European Population Conference

Warsaw, 26-30 August 2003

Population of Central and Eastern Europe. Challenges and Opportunities

edited by

Irena E. Kotowska and Janina Jóźwiak

Statistical Publishing Establishment

Warsaw 2003

Cover design: Fortis
www.fortis.pl

Editorial team
at the Institute of Statistics and Demography,
Warsaw School of Economics

English editing:
Paul V. Smith, Anna Matysiak, Magdalena Muszyńska

Text design, typesetting, and CD preparation:
Anita Abramowska, Andrzej Kwiatkowski, Milena Marks,
Anna Matysiak, Magdalena Muszyńska, Robert Serek,
Paweł Strzelecki

Preface

Since the fall of the "iron curtain" Central and Eastern Europe has witnessed profound and rapid changes in many respects. The most important are: transformation of economic system towards market economy, implementation of fully democratic political system and creation of a civic society. Unquestionably, this transition of the CEE countries towards European standards of social and economic developments is a very favourable trend. However, the speed and depth of these changes caused in societies of the CEE region the so called "social trauma" with all its positive and negative effects.

This reaction to the social and economic transformation is related to the appearance of more uncertainties in individual life, more responsibility for individual careers, more space for individual decisions, etc. Consequently, the transformation has brought about significant shift in individual's behaviour. Changes in demographic processes reflect this shift.

Obviously, the course of demographic processes in various countries of the CEE region is far from homogeneity. However, one can observe several common patterns. First of all, these are: a dramatic decline in fertility, which is much faster and steeper than in Western European countries, significant increase in proportion of extra marital births, decreasing propensity to marry, growing mean age at marriage and birth (and, in general, changes in distributions of age-specific rates), etc. Besides, positive developments in mortality have been observed in some countries, while others experienced worsening. What is also characteristic for populations of the CEE countries is the high sensitivity of demographic behaviour to economic factors.

A discussion has been taking place: whether the demographic changes in the CEE can be placed within the framework of the second demographic transition or they rather seem to be similar, but the underlying factors and mechanisms that launched the transition are different; whether the changes reflect a discontinuity of demographic processes or rather they continue previous trends which have been accelerated by transformation processes.

Taking the opportunity of the fact that the European Population Conference 2003 will be held in Poland and in the CEE region (first time in the twenty-year EAPS history) we decided to devote the pre-conference publication to demographic problems of Central and Eastern European countries.

The papers prepared by the authors from both East and West of Europe cover description and explanation of the course of demographic processes in the CEE countries from different perspectives and in different context.

We believe that the studies presentedin the book will help to better understanding both the demographic changes and underlying factors in Central and Eastern Europe. Moreover, we hope that this book will enable to identify challenges for future demographic developments of Europe and to become conscious of opportunities associated with it.

Janina Jóźwiak, Irena Elżbieta Kotowska

CONTENTS

CONTRIBUTORS

Andreev Evgueni	CDHE, RUSSIA
Avdeev Alexandre	Max Planck Institute for Demographic Research / Moscow State University, GERMANY
Balcerzak–Paradowska Bożena	Institute for Labour and Social Studies, POLAND
Billari Francesco	IMQ-Università Bocconi, ITALY
Bonifazi Corrado	Institute for Population Research, ITALY
Borkowska Stanisława	Institute of Labour and Social Affairs, POLAND
Daróczi Etelka	HCSO Demographic Research Institute, HUNGARY
Fassmann Heinz	Angewandte Geographie, Raumforschung und Raumordnung Universität Wien, AUSTRIA
Festy Patrick	Institut National d'Etudes Démographiques, FRANCE
Frątczak Ewa	Institute of Statistics and Demography, Warsaw School of Economics, POLAND
Frejka Tomas	Independent consultant, USA
Gárdos Eva	Hungarian Central Statistical Office, HUNGARY
Gaumé Catherine	Institut de Demographie, Université de Louvain, BELGIUM
Gierveld Jenny de Jong	Netherlands Institute for Advanced Studies (NIAS), NETHERLANDS
Gourbin Catherine	Institute of Demography, University of Louvain, BELGIUM
Hablicsek László	HCSO Demographic Research Institute, HUNGARY
Hertrich Véronique	Institut National d'Etudes Démographiques, FRANCE
Jóźwiak Janina	Institute of Statistics and Demography, Warsaw School of Economics, POLAND
Kamarás Ferenc	Hungarian Central Statistical Office, HUNGARY
Katus Kalev	Estonian Interuniversity, Population Research Centre, ESTONIA
Kortchaguina Irina	Institut des problèmes socio-économiques de population, RUSSIE

Koschin Felix	University of Economics, Department of Demography, CZECH REPUBLIC
Kotowska Irena Elżbieta	Institute of Statistics and Demography, Warsaw School of Economics, POLAND
Krumins Juris	University of Latvia, LATVIA
Kurkiewicz Jolanta	Cracow University of Economics, POLAND
MacDonald Alphonse L.	United Nations Economic Commission For Europe, SWITZERLAND
Macura Miroslav	United Nations Economic Commission For Europe, SWITZERLAND
Meslé France	Institut National d'Etudes Démographiques, FRANCE
Münz Rainer	Department of Demography, Humboldt University, GERMANY
Oláh Livia Sz.	Department of Sociology, Stockholm University, SWEDEN
Ovtcharova Lilia	Institut des problèmes socio-économiques de population, Académie des Sciences, RUSSIE
Paradysz Jan	Academy of Economics, Department of Statistics, POLAND
Philipov Dimiter	Research Group on Comparative European Demography, Vienna Institute of Demography, AUSTRIA
Prokofieva Lidia	Institut des problèmes socio-économiques de population, Académie des Sciences, RUSSIE
Sardon Jean-Paul	Institut National d'Etudes Démographiques, FRANCE
Shkolnikov Vladimir	Max Planck Institute for Demographic Research, GERMANY
Sobotka Tomas	Population Research Centre, University of Groningen, NETHERLANDS
Spéder Zsolt	HCSO, Demographic Research Institute, HUNGARY
Stankuniene Vladislava	Institute for Social Research, LITHUANIA
Stropnik Nada	Institute for Economic Research, SLOVENIA

Strzelecki Zbigniew	Government Centre for Strategic Studies, POLAND
Vallin Jacques	INED, FRANCE
Van de Kaa Dirk J.	Honorary Fellow, Netherlands Interdisciplinary Demographic Institute (NIDI), NETHERLANDS
Witkowski Janusz	Warsaw School of Economics, Institute of Statistics and Demography, POLAND
Wunsch Guillaume	Institut de Demographie, Université de Louvain, BELGIUM

INTRODUCTION

The population of Europe: the present and the future[1]

Zbigniew Strzelecki

This paper focuses on the most instructive elements of the demographic development of thirty European states and the major regions of the world. The analysis encompasses the years 1980-2000, during which period both Poland and Europe underwent very important changes. To evaluate future changes the most recent UN population projections for 2000-2050 are applied.

1. Present-day Europe

The different continents are characterised by dissimilar speed of demographic development: the highest is in Africa (about 3% average annual rate in the 1980s and 2.5% currently), while the lowest is in Europe (which in the 1980's had 0.4% average annual rate and since the 1998 there has been no population growth). Since the 1990s Poland has been developing demographically at a pace comparable to that of Europe (see Table 1). The European continent as a whole has witnessed unchanging population during the last several years (729 million), whereas in Poland downward tendency has been observed for the same period of time.

Generally speaking, the pace of population growth in the world during the last two decades has slowed down considerably. In the not so distant 1980s the annual average population growth was 1.74%, while at the end of the 1990s it decreased by 40% and hardly exceeded 1%. This process has to a different extent affected all the continents with the exception of Oceania, which population has increased from 23 million in 1980 to 30

[1] Parts of this text come from the Author's presentation *Problemy demograficzne Polski na tle sytuacji Europy i świata* (Demographic problems in Poland analysed against the background of the situation in Europe and the world) in the conference *Zadania samorządów lokalnych w rozwoju demograficznym* (The tasks of local self-governments in demographic development), which took place in Skierniewice 13-14 June 2002 (Strzelecki, 2002). This conference took place within the framework of the First Demographic Congress in Poland.

million in 2000. The unequal speed of population growth triggers changes in the structure of population density in the different continents. The share of Europeans has been declining (from 15.6% in 1980 to 12.0% in 2000), while the proportion of residents of Africa, Asia and Central America has been on the rise (most significantly, from 10.7 to 12.9% for Africa; from 59.4 to 60.8% for Asia, and from 5.4 to 5.7% for Central America respectively). The share of the residents of Oceania has remained unchanged (0.5%). The proportion of the population of Poland has likewise been shrinking. During the last twenty years it dropped from 0.8% to 0.6%.

Table 1. World population by regions and Poland, 1980–2000 (in million) (as on December 31)

Regions	**1980**	**1990**	**1998**	**2000**
WORLD	4447	5282	5930	6055
Europe	693	722	729	729
Asia	2641	3184	3590	3684
Africa	476	629	778	784
North and Central America	374	425	472	482
South America	240	293	332	346
Oceania	23	26	29	30
Poland	**35.735**	**38.183**	**38.667**	**38.644**
	Annual rate (in %)			
	1981-1990	1991-1998	1999-2000	
WORLD	1.74	1.46	1.05	
Europe	0.41	0.12	0.00	
Asia	1.89	1.51	1.30	
Africa	2.83	2.69	0.38	
North and Central America	1.29	1.32	1.05	
South America	2.02	1.57	2.09	
Oceania	1.23	1.37	1.71	
Poland	**0.66**	**0.12**	**-0.03**	

Source: World Population Prospects: The 2000 Revision, Volume I: Comprehensive Tables, UNPD, New York 2002

While studying the alterations in the population of European states (see Table 2) in the years 1981-2000, it is important to highlight the co-occurrence of two types of developments: the increase of the number of residents in Western states and the concomitant decrease of population in post-socialist states. This latter change became reinforced especially in the 1990s, when socio-economic transformation took place in the

countries from Central Europe. This process encompassed the Russian Federation and Ukraine likewise.

Table 2. Population in European countries, 1980 – 2000 (in thousands)

	Population			Average annual rate (%)		
Country	**1980**	**1990**	**2000**	**1980-1985**	**1990-1995**	**1995-2000**
Austria	7549	7729	8080	0.08	0.81	0.08
Belarus	9659	10260	10187	0.69	0.13	-0.28
Belgium	9859	9967	10249	0.00	0.34	0.22
Bulgaria	8862	8718	7949	0.22	-0.73	-1.12
Croatia	4377	4517	4654	0.43	0.51	0.09
Czech Republic	10283	10306	10272	0.04	0.05	-0.11
Denmark	5123	5140	5320	-0.04	0.34	0.35
Estonia	1473	1571	1393	0.62	-1.14	-1.26
Finland	4780	4986	5172	0.51	0.48	0.25
France	53880	56735	59238	0.52	0.49	0.37
Germany	78289	79433	82017	-0.16	0.55	0.09
Greece	9643	10160	10610	0.60	0.57	0.30
Hungary	10707	10365	9968	-0.24	-0.29	-0.49
Ireland	3401	3515	3803	0.80	0.53	1.05
Italy	56434	56719	57530	0.06	0.20	0.08
Latvia	2512	2671	2421	0.53	-1.20	-0.77
Lithuania	3413	3722	3696	0.76	-0.04	-0.1
Netherlands	14150	14952	15864	0.48	0.67	0.52
Norway	4086	4241	4469	0.33	0.55	0.50
Poland	**35574**	**38111**	**38605**	**0.90**	**0.25**	**0.01**
Portugal	9766	9899	10016	0.50	0.04	0.20
Romania	22201	23207	22438	0.47	-0.46	-0.22
Russian Federation	138660	148292	145491	0.66	-0.02	-0.36
Slovakia	4976	5256	5399	0.65	0.41	0.13
Slovenia	1832	1918	1988	0.52	0.74	-0.02
Spain	37542	39303	39910	0.49	0.22	0.09
Sweden	8310	8559	8842	0.10	0.62	0.03
Switzerland	6319	6834	7170	0.67	0.82	0.15
Ukraine	50044	51891	49568	0.36	-0.14	-0.78
United Kingdom	56330	57561	59415	0.13	0.36	0.27

Source: World Population Prospects: The 2000 Revision, Volume I: Comprehensive Tables, UNPD, New York 2002

In spite of the observed slowing down of the pace of population growth in the countries from Western Europe, in the 1990s the phenomenon of depopulation did not occur in neither of these countries, including Denmark and Germany (which in 1980-1985 witnessed population loss). This is an outcome of the long-range social and family policies, which were carried out in the majority of these states ever since the 1970s. These policies were implemented in order to counteract the approaching depopulation as well as the consequences of the influx of workforce from abroad, including residents from Eastern and Central Europe, who started to migrate in the 1980s and 1990s.

The changes in population are contingent upon the development of the basic demographic processes: fertility, mortality and migration characterising each of the analysed spatial levels (see Table 3). The changes observed during the last two decades in all of these three processes have been profound, yet also multidimensional.

Fertility is greatly differentiated across the world and these disparities are on the rise. Whereas in 1980 the reproduction rate in Africa tripled that of Europe (almost 46 births per 1000 residents in Africa and about 15 in Europe), in the year 2000 the number of births in Africa was fourfold the number of births in Europe (respectively, about 39 in Africa and 10 in Europe). As it is well known, the highest reproduction rate is observed in Africa, while the lowest – in Europe and North America. The reproduction rate in the world decreased in the years 1981-2000 by almost 20%, *i.e.* from 28 to 22.5 births per 1000 residents. The births rates have been declining in all of the continents, albeit to a different extent. In Europe – in spite of its lowest reproduction rate – one can witness the most intense decrease of reproduction measured against the background of the rest of the world (about 32% for a period of 20 years). Comparable to that of Europe has been the reproduction rate of Central and South America, whereas in Africa it was twice as low. The residents of North America are characterised by totally different pattern of demographic behaviour; the reproduction rate in this continent in the years 1981-2000 has declined only slightly.

Europe, which as a continent stands out from the rest of the world in terms of the level and direction of reproduction, has become internally diversified in this respect. In 1980 the highest birth rate was observed in

Ireland (21.7‰), while Germany (11.1), Denmark (11.2) and Italy (11.3) brought up the rear in terms of birth rates. In 1980 Poland was one of the European states with highest reproduction: almost 20 births per 1000 residents. Although the crude birth rate in most of the European states has been declining during the last 20 years, the range of this decrease has been dissimilar. Among the European states in the years 1981-2000 the highest reduction of reproduction rate took place in Poland. It shrank by 50% - from 19.6‰ to 9.8‰. In spite of this consequential decline, Poland has not yet become one of the states with lowest fertility rates. Ukraine, Latvia, the Russian Federation and the Czech Republic are the countries with lowest fertility. A fact that merits attention is that the countries from Eastern and Central Europe underwent not only socio-economic transformation, but also significant demographic changes. All of these processes contributed to the formation of a region with the lowest fertility in Europe. On the other hand, the region with highest fertility consists of the following countries from Western Europe: Ireland, Norway, the Netherlands and Denmark. At the same time, Denmark and Norway stand out from the rest of Europe, because unlike the other European states, the reproduction rate of the residents of these two countries has been on the rise. In Denmark it grew noticeably from 11.2 to 12.6‰, while in the Netherlands and Norway this increase was more modest, from 12.8 to 13.0‰ and from 12.5 to 13.2‰ respectively.

The other process, which has an impact on the dynamic of population, is mortality. In 1980 almost 11 per 1000 population of the world died, while in twenty years the mortality rate decreased by 17.4%, which means 9 per 1000 people died in the year 2000. Africa is the continent of highest death rates; in 1980 almost twice as many people died in Africa compared to both Americas and Oceania taken together. At present – in spite of the decrease in mortality rates during the last two decades – mortality in Africa keeps being highest, yet the difference between Africa and Central America tripled (5.4‰ for Central America). Thus high death rate in Africa can be accounted for by the extremely difficult situation of the health(-care), diet and environmental conditions which are to be found especially in some of the regions in this continent. The only continent in the world where crude death rate has been on the rise is Europe. In the years 1981-2000 it grew by almost 11% (from 10.4 to 11.5‰). However, the reasons for this seeming resemblance are rooted in the age structure of the residents of Europe and the quick pace of ageing of the European

population as well as increases in death rates in some Eastern European countries.

In some Western European countries crude death rates increased slowly due to ageing (Spain from 7.7 to 9.3‰, Greece from 9.1 to 9.8‰, and in Portugal from 9.7 to 10.3‰). In other countries the crude death rates were stable despite the continuous rise in the number and the share of the elderly population (Denmark, Finland, Lithuania, the Netherlands, Slovenia, Croatia, Hungary, and Italy) was stable. In most of the countries from Western Europe mortality declined in the 1980s and 1990s.

In 2000 the highest crude death rates concerned Ukraine (15.4‰), the Russian Federation (15.3‰), Bulgaria (14.1‰), Latvia (13.6‰), Belarus, Estonia and Hungary (13.5‰ each), despite the relatively young age structure they had. Almost twice as low death rates – compared to the Russian Federation and Ukraine – characterised Ireland (8.2‰), Switzerland (8,7‰) and the Netherlands (8.8‰). Poland – as seen against the background of Europe – belongs to the group of countries with relatively low mortality rate (9.5‰ in 2000), which actually decreased since the 1990s (when it was 10.2‰) along with the rise in the number and the share of the elderly. It resulted from the remarkable improvement in mortality during the 1990s.

Table 3. Births, deaths and natural increase in the world and in European countries. 1980 – 2000 (per 1000 of population)

Region/ Country	Births			Deaths			Natural increase		
	1980[1)]	1990[2)]	2000[3)]	1980[1)]	1990[2)]	2000[3)]	1980[1)]	1990[2)]	2000[3)]
WORLD	28.0	26.7	22.5	10.9	9.6	9.0	17.1	17,1	13,5
Europe	14.8	13.7	10.1	10.4	10.6	11.5	4.4	3,1	-1,4
Asia	29.3	27.6	22.3	10.4	8.9	7.9	18.9	18,7	14,4
Africa	45.6	42.7	38.7	17.5	14.6	14.1	28.1	28,1	24,6
North America	15.1	15.8	14.2	8.5	8.6	8.4	6.6	7,2	5,8
Central America	38.1	30.9	26.5	8.3	6.2	5.4	29.8	24,7	21,1
South America	32.1	26.5	22.1	8.9	7.4	6.7	23.2	19,1	15,4
Oceania	20.9	20.0	18.2	8.8	8.2	7.5	12.1	11,8	10,7

Average estimates for the world and the continents: 1) for the years 1975 – 1980,
2) for the years 1985 – 1990,
3) for the years 1995 – 2000.

Source: World Population Prospects: The 2000 Revision, Volume I: Comprehensive Tables, UNPD, New York 2002

Table 3. Births, deaths and natural increase in the world and in European countries. 1980 – 2000 (per 1000 of population), continued

Region/ Country	Births			Deaths			Natural increase		
	1980[1)]	1990[2)]	2000[3)]	1980[1)]	1990[2)]	2000[3)]	1980[1)]	1990[2)]	2000[3)]
Austria	12.0	11.7	9.7	12.2	10.7	9.5	-0.2	1.0	0.2
Belarus	16.0	14.0	9.4	9.9	10.8	13.5	6.1	3.2	-4.1
Belgium	12.6	12.4	11.3	11.6	10.5	10.3	1	1.9	1.1
Bulgaria	14.5	12.1	9.0	11.1	12.5	14.1	3.4	-0.4	-5.1
Croatia	14.8	11.8	10.0	10.9	11.1	11.5	3.9	0.7	-1.4
Czech Republic	15.0	12.6	8.8	13.2	12.5	10.6	1.8	0.1	-1.8
Denmark	11.2	12.3	12.6	10.9	11.9	10.9	0.3	0.5	1.7
Estonia	15.0	14.2	9.6	12.3	12.4	13.5	2.7	1.8	-3.9
Finland	13.2	13.1	11.0	9.3	10.0	9.5	3.9	3.1	1.6
France	14.9	13.4	13.2	10.2	9.3	9.1	4.7	4.2	4.1
Germany	11.1	11.4	9.2	12.2	11.6	10.1	-1.1	-0.2	-0.9
Greece	15.4	10.1	9.6	9.1	9.3	9.8	6.3	0.8	-0.2
Hungary	13.9	12.1	9.7	13.6	14.1	13.5	0.3	-1.9	-3.8
Ireland	21.7	15.1	14.4	9.8	8.9	8.2	11.9	6.2	6.3
Italy	11.3	10.0	9.3	9.8	9.6	9.7	0.15	0.5	-0.4
Latvia	14.1	14.2	8.5	12.8	13.1	13.6	1.4	1.2	-5.0
Lithuania	15.2	15.3	9.2	10.5	10.7	10.5	4.7	4.6	-1.3
Netherlands	12.8	13.2	13.0	8.1	8.6	8.8	4.7	4.6	4.2
Norway	12.5	14.4	13.2	10.1	10.9	9.8	2.4	3.5	3.4
Poland	**19.6**	**14.4**	**9.8**	**9.9**	**10.2**	**9.5**	**9.6**	**4.1**	**0.3**
Portugal	16.2	11.8	11.8	9.7	10.4	10.3	6.5	1.3	1.4
Romania	18.0	13.6	10.4	10.4	10.6	11.4	7.5	2.9	-0.9
Russian Federation	15.9	13.5	8.7	11.0	11.2	15.3	4.9	2.3	-6.6
Slovakia	19.1	15.1	10.2	10.1	10.3	9.8	8.9	4.8	0.4
Slovenia	15.7	11.2	9.1	9.9	9.3	9.3	5.8	1.9	-0.2
Spain	15.3	10.3	9.9	7.7	8.6	9.3	7.5	1.8	0.6
Switzerland	11.7	12.5	10.9	9.4	9.5	8.7	2.3	3.0	2.2
Sweden	11.7	14.5	10.2	11.0	11.1	10.5	0.6	3.4	-0.3
Ukraine	14.8	12.7	7.8	11.4	12.1	15.4	3.5	0.5	-7.6
United Kingdom	13.4	13.9	11.4	11.7	11.1	10.2	1.7	2.7	1.2

Average estimates for the world and the continents: 1) for the years 1975 – 1980,
2) for the years 1985 – 1990
3) for the years 1995 – 2000

Source: World Population Prospects: The 2000 Revision, Volume I: Comprehensive Tables, UNPD, New York 2002

The level of improvement of living conditions is measured by infant mortality. At the same time, it represents a factor, which moderates a negative effect of fertility decline on the replacement of generations. The infant mortality rate decreased by one-third (from 88‰ in the first half of the 1980s to 60‰ in the second half of the 1990s) in major regions of the world. The most significant progress can be observed in Europe, where the infant mortality rate is relatively low (it declined by 55%), in the Americas (in North America – where the death rate is lowest against the background of the world – it decreased by half, whereas in Central and South America it is lower by 48%). In Oceania and Asia infant mortality rate shrank by one-third (on average, 59 per 1000 infants die before reaching the age of 1 in Oceania and Asia, like in the rest of the world). The least significant progress is observed in these regions of the world, where the situation in this respect is still grave. In these regions each 11th child dies before becoming one year old, which means infant death happens by one-third more often than in the rest of the world, thirteen times more often than it takes place in Northern America and nine times as often as it occurs in Europe.

In Europe progress in the combating of infant morality has been achieved in all of the countries, although the starting point in the beginning of the 1980s and the scope of the changes were different in the separate cases. The higher infant mortality rate in Europe – in comparison to North America – is due to the very high infant mortality rates in the majority of post-socialist states. This is especially true of Romania (in 2000 18.6‰), the Russian Federation (15.5‰), Bulgaria (13.4‰) and Ukraine (12.8‰). The Scandinavian countries make the region where new-borns have the greatest probability to survive the first year. In Switzerland the infant mortality rate in 2000 was 3.4‰, in Finland - 3.7‰, and in Norway 8‰. Among the countries from the former socialist countries the impressive progress that has been achieved in the Czech Republic - infant mortality rate shrank from 16.6 in 1980 to 4.1‰ in 2000. This rate is comparable to the one in the Scandinavian states and is twice as low as the mortality rate characterising the group of countries with medium infant death rates. Some of the countries undergoing transformation, including Poland, belong to this latter group of states.

Although infant mortality rate in Poland significantly decreased during the transformation (from 25.5 to 8.1%), that is by more than two-thirds

for a period of twenty years. It is important not to overlook the fact that in the 1980s Poland was one of the European countries with highest infant mortality rate. Higher (than the one in Poland) mortality rate was registered only in Romania (39.0%). Currently 10 countries have higher than Poland's infant mortality rates and these are all post-socialist states. Hence – leaving aside the Czech Republic, which was very successful in this respect – it is necessary to underscore the significant progress, which occurred in Poland. Poland comes second among the countries from Eastern and Central Europe, which have certain achievements in the prevention of infant mortality.

The tendencies in fertility and mortality result in changes of natural increase[2]. After the stability of the 1980s, the 1990s were characterised by a drop in the natural increase by 21% (from 17.1‰ to 13.5‰) caused by the significant decrease in fertility. This decline had an impact on all the regions of the world, albeit with different intensity. The case of Europe can be singled out, because the already low natural increase in 1980 (4.4‰) further decreased in the following two decades by 132% and currently it is a continent witnessing the negative natural increase (-1.4‰). For the same period of time, the rate of natural increase in South and Central America regressed by one-third, in Asia by a quarter, and by one-eighth in the other continents of the world.

Among the European states - with the exception of Denmark and Norway - the natural increase shrank to a different extent. Whereas in 1980 only two countries were affected by negative natural increase (Austria and Germany), in twenty years there were already sixteen such countries and five more had natural increase close to zero.

[2] Due to the complexity and scope of the current analysis, the author has omitted the issue of migration.

Table 4. Characteristics of marriages in European countries, 1980 – 2000

Country	Crude marriage rate (per 1000 of population)			Average age of women at first marriage[1)]			Average age of women at first birth		
	1980	1990	2000	1980	1990	2000	1980	1990	2000
Austria	6.2	5.8	4.8	23.2	24.9	27.2	...	25.0	26.3
Belarus	10.1	9.7	6.2	22.9	22.0	22.6	...	22.6	23.4
Belgium	6.7	6.5	4.4	22.2	24.2	26.1[5)]	24.7	26.4	...
Bulgaria	7.9	6.9	4.3	21.3	21.4	24.1	21.9	22.2	23.5
Croatia	7.2	6.0	5.2[5)]	22.1	23.1	25.3	23.4	24.1	...
Czech Republic	7.6	8.8	5.4	21.5	21.6	24.5	22.4	22.5	24.9
Denmark	5.2	6.1	7.2	24.6	27.6	29.5	24.6	26.4	...
Estonia	8.8	7.5	4.0	22.6	22.5	24.8	23.2	22.9	24.0
Finland	6.1	5.0	5.1	24.3	26.0	28.0	25.6	26.5	27.4
France	6.2	5.1	5.2	23.0	25.6	27.6[3)]	25.0	27.0	...
Germany	6.3	6.5	5.1	22.9	25.2	26.9[4)]	25.0	26.6	...
Greece	6.5	5.8	4.3	23.3	24.8	26.5[4)]	24.1	25.5	...
Hungary	7.5	6.4	4.8	21.2	21.9	24.6	22.4	23.1	25.1
Ireland	6.4	5.1	5.1	24.6	26.6	27.9[2)]	25.5	26.6	27.8
Italy	5.7	5.6	4.6	23.8	25.5	...	25.0	26.9	...
Latvia	9.8	8.9	3.9	22.8	22.3	24.5	22.9	23.0	24.4
Lithuania	9.2	9.8	4.6	23.0	22.3	23.5	23.8	23.2	23.8
Netherlands	6.4	6.4	5.5	23.2	25.9	27.8	25.7	27.6	28.6
Norway	5.4	5.0	5.6	23.5	26.2	28.3[4)]	...	25.6	26.9
Poland	**8.6**	**6.7**	**5.5**	**22.7**	**22.6**	**23.9**	**23.4**	**23.3**	**24.5**
Portugal	7.4	7.2	6.3	23.2	23.9	25.2	24.0	24.9	26.4
Romania	8.2	8.3	6.1	21.5	22.0	23.4	22.4	22.6	23.6
Russian Federation	10.6	8.9	5.4	22.4	21.9	22.0[2)]	23.0	22.6	...
Slovakia	7.9	7.6	4.8	21.9	21.9	24.0	22.7	22.6	24.2
Slovenia	6.5	4.3	3.6	22.5	23.7	26.7	22.9	23.7	26.5
Spain	5.9	5.7	5.3	23.8	25.5	27.5[4)]	25.0	26.8	...
Sweden	4.5	4.7	4.5	26.0	27.5	30.2	25.3	26.3	27.9
Switzerland	5.7	6.9	5.5	25.0	26.8	27.9	26.3	27.6	28.7
Ukraine	9.3	9.3	5.6	...	...	...	...	...	...
United Kingdom	7.4	6.5	5.1[4)]	23.0	25.1	...	...	27.3	29.1

[1)] before reaching the age of 50 [2)] 1995 [3)] 1997 [4)] 1998 [5)] 1999

Source: Recent demographic developments in Europe 2001, Council of Europe Publishing, Strasbourg 2001

Fertility, and - in consequence - natural increase and the population dynamics are influenced by the changes in the model of family formation and dissolution[3]. In European countries that trend unambiguous: decrease of frequency of contracted marriages, Europeans marry at an ever later age, which also means that the first child (if spouses opt for having children at all) is born by increasingly older women (Table 4).

Only in the Denmark during the last two decades the crude marriage rate was on the rise from 52 to 72 per 10 000 inhabitants (this trend also affected Norway in the 1990s). In Sweden no such changes were observed in this respect. The decrease in marriage rates in Europe varied between 5 and 60%, depending on the country. The most significant reduction occurred in the following post-socialist states (decrease by 40-50%): Latvia, Estonia, Bulgaria, Lithuania, the Russian Federation, Belarus, Slovakia, Ukraine and Hungary. Poland was likewise influenced by this trend.

In the years 1981-2000, the least significant changes regarding these issues took place in many Western European states: Switzerland, Portugal, the Netherlands, France, Germany and Italy.

Except for declining propensity to marriage, changes in the family model are also reflected in the mean age of marriage. During the last twenty years the average age of women at the moment of their first marriage has moved by 4-5 years. That is, on average women used to marry at about 22-23, while currently they are 25-26 years old when they get married for the first time. Generally, women in the majority of countries from Western Europe and the Scandinavian states marry relatively late in life. In 1980 they used to marry at the age of 24-25, while now they marry 4-5 years later, that is on average they are 30 years old. In most of the post-socialist states marriages were contracted by comparatively younger women than the ones in Western states: in 1980 by 2-3 years younger (that is, on average 21-22 years old women), and at present 24-25 years old, which means they marry 4-5 years earlier than this takes place in Western countries. These changes refer to Poland as well, although the

[3] Due to the huge dissimilarities in terms of culture characterising the different regions in the world and affecting the family model, here its changes in different regions are omitted.

'ageing' of newly-weds is not so advanced as it is in Europe. Nevertheless, it seems that the marriage patterns in former socialist countries are following Western Europe's example, so we should be expecting the quickening of the pace of this process in the years to come.

The direct effect of the changes in marital behaviour is an increase in the age of women, who give birth to their first child. With the exception of Lithuania, with the passing of time in all of the countries to a lesser or greater degree the average age of women at first birth has been continuously on the rise. On average, the youngest in this respect in Europe are women living in post-socialists states. In 1980 they used to become mothers for the first time at the age of 22-23, while at present they are two years older when they give birth to their first child. Women from Western Europe and the Scandinavian countries opt for having their first child relatively latest in life. Twenty years ago at this important moment in their lives they were 2-3 years younger than women from the Central and Eastern Europe (*i.e.* they were 24-25 years old), while at present their first child is born when they are nearing 30. In the United Kingdom they are in average 29.1 years old, in Switzerland - 28.7, in the Netherlands - 28.6, in Sweden - 27.9, and in Finland - 27.4. In Poland the postponement of the first child also took place, although this process is still by half slower than it is on average in Europe. Currently Polish women give birth to their first child 13 months later than they used to do in 1980.

These changes in fertility and the family model as well as in mortality determine the model of replacement of generations, which has an impact on the inter-generation relations as well as the demographic resilience of the separate populations. This model is greatly differentiated in the world. Actually, one can distinguish several sub-types of this model: African, Asian-South-American, European and American (Table 5). On average, women in reproductive age give birth to almost three children (the total fertility rate (TFR) - 2.82). During the last two decades, the TFR in the world as a whole diminished considerably. It decreased by 1 child (from 3.90 in the years 1975-1980), which equals 30% of the TFR of these years. In Africa this rate is highest (6.56 in the years 1975-1980 and 5.27 in 1995-2000). The Asian type, which also refers to Central and South America, is characterised by childbearing rate twice as low as the one in Africa: 2.7-3 children per woman. European women have the lowest

TFR- 1.4 children, women in North America - 1.8-2 children. In the twenty countries studied here the pace of change of the TFR likewise depended on the model of replacement of generations. The Asian-South-American type witnessed the highest decline during these two decades (35-45%), to be followed by the European type, which has the lowest TFR in the world (25% decrease). The lowest decline concerns Africa (20%), which is the type of highest fertility. Unlike the types analysed so far, North America in the 1980s and 1990s underwent the increase in fertility by about 10%. It did not happen in any of the other continents of the world.

In the European countries the fertility changes were diverse. The regression of the TFR to the lowest values is characteristic for post-socialists countries (in the Czech Republic this rate was lowest - in 2000 only 1.14 children per woman, in Ukraine – 1.19 in 1998, and in the Russian Federation – 1.21) as well as of some southern countries: Greece, Spain and Italy. There are some countries, mostly from Northern Europe, where the TFR has been on the rise in the years 1981-2000: Denmark, Norway and the Netherlands. In Finland no significant changes in this respect have been noticed. The countries mentioned above together with France and Ireland form a group with the highest TFR in Europe. This fact notwithstanding, in these countries even simple replacement of generations is not guaranteed. The rest of European states fare even worse in this respect (see Part III in Table 5).

Table 5. Childbearing and replacement of generations in the world and in European countries, 1980-2000

Region/ Country	Infant mortality rate per 1000 live births			Total fertility rate			Net reproduction rate		
	1980[1)]	1990[2)]	2000[3)]	1980[1)]	1990[2)]	2000[3)]	1980[1)]	1990[2)]	2000[3)]
WORLD	88	70	60	3.90	3.35	2.82	1.56	1.40	1.18
Europe	22	16	10	1.97	1.83	1.41	0.93	0.87	0.66
Asia	95	73	59	4.17	3.38	2.70	1.64	1.42	1.16
Africa	123	103	91	6.56	6.05	5.27	2.28	2.22	1.93
North America	14	10	7	1.78	1.89	2.00	0.85	0.90	0.96
Central America	63	44	33	5.42	3.88	3.04	2.34	1.75	1.40
South America	71	49	37	4.28	3.19	2.57	1.84	1.44	1.19
Oceania	40	33	26	2.78	2.52	2.41	1.23	1.13	1.10

Table 5. Childbearing and replacement of generations in the world and in European countries, 1980-2000, continued

Region/ Country	Infant mortality			Total fertility rate			Net reproduction		
	1980[1]	1990[2]	2000[3]	1980[1]	1990[2]	2000[3]	1980[1]	1990[2]	2000[3]
Austria	14.4	7.9	4.8	1.65	1.45	1.34	0.79	0.70	0.65
Belarus	16.3	11.9	9.4	2.04	1.90	1.31	0.95	0.91	0.63
Belgium	12.2	6.6	5.3[7)]	1.68	1.62	1.66	0.80	0.78	0.75[4)]
Bulgaria	20.0	14.6	13.4	2.05	1.82	1.26	0.97	0.87	0.60
Croatia	20.5	10.7	7.3	1.92	1.67	1.36	0.89	0.80	0.69[6)]
Czech Republic	16.6	10.8	4.1	2.10	1.90	1.14	1.00	0.91	0.55
Denmark	8.4	7.5	5.3	1.55	1.67	1.77	0.74	0.80	0.85
Estonia	17.1	11.9	8.5	2.02	2.04	1.39	0.95	0.97	0.67
Finland	7.6	5.7	3.7	1.63	1.78	1.73	0.78	0.86	0.83
France	10.1	7.4	4.8[5)]	1.95	1.78	1.89	0.93	0.85	0.84[6)]
Germany	12.5	7.1	4.7[4)]	1.56	1.45	1.36	0.75	0.70	0.65[6)]
Greece	17.9	9.7	5.9[6)]	2.22	1.39	1.29	1.08	0.67	0.62[6)]
Hungary	23.0	14.9	9.3	1.91	1.87	1.32	0.90	0.89	0.63
Ireland	11.1	8.2	6.0	3.24	2.11	1.89	1.52	1.01	0.91
Italy	14.4	8.2	4.6	1.64	1.33	1.23	0.78	0.64	0.57[6)]
Latvia	15.4	13.7	10.5	1.90	2.01	1.24	0.90	0.95	0.59
Lithuania	14.5	10.3	8.5	1.99	2.02	1.27	0.96	0.97	0.61
Netherlands	8.6	7.1	5.1	1.60	1.62	1.72	0.77	0.78	0.83
Norway	8.0	6.9	3.8	1.72	1.93	1.85	0.83	0.93	0.89
Poland	**25.5**	**19.3**	**8.1**	**2.26**	**2.05**	**1.34**	**1.07**	**0.97**	**0.64**
Portugal	24.2	11.0	5.5	2.25	1.57	1.52	1.06	0.75	0.73
Romania	29.0	25.0	18.6	2.43	1.84	1.31	1.13	0.86	0.62
Russian Federation	22.1	17.3	15.5	1.86	1.90	1.21	0.88	0.90	0.57
Slovakia	20.8	12.0	8.6	2.31	2.09	1.29	1.10	1.00	0.62
Slovenia	15.1	8.2	4.9	2.10	1.46	1.26	1.00	0.70	0.61
Spain	12.3	7.6	4.9[7)]	2.20	1.36	1.24	1.05	0.65	0.56[6)]
Sweden	6.9	6.0	3.4	1.68	2.13	1.54	0.81	1.03	0.75
Switzerland	9.1	6.9	5.0	1.55	1.58	1.50	0.74	0.76	0.72
Ukraine	16.6	12.8	12.8[6)]	1.95	1.89	1.19[6)]	0.91	0.88	...
United Kingdom	12.1	8.0	5.6	1.89	1.83	1.65	0.91	0.88	0.79

Average estimates for the world and the continents: 1)1975 – 1980, 2) 1985 – 1990, 3) 1995 4) 1995 5) 1997 6) 1998 7) 1999

Source: World Population Prospects: The 2000 Revision, Volume I: Comprehensive Tables, UNPD, New York 2002; Recent demographic developments in Europe 2001, Council of Europe Publishing, Strasbourg 2001

The lowest replacement of generations rate concern the countries from Eastern and Central Europe. In Europe the net reproduction rate is decreased during the last twenty years from 0.93 to 0.66, *i.e.* 100 women in the future will be replaced by 66 daughters, which means that the next generation of women in Europe will be by one-third smaller than the current one. In the world besides Europe the replacement level is not guaranteed in North America – the rate equalled 0,96 in the years 1975-2000. In Africa, however, the generation of today's women daughters will be almost twice as numerous as the present-day one, while on the rest of continents this increase will range from 10 to 40%. It is important to highlight the fact that these inter-generation ratios deteriorated in the years 1976-2000 on all of the continents (the pace of these changes is comparable to these of the TFR), with the exception of North America, where the opposite process is taking place: improvement of the relation between mothers and daughters.

In Poland in the 1980s, and especially in the 1990s, the TFR underwent significant limitation for a period of 20 years. The net reproduction rate decreased from 1.07 to 0.64, which means that – similarly to Europe – women living nowadays will be replaced by a generation of daughters, which will be by one-third less numerous than their mothers' generation.

2. Europe in the future

In order to understand the Europe of tomorrow, we should regard it from the perspective of processes, which we have witnessed in the past. The long-term demographic tendencies, which affected Europe as well as Poland, can be summed up as follows: decrease of the population dynamics, low fertility rates, transition from the traditional family with many children to childless families or such with a small number of children, decline in propensity to marriage, postponement of marriage, decrease in mortality rates and considerable increase in life duration, the emergence of depopulation symptoms. It is argued that these changes can be accounted for by the deep transformations taking place in culture, the individuation of life-styles, the redefinition of needs, the changes of political orientations, religious beliefs, sexual and gender relations, and so on. The majority of theoreticians defined these processes, following Lesthaeghe and van de Kaa, as "second demographic transition" (Lesthaeghe and van de Kaa, 1986; van de Kaa, 1987). As mentioned

previously, from the point of view of the intensity with which these changes occur in Europe, one can identify – somewhat simplifying the picture – a twofold situation in which the Eastern and Western parts of the continent differ. There are opinions, that despite these differences the second demographic transition theory formulated for industrialised countries can also be used for studies on demographic changes in Central and Eastern European countries (*e.g.* UN, 2000; Kotowska, 2002).

Some of the factors analysed above determine the demographic prospects of the world as a whole as well as of its separate parts. The decrease in fertility and mortality together with the increase in life expectancy play especially important role in this respect. The medium variant of the demographic projection of the United Nations Organization from the year 2000 (UN, 2002b), which takes into consideration the current tendencies regarding the factors influencing the demographic development of the separate regions and countries of the world, foresees growth in population from the current 6 056.7 million inhabitants to 9 322.3 million in the year 2050, that is by 54%[4].

With the exception of Europe, populations of all the other continents would increase. The Old Continent would undergo depopulation. Provided that the projection assumptions turn out to be correct, the population of Europe would decrease to 603.3 million, which means it will be by 17% smaller than the current one[5]. If this is the way the demographic processes will be taking place in Europe, the sustainable development of the continent is seriously endangered, especially the ratio between the economically active population and retirees. Contrary to the

[4] The UN experts developed two more variants regarding the world demographic projections. These variants make different assumptions concerning the TFR. According to the so-called 'low' version, the TFR is supposed to decrease from the current 2.82 to 1.68 in the years 2045-2050, which would entail an increase in population by only 30% (7 866 million). According to the 'high' version, the TFR is expected to shrink to 2.62, which means the world would be inhabited by 10.9 billion people, or 90% increase. According to the 'medium' variant, which is presented in this paper, the decrease in the TFR is assumed to reach 2.15 children per woman.

[5] These projections are quite different from the ones prepared by Eurostat. Eurostat foresees certain increase in population. As far as the political, social and economical interests of Europe are concerned, the Eurostat forecast is the more favourable one.

second half of the 19th and the first half of the 20th centuries, when the exodus of Europeans, who crossed oceans and sees, took place, in the first half of the 21st century the Old continent should open its 'gates' to immigrants from the other continents.

The quickest to expand will be the population of Africa. The population growth will be 2.5-fold and in 2050 2 billion people will be inhabiting Africa. The slowest to increase will be the population of North America (it will expand by 40%). It is to be followed by Asia (50% population growth), where 5.4 billion people will be living in 2050. Somewhat more accelerated in this respect will be the increase of population in Oceania and South and Central America.

Such differentiated dynamics of population in the separate regions of the world in the coming fifty years will effect changes in the structure of the population in the world according to its regions. These changes will be very important from the point of view of Europe. The share of Europeans will decrease almost by half from the current 12% to 6.5% in 2050. On the other hand, the share of Africans will increase meaningfully (from 13.1 to 21.5%). The inhabitants of Asia will keep standing for 60% of the population of the world. The share of the population from the rest of the regions of the world will remain unaltered (South America and Oceania) or would change imperceptibly (North and Central America).

Table 6. Population projections for the world, the regions and European countries up to 2050

Region/ Country	2000	2010	2030	2050	2010	2030	2050
	Number in millions				2000 = 100,0		
WORLD	6056715	6825736	8270064	9322251	112,7	136,5	153,9
Europe	727304	713211	670311	603328	98,1	92,2	83,0
Asia	3672342	4144937	4949604	5428170	112,9	134,8	147,8
Africa	793627	996960	1488889	2000383	125,6	187,6	252,1
North America	314113	341904	396321	437619	108,8	126,2	139,3
Central America	135129	157802	195986	220229	116,8	145,0	163,0
South America	345738	394784	479614	535515	114,2	138,7	154,9
Oceania	30521	34411	41777	47191	112,7	136,9	154,6

Source: World Population Prospects: The 2000 Revision, Volume I: Comprehensive Tables, UNPD, New York 2002; forecasts by the Central Statistical Office (CSO) „Sytuacja demograficzna Polski. Raport 1999-2000", Warszawa 2000

Table 6. Population projections for the world, the regions and European countries up to 2050, continued

Region/ Country	2000	2010	2030	2050	2010	2030	2050
	Number in thousands						
Austria	8080	7953	7442	6452	98,4	92,1	79,9
Belarus	10187	9819	9149	8305	96,4	89,8	81,5
Belgium	10249	10296	10143	9583	100,5	99,0	93,5
Bulgaria	7949	7185	5787	4531	90,4	72,8	57,0
Croatia	4654	4650	4457	4179	99,9	95,8	89,8
Czech Republic	10272	10138	9509	8429	98,7	92,6	82,1
Denmark	5320	5374	5343	5080	101,0	100,4	95,5
Estonia	1393	1253	995	752	89,9	71,4	54,0
Finland	5172	5187	5084	4693	100,3	98,3	90,7
France	59238	61203	62935	61832	103,3	106,2	104,4
Germany	82017	81353	77678	70805	99,2	94,7	86,3
Greece	10610	10579	9955	8983	99,7	93,8	84,7
Hungary	9968	9489	8532	7486	95,2	85,6	75,1
Ireland	3803	4201	4877	5366	110,5	128,2	141,1
Italy	57530	56390	50776	42962	98,0	88,3	74,7
Latvia	2421	2288	2015	1744	94,5	83,2	72,0
Lithuania	3696	3594	3341	2989	97,2	90,4	80,9
Netherlands	15864	16313	16572	15845	102,8	104,5	99,9
Norway	4469	4614	4857	4880	103,2	108,7	109,2
Poland 1) UN	38605	38253	36577	33370	99,1	94,7	86,4
2) CSO	38664	38788	38025		100,3	98,3	
Portugal	10016	10082	9716	9006	100,7	97,0	89,9
Romania	22438	21819	20130	18150	97,2	89,7	80,9
Russian Federation	145491	136976	121420	104258	94,1	83,5	71,7
Slovakia	5399	5430	5224	4674	100,6	96,8	86,6
Slovenia	1988	1955	1794	1527	98,3	90,2	76,8
Spain	39910	39569	36428	31282	99,1	91,3	78,4
Switzerland	7170	7073	6563	5607	98,6	91,5	78,2
Ukraine	49568	45239	37618	29959	91,3	75,9	60,4
United Kingdom	59415	60262	61297	58933	101,4	103,2	99,2

Source: World Population Prospects: The 2000 Revision, Volume I: Comprehensive Tables, UNPD, New York 2002; forecasts by the Central Statistical Office (CSO) „Sytuacja demograficzna Polski. Raport 1999-2000", Warszawa 2000

As far as Europe is concerned, UN experts perceive an opportunity for demographic development in the first half of the 21st century only for Ireland (41% increase), Norway (9%), and France (4%). The rest of countries will be affected by depopulation, which will be aggravating as far as its intensity is concerned and also enlarging spatially. Whereas in the first decade of this century the number of inhabitants of 11 countries (the majority of which Western ones, although Slovakia also belongs to this group) will be on the rise (from 0.3 to 10.5%), in the years 2011-2030 it will be already only six Western European states that would be able to boast population growth (which in relation to the year 2000 will be from 0.4 to 28.2%). During the last two decades of the projection period only Ireland and Norway will stand out in this respect. It is assumed that in some of the European states the population may decrease by a quarter or even by one-half. With the exception of Italy, these are all countries undergoing transformation: Bulgaria (decrease by 43%), Estonia (46%), Ukraine (40%), the Russian Federation (28%), Latvia (28%) as well as Italy (25%). The UN experts foresee that Poland will undergo depopulation from the year 2000 onwards (Strzelecki, 2001). Poland's population is expected to shrink by more than 5 million (from 38,644 million in 2000 to 33,370 in 2050). According to the Polish forecast (up to 2030) a decline in population is likewise foreseen by Polish experts, however it is supposed to occur only after the first decade of the 21st century and its scope is expected to be lesser, that is the population of Poland is assumed to decrease by some 600 thousands in relation to 2000.

The decrease in women's fertility rate coupled with the prolongation of the life duration are the underlying causes for the changes anticipated to affect not only the size, but also the population composition in the future. Here the main focus will be on the changes in the age structure. This issue appears to be of special importance, because it entails significant socio-economic consequences (because of this reason, the other demographic processes analysed by the UN experts will not be taken into account here). The main challenge is the population ageing, which process concerns the world as a whole as well as the separate countries (Table 7). The population aged 60 and more will be expanding from the current 606 million to 2 billion in the year 2050, *i.e.* by 3.2 times. This development also means that the share of elderly people will double from 10% in 2000 to 21% in 2050. The speed with which ageing of the population will have an impact on the different parts of the world will be dissimilar, yet in the

light of the year 2050 it is Europe and Africa that can be distinguished from the other regions. In Europe each fifth inhabitant is at last 60 years old. However, in 2050 the share of 60 and more years old Europeans will probably about 37%. In Africa, in spite of the projection according to which the share of elderly people will increase twofold by 2050, people 60 and more years old will represent 10% of the population. In the remaining regions of the world elderly people will stand for 22-27% of the total population.

The European countries – when compared to the rest of the world – are characterised by ever deepening demographic ageing. In 2000 the share of elderly people ranged between 15.2% in Ireland to 23.2% in Germany and 24.1% in Italy. In the coming fifty years the share will grow by 50% to 100% or even more (the Czech Republic, Spain, Slovakia). The oldest populations in Europe will be living in Spain (60 and more years old will comprise 44%), Slovenia and Italy (42% each), Austria and Greece (41% each) and the Czech Republic (40%). Ireland's will be the youngest society (28%). According to the UN projection, the 60 and more years old population of Poland will grow from 6,4 million to 11,9 million, *i.e.* it will increase almost twofold; its share will expand from 16.6% in 2000 to 35.6%. The CSO forecast, which is based on more optimistic assumptions, foresees that the pace with which the population of Poland will age would be somewhat slower.

Table7. Population ageing in the world, regions and European countries

Region/ Country	Share of people 60+ years old in the total population					
	1980	**1990**	**2000**	**2010**	**2030**	**2050**
WORLD	8.6	9.2	10.0	11.1	16.5	21.1
Europe	16.0	18.2	20.3	22.1	30.8	36.6
Asia	6.9	7.6	8.80	10.2	16.8	22.6
Africa	4.9	4.9	5.10	5.3	6.70	10.2
North America	15,4	16.5	16.2	18.5	26.1	27.2
Central America	5,2	5.8	6.70	8.1	14.1	22.0
South America	6,9	7.4	8.20	9.8	16.2	22.6
Oceania	11.7	12.9	13.4	15.4	20.7	23.3

Source: World Population Prospects: The 2000 Revision, Volume I: Comprehensive Tables, UNPD, New York 2002; forecasts by the Central Statistical Office (CSO) „Sytuacja demograficzna Polski. Raport 1999-2000", Warszawa 2000

Table7. Population ageing in the world, regions and European countries, continued

Region/ Country	Share of people 60+ years old in the total population					
	1980	**1990**	**2000**	**2010**	**2030**	**2050**
Austria	19.1	20.1	20.7	24.3	36.7	41.0
Belarus	13.7	16.5	18.9	18.6	26.7	35.8
Belgium	18.5	20.5	22.1	24.5	33.0	35.5
Bulgaria	15.7	19.1	21.7	23.4	29.1	38.6
Croatia	14.8	17.1	20.2	21.7	27.8	30.8
Czech Republic	16,8	17.7	18.4	23.2	31.1	40.1
Denmark	19.5	20.4	20.0	24.0	31.4	31.8
Estonia	16.0	17.2	20.2	21.7	27.9	35.9
Finland	16.4	18.5	19.9	25.1	33.2	34.4
France	17.2	19.1	20.5	22.9	30.2	32.7
Germany	19.3	20.4	23.2	25.7	36.1	38.1
Greece	17.5	20.0	23.4	26.0	34.2	40.7
Hungary	17.2	19.0	19.7	22.2	28.4	36.2
Ireland	14.8	15.1	15.2	17.0	22.1	27.6
Italy	17.0	21.1	24.1	27.2	37.4	42.3
Latvia	16.5	17.7	20.9	22.8	29.4	37.5
Lithuania	14.3	16.1	18.6	20.8	29.3	37.3
Netherlands	15.7	17.3	18.3	22.1	31.8	32.8
Norway	20.3	21.0	19.6	22.5	30.6	32.3
Poland UN	31.2	14.9	16.6	18.8	27.2	35.6
CSO	10,1	14.9	16.7	19.0	26.7	…
Portugal	14,6	19.0	20.8	22.7	29.8	35.7
Romania	13.3	15.7	18.8	19.4	25.3	34.2
Russian Federation	13,5	16.0	18.5	18.4	27.1	37.2
Slovakia	13.4	14.8	15.4	17.7	26.4	36.8
Slovenia	14.2	17.1	19.2	22.8	34.4	42.3
Spain	14.9	19.2	21.8	24.3	35.0	44.1
Sweden	21.9	22.8	22.4	27.0	34.3	37.7
Switzerland	18.3	19.1	21.3	26.5	38.0	38.9
Ukraine	15.5	18.5	20.5	20.6	27.6	38.1
United Kingdom	20,1	20.9	20.6	23.4	31.7	34.0

Source: World Population Prospects: The 2000 Revision, Volume I: Comprehensive Tables, UNPD, New York 2002; forecasts by the Central Statistical Office (CSO) „Sytuacja demograficzna Polski. Raport 1999-2000", Warszawa 2000

Such an advanced ageing of the population in the European countries is becoming an immense challenge for economic growth as well as for GDP redistribution among the different generations. The group of people, who contribute to the GDP, is shrinking, while the number of beneficiaries is on the rise. Inter-continental migrations might mitigate the threat of tensions between generations, which are expected to surface in connection with the future difficulties with GDP redistribution. European societies face the tackling of immigration to Europe in the future. This is an issue which is increasingly dealt with by the European Council[6]. However, discussions have to turn into decisions. Besides, decision-makers should not overlook support to families who want to have children.

References

Council of Europe, 2001, *Recent Demographic Developments in Europe 2002*, Strasbourg: Council of Europe Publishing.

Government Population Council, 2002, *Informacja Rządu o sytuacji demograficznej kraju* (Information of the government on the demographic situation in the country, *Biuletyn* nr 47), Warsaw.

Kotowska I.E., 2002, Uwarunkowania rozwoju demograficznego Polski południowo-wschodniej oraz perspektywy do roku 2020 (Determinants of the demographic development of south-eastern Poland and prospects for the year 2020), in: Aktualne problemy demograficzne i szanse rozwoju społeczno-gospodarczego województw Polski południowo-wschodniej (Current demographic problems and opportunities for socio-economic development of the south-eastern voivodships in Poland), the seminar of the First Demographic Congress, October 2002, Kielce.

Population in Europe and North America on the Eve of the Millenium: Dynamics and Policy Responses. Regional Population Meeting, 7-9 December 1998, Budapest, Hungary, 1999, UN, New York and Geneva.

[6] 7th Conference of Ministers Responsible for Migration Affairs, Helsinki, 16-17 September 2002, Final Declaration

Lesthaeghe R. and D.J. van de Kaa, 1986, "Twee demografische transities?" in: D.J.van de Kaa and R.Lesthaeghe (eds.), *Bevolking: groei en krimp*, Deventer: Van Loghum Slaterus, 9-24.

Van de Kaa D.J., 1987, "*Europe's Second Demographic Transition*," *Population Bulletin*, Population Reference Bureau, Inc. Washington D.C.

Strzelecki Z., 2001, Polska a Europa. Procesy demograficzne u progu XXI wieku (Poland and Europe. Demographic problems at the threshold of the 21st century), in: Z. Strzelecki and A. Ochocki (eds.), *Polska a Europa. Procesy demograficzne u progu XXI wieku*, Warsaw.

United Nations, 2000, *Partnership and Reproductive Behaviour in Low Fertility Countries*, New York, ESA/P/WP.177.

Strzelecki Z., 2002, Problemy demograficzne Polski na tle sytuacji Europy (Demographic problems in Poland against the background of the situation in Europe], in: J.Hrynkiewicz (ed.), *Zadania samorządów lokalnych w rozwoju demograficznym* (The tasks of local self-governments in demographic development), RRL, WSEH, Skierniewice.

World Population Prospects. The 2000 Revision, 2002, Volume I: Comprehensive Tables, United Nation Population Division, New York.

Population trends in Central and Eastern Europe – an overview

Heinz Fassmann, Rainer Münz

1. Introduction

The main objective of that contribution is to present an overview over the demographic trends in Central and Eastern Europe. The fall of the „iron curtain" and the transformation of the economic and political system were the main reasons for the significant changes in the demographic regime. The overall decline in fertility and the shortening of the life expectancy in some countries are remarkable. They reflect the linkages between demography and economy. The main trends in the population development will reduce the migration potential and accelerate the ageing process.

2. Demographic trends in Central and Eastern Europe

In order to be able to complete an analysis on the necessity of transitional arrangements and the expected effects of these arrangements in Central and Eastern European (CEE) countries, until their citizens gain access to the labour markets of the existing 15 EU countries, a longer-term study should be undertaken. If, for example, the first ten states of Eastern Europe should join the EU in 2004 and the proposed transitional period of seven (five plus two) years comes into force, then it is necessary to analyse the demographic situation of the year 2011, in order to estimate the consequences of the then fully applicable freedom of establishment.

2.1. General situation

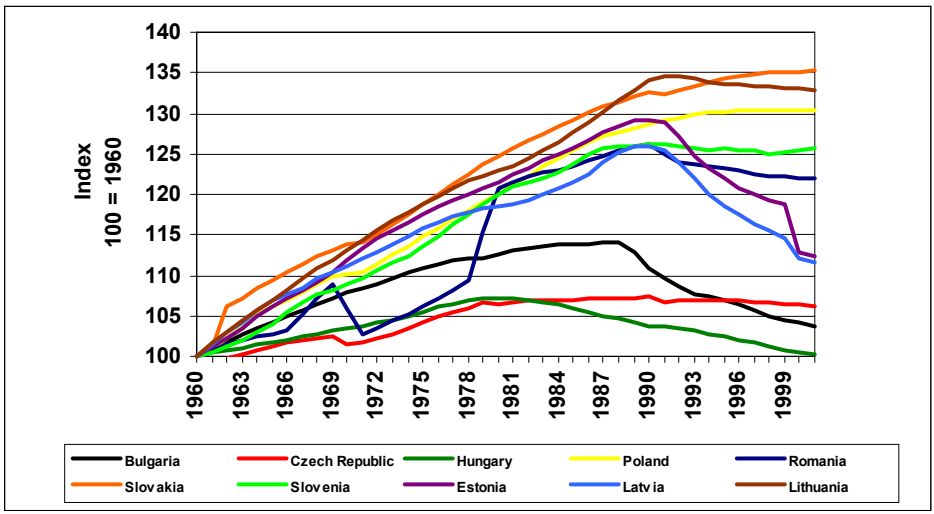
All CEE countries which have applied for EU membership and taken part in concrete accession negotiations (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic and Slovenia) have a stagnant or shrinking population. In the Baltic States as well as in Bulgaria, Romania, Hungary and Slovenia the population growth rates are to some parts considerably decreasing. In two countries – in the Czech Republic and in Poland – the total population has not

changed during the 1990s. Only the Slovak Republic experienced an increase of population during the last years.

The fall of the „iron curtain", but mainly the transition to market economy, led to sustainable demographic effects nearly everywhere. Decreasing population rates in Central and Eastern Europe are partly related to the decreasing life expectancy of men, but mainly to the drastically declined fertility rate. The transition of the political and economic systems led to a distinct change within the demographic settings.

Despite the considerable decline in the population growth of the Eastern European States, 102 million people are still living in the ten applicant countries of Central and Eastern Europe - 38,5 million alone in Poland. In comparison with the other applicant countries, Poland takes up an exceptional position. Poland has as many inhabitants as Spain and with an area of 313,000 km² it is as big as Italy. A bit more than 22 million persons are currently living in Romania; 10 million respectively in the Czech Republic and in Hungary. Bulgaria with its 8 million inhabitants is a bit smaller, just like Slovakia with 5 million. Latvia, Lithuania and Slovenia each have over 2 million inhabitants, Estonia only 1,5 million.

Figure 1. Development of the resident population in Eastern Europe 1960-2001 (Index; 1960=100; partly interpolated)



Source: Recent Demographic Developments in Europe, 2001; own calculations

Up till the 1990s the population of most of the CEE countries has grown due to comparably high birth rates. Only Hungry is an exception. Due to this development nearly all states show a relatively young population. The 0-14-year old account in total up to nearly 20 per cent, the over 60-year old account to around 18 per cent. This implies that to some extent that region currently still show a younger population structure than many Western European states. The proportion of children and young people in Germany, Austria and Switzerland is much lower in contrast to the proportion of people over over 60.

In Poland and Slovakia the share of persons under 15-year old is considerably higher than in other Eastern European States; in Bulgaria, Slovenia, Hungary and in the Czech Republic this rate is lower. The reasons why the quota of children and young people has decreased considerably in these countries are the earlier decrease in birth rates and – in the case of Bulgaria - the considerable emigration rate of many young families with children to Turkey during the period of 1989-92.

Table 1. Age structure in selected CEE countries, 2001

	Bulgaria	**Czech Republic**	**Hungary**	**Poland**	**Romania**	**Slovak Republic**	**Slovenia**	**Total**
0-14	1266533	1664434	1717243	7272985	4047454	1036425	313046	17318480
15-29	1776584	2401932	2268097	9421937	5409864	1353076	434786	23066276
30-44	1671945	2061918	2024845	8143538	4722709	1165967	459310	20250232
45-59	1660168	2243043	2058856	7355591	4015722	1008550	397660	18739590
≥ 60	1774238	1895219	1974183	6450160	4234708	838529	384932	17551969
Total	8149468	10266546	10043224	38644211	22430457	5402547	1990094	96926547
				in %				
0-14	15.5	16.2	17.1	18.8	18.0	19.2	15.7	17.2
15-29	21.8	23.4	22.6	24.4	24.1	25.0	21.8	23.3
30-44	20.5	20.1	20.2	21.1	21.1	21.6	23.1	21.1
45-59	20.4	21.8	20.5	19.0	17.9	18.7	20.0	19.8
≥ 60	21.8	18.5	19.7	16.7	18.9	15.5	19.3	18.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Recent demographic developments in Europe 2001; calculations: S. Marik

2.2 Trends in development

The decrease in population since the fall of the „iron curtain" results mainly from:

- emigration of labour force as well as of ethnic and religious minorities,
- a distinct decrease in the fertility rate leading to a lower birth rate, and finally,
- a stagnating or decreasing life expectancy (especially of men) leading to a higher death rate.

Immediately after the fall of the „iron curtain" the citizens of Central and Eastern Europe made extensive use of the newly gained freedom of movement. Several took this as a chance to emigrate at least for a short time to the West. Most of them travelled as tourists, some as merchants or labour force, but a lot also arrived in Western Europe as asylum seekers, civil war refugees or forced migrants. In the case of some migrants the idea of emigrating to Western Europe had actually been encouraged by one or more Western governments. Germany is such an example: from 1988 onwards Germany encouraged the people and opened their borders for a large number of family members of German minorities from Poland, Romania and the succeeding countries of the former Soviet Union. At that time also Jewish emigrants received admission to Germany.

Significant reasons for this immediate large increase in the migration flow were on the one hand to be found in the uncertainty of that time, whether the change of the political and economic system would be a success, in the question of its stability, and in the chance of gaining more prosperity by emigrating to the West, but on the other hand also in the uprising of national ethnic conflicts. The emigration movements especially affected Bulgaria, Poland and Romania. In the other CEE countries the officially and statistically recorded emigration rate was smaller, or it was balanced by the immigration from other states (for example, by ethnic Hungarians, migrating from Romania and the Serbian Vojvodina to Hungary).

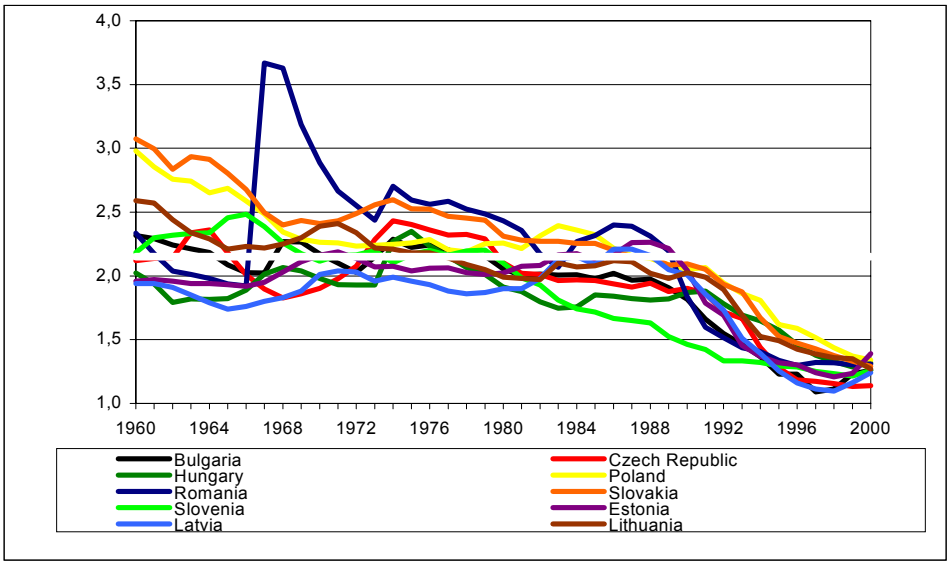
Much more important than the actual emigration rates were a decrease in fertility and an increase in mortality in some countries. The relatively poor economic conditions the elderly population was exposed to, the cut

in social benefits, especially the cut-back in basic medical treatment, led to an increase in the death rates and a decrease of life expectancy. In most of the CEE states the death rates reached record standards, especially in the first half of the 1990s. The male population was especially affected. Unemployment, impoverishment and the privatisation of the medical care go herewith hand in hand with an unhealthy life-style, alcohol and a growing number of traffic accidents.

After 1989/90 there was a considerable decrease in the fertility rates in all CEE countries. Within a few years the fertility rate sunk to or even below the level of Western Europe. Whereas in Western Europe a prolonged decrease in fertility was observed from the second half of the 1960s onwards in CEE countries, it remained at a high level until the 1990s. At the beginning of the 1970s fertility was actually partly above the replacement level. There were two major reasons for high (above the European average) fertility in that region up till the end of the 1980s. These are: the distribution of flats, which was related to marriage and a concrete family size, and the increase in the expenditures for social infrastructure. Additionally labour market arrangements offer opportunities of combining work and family life. Not until were the market economy and the radical changes within the political and social systems introduced than a significant decrease in the number of children was to be seen.

Towards the end of the 1990s the TFR was lower than 1.5 children per woman in all CEE countries. Even the very catholic Poland, where, in the mid 1980s women on average still gave birth to nearly 2.3 children, showed a decline down to less than 1.5 children. Towards the end of the 1990s, Slovenia, Bulgaria, the Czech Republic and Latvia showed the lowest fertility rate (Figure 2).

Figure 2. Average number of children (TFR) in Eastern Europe 1960-2000



Source: Recent demographic developments in Europe, 2001; own calculations

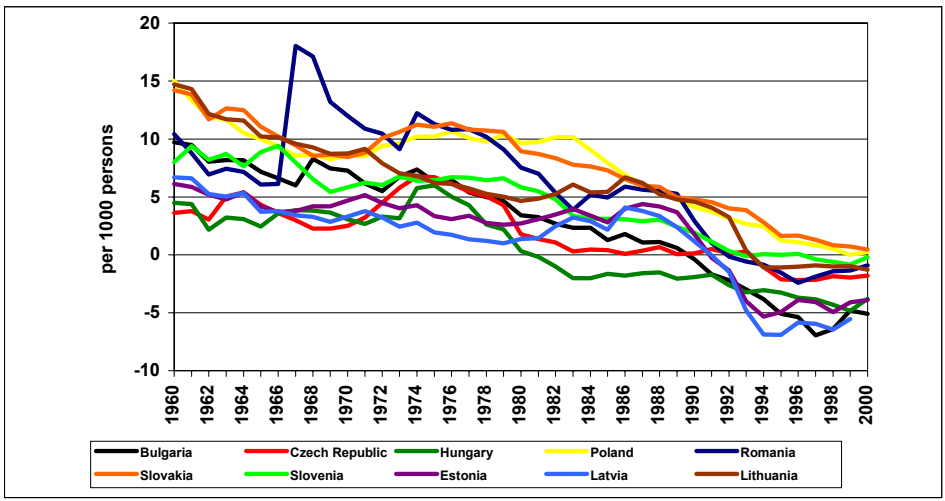
Fertility development has particular influence on the future workforce potential and therewith also on the number of potential and actual labour migrants – this based on the fact that in approximately 18 years the children born today will move from the education system to the labour market. The noticeable decrease in births since the 1990s will - with respective delay – lead to a lower number of employment seekers and will reduce the potential of possible East-West migrants.

Decreasing fertility and increasing death rates will sooner or later lead to a negative natural population growth. In most of the CEE countries the balance of births and deaths is already negative. Slovakia and Poland are the only two countries with a slight positive balance[1]. In the Baltic States and Hungary the balance of births and deaths is already significantly negative. It is therefore obvious that certain long-term effects will be set off by this trend and have implications on the population structure and workforce potential. Since the decrease in fertility in Central and Eastern Europe took place very quickly and within a very short period, the results can now be observed in a very disproportionate age-structure. All the

[1] In 2002 the natural increase in Poland was negative.

social services based on a balanced age structure are therefore currently confronted with severe structural problems. This concerns primarily the education system and - with some delay - also the state pension systems. At present the number of pupils is already significantly decreasing. Therefore some schools will be closed, but also a reduction in the number of classes and an improvement in the educational system will be undertaken. After 2005, when the nationals born during the post-war baby boom reach their pension age, the number of employable persons will decrease significantly. Due to the fact that the generations of baby bust start to enter the labour market. A relative decrease in the old-age pensions is expected to take place until this time.

Figure 3. Birth surplus / deficit 1960-2000



Source: Recent demographic developments in Europe, 2001; own calculations

Concluding, it is possible to predict, that the total population of nearly all Central and Eastern European countries is decreasing and will further do so in the future. In Hungary this has already been the case since the 1980s. In the Baltic States, the Czech Republic, Romania and Bulgaria the demographic decline started during the early or mid 1990s, in Slovenia towards the end of the 1990s. Poland and Slovakia will follow in the early 21st century. In the mid-term the national employee potential will decrease. In Hungary this is already the case just as in Estonia and Latvia.

The number of potentially employed persons will decrease in the Central and Eastern European states as soon as the nationals born after 1990 leave the education system. That must not necessarily imply that the emigration potential will decrease, but it does however contribute to the increase in possibilities to find employment in the own country. This could possibly lead to a positive economic development, additionally intensified EU accession and perhaps lead to an increase in demand for workforce. In 10-15 years it is predictable that some CEE countries will then themselves be trying to recruit workforce. Already today a labour migration on a small scale from Ukraine to Poland and Hungary can be observed.

Conclusion

Our demographic prognoses show clearly that in the 21st century neither Central nor Eastern European countries can be considered as countries of persistent mass migration to the present 15 EU member states, Switzerland or Norway. Irrespective of the economic development, migration potential from that region is in any way likely to decrease in the medium-term. With the market economy getting underway and with the radical changes in the political and social system there has been a dramatic decline in fertility everywhere. From 2005 onwards this decrease will have concrete effects on the labour supply in CEE countries. It will lead to a decline in the working age population and therewith reduce the existing migration potential. The decreasing numbers of graduates will lead to better chances for young people to find an adequate employment opportunities in the region. As a result the younger population will stop emigrating to the West or commuting.

References

Bauer T., K. Zimmermann, 1999, Assessment of Possible Migration Pressure and its Labour Market Impact Following EU Enlargement to Central and Eastern Europe, A Study for the Department for Education and Employment (United Kingdom), Bonn.

Brücker H. (unter Mitarbeit von H. Belitz, F. Bornhorst, P. Edin, M. Fertig, P. Frediksson, H. Hofer, E. Hönekopp, P. Huber, M. Kreyenfeld, P. Lundborg, U. Möbius, D. Roulstone, W. Schrettl, J. Schräpler, D. Schumacher, P. Trübswetter), 2000, Studie über die Auswirkung der EU-

Erweiterung auf die Beschäftigung und die Arbeitsmärkte in den Mitgliedstaaten – Final Report, Part 1: Analysis, Brüssel, unpublizierter Bericht

Council of Europe, 2001, Demographic Yearbook Edition 2001, Strasbourg: Council of Europe Publishing.

Fassmann H., R. Münz, 2000, Ost-West Wanderung in Europa, Böhlau-Verlag: Wien-Köln-Weimar.

International Organization for Migration (Hg.), 1999, Migration Potential in Central and Eastern Europe, Genf

OECD/Directorate for Social Affairs, Manpower and Education (Hg.), 1999, SOPEMI. Trends in International Migration. Continuous Reporting System on Migration, Annual Report 1998, Paris.

Okólski M., 1998, „Recent Migration in Poland: Trends and Causes“, in: K. Iglicka, K. Sword (Hg.), *The Challenge of East-West Migration for Poland*, Houndmills.

Okólski M., 1999, Migrant Trafficking in Poland. Actors, Mechanisms, Combating (in polish), ISS Working Papers, Seria: Prace Migracyjne 24, Warsaw.

Salt J., J. Clarke, S. Schmidt, J. Hogarth, P. Densham, P. Compton, 1999, Assessment of Possible Migrations Pressure and its Labour Market Impact Following EU Enlargement to Central and Eastern Europe, Migration Research Unit, Dept. of Geography, University College, London.

PART I FERTILITY CHANGE

Fertility and fertility regulation in Eastern Europe: from the socialist to the post-socialist era

Miroslav Macura and Alphonse L. MacDonald*

1. Introduction

This paper explores fertility and fertility regulation patterns in Eastern Europe, namely in all the countries that once belonged to the so-called Eastern Block, including those in the Caucasus and central Asia. It reviews the patterns during the socialist era then focuses on the post-socialist years, underscoring the differences between the two periods. Where appropriate, it contrasts the Eastern European patterns with those observed in western Europe during the last few decades. Additionally, the paper seeks to shed light on the effects on fertility and fertility regulation patterns caused by the broader political, economic and social conditions before and after the fall of the communist-led governments. The emphasis is on the effects of the transition to parliamentary democracy and the free-market economy. Although we do not consider ourselves proponents of the "economic determinism" school of thought, we pay particular attention to the economic changes underpinning the shifts in the fertility and fertility regulation patterns during the post-socialist era. Other papers in this volume draw on other approaches, including sociological perspectives, to the population changes in Eastern Europe during this era and we wish to avoid an overlap with those contributions.

A preliminary note on the geography of the region and associated data is in order. Within the region we distinguish six areas: central Europe; the Balkans; the Baltic states; the European CIS (Commonwealth of Independent States) countries; the Caucasus CIS countries; and the central Asian CIS states. The coverage of information on the fertility and family

* We express our gratitude to Leo Morris for providing us with an important study by the Centers for Disease Control and Prevention and ORC Macro which at the time of writing was in press; to Jean-Paul Sardon for making available to us some of the data on births by age of mother and parity used in the paper; to Enrico Bisogno, Annabel Tournon and Jelena Torbica for preparing tables and graphs used in the analysis; and to Marion Burkimsher for the linguistic editing of this paper.

regulation patterns varies across and within the six areas due to differences in data availability. Fertility patterns are more thoroughly covered in the first four areas than the Caucasus and central Asia. The coverage of fertility regulation patterns is more even, although the coverage for the Balkans is more limited than that of other areas. Data limitations, especially lack of relevant information for certain countries, posed significant constraints on the analysis.

2. Fertility and fertility regulation in the socialist era

As summarised by Preston (2001), one of the major outcomes of the First World War, which contributed to the turbulent political, social and economic developments during the decades leading to the Second World War, was the creation of the first socialist state - the Soviet Union. The new state, mainly on antagonistic terms with the rest of Europe during the inter-war years, led an existence of its own in isolation. Other Eastern European countries, however, shared in the developments of the continent. Also - and this is of particular interest to us - they shared in varying degrees in the ongoing fertility and fertility regulation changes.

Many of these countries experienced fertility declines during the 1920s and into the 1930s. During the Great Depression, Western European countries were more economically developed and better integrated into the world economy and, as a result, suffered relatively more than others. They were further along the path to low fertility and a number of them saw, for the first time ever, their period total fertility rates (TFRs) falling below replacement (2.1 children per woman). The resultant "[d]eclines in population growth were accompanied by an upsurge of concern about the size and health of the population and interest in eugenics, the 'science' of race improvement by judicious mating. Concern to reverse declines in population growth, and to improve the health of the human stock arose across the continent - from Fascist Italy and Weimar and Nazi Germany to Stalinist Russia" (Bessel, 2001).

Central, Eastern and Southern European countries, with the exception of Albania and some parts of the former Yugoslavia, displayed similar demographic patterns to the Western European countries. The secular demographic transition with declining birth and death rates was apparent in all countries that later formed part of the Eastern Block. Bulgaria, the

former Czechoslovakia and Hungary showed fertility trends similar to those of Finland and the Netherlands, while Poland, Romania and some parts of Yugoslavia experienced similar developments but with lower rates of decline (Mitchell, 1981).

In varying degrees, all the European countries participated in the ongoing debates about social issues, such as fertility control, social welfare measures, women's rights and the decriminalisation and legalisation of abortion. Although all contraceptive methods, except for the IUD and hormonal-based methods, were known, their availability to the wider public was limited and their use was rare. Early in the twentieth century family planning clinics for the working class and poor were opened in the Netherlands, the United Kingdom, Germany and the Nordic countries. Later they spread to other countries. Premarital consultation centres operated in several countries and provided advice on family planning matters. Condoms were mostly used as a preventive measure against venereal diseases outside marriage. Fertility regulation was achieved through the use of traditional methods and abortion. In 1920 the Soviet Union promulgated a liberal abortion law, which was severely restricted in 1936 in an attempt to reverse the fall in birth rate (Popov and David, 1999). Elsewhere abortion was illegal, although the way in which offenders, both women undergoing the procedure and physicians who performed it, were prosecuted varied widely.

One of the results of the Second World War was the emergence of the former Soviet Union as a superpower, the spread of its domination through Eastern Europe and the division of the continent into the two antagonistic Blocks. In time this division contributed to numerous and frequently stark east-west contrasts that deepened over time as the two Blocks travelled down their separate paths and increasingly drifted apart. Among the contrasts were those of fertility and fertility regulation patterns of the two Europes. These initially appeared to have similar features everywhere (except in the former Soviet Union), only to become increasingly different from the 1950s onward. Early on, some of the peculiarities of Eastern European fertility patterns were due to the fact that the transition from high to low fertility did not run its full course in a good part of this region until the 1960s - considerably later than in much of Western Europe. The specificities of fertility regulation patterns in all but very few of the Eastern European countries were caused by the fact

that the spread of modern means of fertility regulation lagged here, while legalised induced abortion became an important means of fertility control.

2.1. Socialist-era fertility patterns

The aftermath of the war saw fertility rising in practically all Eastern European countries (Berent, 1970a; United Nations Economic Commission for Europe, 1979). When compared with Western Europe's post-war baby boom, this increase - aided by family reunification and new marriage formation - was moderate and relatively short-lived. Fertility decline was already under way during the 1950s in much of the region. The pace of decline was faster in countries such as Poland, Romania and the former Yugoslavia, where fertility was initially higher. Hungary, Romania, Bulgaria and the former Czechoslovakia saw, in that order, their period TFRs dropping below replacement during 1957-1969, if only temporarily. The TFR in the former German Democratic Republic (GDR) approached replacement in the late 1950s, recovered somewhat subsequently and then sank below replacement in 1972. The former Yugoslavia followed suit in 1979; Poland did the same ten years later. Due to high fertility rates in central Asia and the Caucasus, the former Soviet Union did not see its TFR dropping below 2.1 before it dissolved.

The regional variations in fertility rates in the three former multi-ethnic federal states - the former Czechoslovakia, USSR and Yugoslavia - were substantial until the time of their dissolution. National averages disguised some remarkable early occurrences of sub-replacement fertility. It was almost the rule that early low fertility emerged, often temporarily, in the former republics and major provinces that were more economically developed as well as geographically and culturally closer to the West. The decline in the Czech region paralleled that of Hungary, resulting in sub-replacement fertility already in 1959. The Ukraine and Russia reached this stage in 1963 and 1967 respectively. The much smaller Estonia and Latvia, having reached sub-replacement fertility during the inter-war years, saw no further decline. Between the second half of the 1950s and the late 1960s, their fertility fluctuated below replacement (Katus, forthcoming). Parts of Serbia had fertility falling below replacement in 1958 (Macura, 1982), roughly at the time as neighbouring Hungary, while Croatia followed suit in 1962. Kosovo, however, a Serbian province

mainly populated by an ethnic Albanian population, had high fertility at that time.

Following the establishment of Soviet domination, Eastern European countries adapted their political, economic and social systems to the Soviet model. The necessity for economic reconstruction but without the support of the Marshall Plan, especially where devastation caused by the war was extensive, placed a heavy burden on these countries, which were already in turmoil because of the aftermath of the war and regime changes. The systems of central planning established throughout the region showed great variability due to the persistent influence of national priorities and preferences based on prevailing social and economic conditions and historical experience. Nevertheless, there were several common elements in the newly emerging situation of these countries which became increasingly integrated in the new regional economic structure. All these countries needed to respond to the demographic imperative of producing a labour force of sufficient size and composition to satisfy the demands of their industrialisation programmes. The proclaimed tenets of social justice and equality among citizens and the sexes warranted social welfare policies that would enable men and women to satisfy their basic needs, and allow them to contribute to the development of a socialist society. Nevertheless, in all Eastern European countries contradictions arose between individual social aspirations, including fertility desires, and the demographic needs of that society. The challenges posed by the different development requirements of the countries were partly responsible for the variability in their policy responses.

In the view of some authors, including Berent (1970b), Macura (1974) and Frejka (1983), certain key social and economic policies that were part and parcel of central planning created conditions conductive to small family size. These included income, employment and possibly legal abortion policies and they were driven by the overarching goal of rapid socialist transformation based on forced industrialisation. Judging by the state response to the spreading low fertility and falling population growth rates, the highest councils of the party and the state also realised that they were inadvertently promoting smaller families. The policies they designed and implemented to counteract this trend suggest that the prime causes were perceived to be the mass employment of women, low incomes and

living standards, as well as easy access to abortion. To counteract the falling fertility rates, policy measures were instituted to lessen the conflict between paid work and motherhood and to moderate the financial burden of children on the family. In some countries, housing policies were used as a means of encouraging early parenthood and larger family size. In more than one half of the countries, measures limiting access to legal abortion and, in the case of Romania, prohibiting it altogether were instituted. The use of modern contraceptive methods was encouraged in a few instances and reluctantly tolerated or even actively discouraged in others; in Romania's case, it was made illegal. In some countries the policies had overriding pro-natalist objectives, while in others they sought to combine these objectives with the aims of improving the welfare of families with children.

Where the policies were deemed indispensable for ideological, economic and/or welfare reasons and instituted with vigour, or even harshness, their effects were tangible but typically short-lived. Today they remain clearly visible in the fluctuations in the total fertility rate. In some instances these continued into the 1980s, with fluctuations being produced by fresh, often timely efforts to broaden the policies and/or enforce them with new vigour. In instances where fertility developments were not worrisome to the governing elite, *e.g.* in Poland and the former Yugoslavia, pro-natalist policies were generally not pursued, leaving fertility trends for the most part unperturbed.

The long-term effects of these policies are not readily ascertainable. The data published by the Council of Europe (2002) suggest that state intervention might have averted the spread of sub-replacement, especially very low fertility throughout much of the region. This occurred particularly where national or sub-national populations, typically of one Christian denomination or other, led the way towards small family size. The data reveal no steady and steep downward TFR trends between the middle of the 1960s and the middle to late 1980s, so typical of Western Europe at that time. Similarly, the same source reveals for these same populations either roughly steady or slightly falling or rising completed fertility for the female cohorts born between 1940 and 1955 to 1960. These were the cohorts that had most of their births during the years of active state intervention. Some authors believe there were long-term effects, especially as regards the impact on completed fertility. Frejka

(1980) and Kamaras (1995), the former more cautiously than the latter, concluded that the policies had contributed to higher completed fertility in the former Czechoslovakia and Hungary, but not by a large margin. Demeny (1999), however, offered a word of caution, stating that evaluations such as these "are made exceedingly difficult by the multiplicity of variables over and above differences in social policies that are influencing any particular demographic outcome".

There were other distinctive traits of fertility patterns in central and Eastern Europe during the socialist era. Five of them are particularly salient. Firstly, where the transition from high to low rates was completed - which was everywhere except parts of the Caucasus, central Asia and Southern Balkans - two children became the norm for most couples. Secondly, during the post-war decades, the age of entry into motherhood fell where it was initially relatively high (*e.g.* the former Czechoslovakia) while remaining by and large stable where it was initially low. The result of this cross-country convergence was a general early onset of motherhood. Thirdly, subsequent children arrived in relatively quick succession after the first. Consequently, although the average family size became relatively small, in most instances childbearing was completed early. Fourthly, childlessness was by and large rare. And fifthly, most of the births took place within marriage, although in a few instances the proportions of births occurring to unwed mothers varied between one and two out of ten. These characteristics of fertility patterns were associated with a first marriage pattern that took hold in the 1960s and 1970s - entry into marriage was early, swift and nearly universal. Writing about the Russian Federation, Avdeev (2001) summed up these broad generalisations regarding fertility patterns (other than the prevalence of marital childbearing) by using the motto, "Everybody, Early, Few and Quickly". Dorbritz and Philipov (forthcoming) draw similar conclusions from their analysis of fertility changes in the former socialist countries. As we shall see later, as regards the 1980s these generalisations warrant qualifications.

2.2. Socialist-era fertility regulation patterns

Contraception

Achieving sub-replacement fertility early on required that a large number of women consistently used effective fertility regulation methods. In the absence of pro-natalist population policies during the first post-war decade, the widespread belief that fertility behaviour was a private matter and that the promotion of family planning was not in accordance with the socialist ideology, countries failed to make arrangements to enable women and couples to realise their fertility objectives. There were no arrangements for appropriate sexual health education, information on contraception was scarce and, more importantly, no provisions were made to provide sufficient supplies of "approved" contraceptives. Only from the 1960s onwards did the former Czechoslovakia, the GDR and Hungary begin rectifying the situation. In other countries there was either insufficient production of contraceptives due to a lack of objective information on the needs of the people, or insufficient funds were made available to import commodities, mostly from other COMECOM countries, and exceptionally from the West. Towards the end of the socialist era, in some countries national contraceptive manufacturing was discontinued and imported commodities were either in short supply or had a prohibitive cost.

A series of surveys carried out during the period 1956 to 1986 shed some light on contraceptive prevalence and use patterns. As the surveys were not part of a centrally co-ordinated research programme, there are some variations in definitions of the population studied and key concepts that affect full comparability. Although all studies covered married women in reproductive ages, the age limits varied: "under 50" and "15-49" were generally used. Moreover, in the case of the former Czechoslovakia, the standard question on current use was substituted by questions on which method was "normally" used (United Nations, 1976; Berent, 1982).

The data illustrate the wide variability of contraceptive use, reflecting availability, in the different countries due to variations in policies. The surveys carried out during the 1970s show that in general the prevalence rate varied from 55 per cent for the former Yugoslavia in 1976 to 76 % for Bulgaria in the same year. The prevalence rate for the former

Table 1. Contraceptive use by women of childbearing age [a] in selected Eastern European countries, 1956-1986

Country	Survey Year	Prevalence rate (per cent)	Percentage of women contracepting by method								
			Pill	IUD	Sterilisation	Condom	Diaphragm	Withdrawal	Rhythm	Other [c]	Total
Bulgaria	1976	76	3	2	-	3	-	79	5	8	100
Former Czechoslovakia	1956	na	-	-	-	20	-	69	5	6	100
	1959	75 [b]	-	-	-	22	1	69	6	2	100
	1970	66 [b]	4	14	-	19	-	52	3	8	100
	1977	95 [b]	15	19	3	14	-	31	7	11	100
Hungary	1958	58	-	-	-	21	5	52	7	15	100
	1966	68	-	-	2	17	6	62	3	10	100
	1974	67	36	8	1	10	2	35	4	4	100
	1977	73	55	14	-	5	1	20	4	1	100
	1978	74	49	13	2	5	2	23	5	1	100
	1986	74	53	26	-	5	1	15	-	-	100
Poland	1972	57	4	1	-	17	-	49	23	5	99
	1977	75	10	2	-	19	4	25	41		101
Romania	1978	58	1	-	-	6	2	44	41	6	100
Former Yugoslavia	1970	59	9	2	-	6	-	73	3	8	101
	1976	55	9	3	-	4	-	65	8	11	100

Sources: Frejka (1983) and United Nations (1996)

Notes: - Not applicable.
[a] Respondents were currently married women of childbearing age, but the defined age limits of childbearing period differed.
[b] Standard definition of "current use" not adhered to, see Frejka (1983) note 32, p. 520.
[c] For example, chemical spermicides and douche.

Czechoslovakia in 1977 seems unrealistically high. Although withdrawal appears to have been the most commonly used method in all countries, the experience of the former Czechoslovakia, Hungary and Poland show that with the availability of modern contraception (pill, IUD and

condom), reliance on withdrawal diminished[1]. Poland and Romania also show considerable use of rhythm as a means of controlling fertility.

Induced abortion

Following a lead from the USSR in 1957, most countries introduced liberal abortion legislation, mainly to protect the health of women and which was intended to counteract the negative effects of clandestine abortion. However, there were great differences in the procedures to be followed to obtain induced abortion, from simple "on demand" through a vetting procedure by a medical and/or community committee. Measures in the areas of labour legislation, social welfare and health were enacted to promote and facilitate childbearing. However, many of these measures failed to promote increased childbearing because of liberal abortion legislation and access to contraception. Subsequently the legislation was periodically modified in response to perceived problems with low fertility and population growth rates. As suggested earlier, some policies produced sustained desired results, while others, like the abortion legislation, had far-reaching consequences both for the individuals concerned and the society. Romania, after a period during which access to induced abortion and modern contraceptives was free, introduced a repressive and rigorous pro-natalist policy, severely restricting both induced abortion and access to modern contraception.

In the absence of adequate supplies of modern contraceptives, couples relied on traditional methods and abortion, which during most of the time was more or less readily available in most countries. Albania did not follow this pattern and had, until after the demise of the Soviet Bloc, a restrictive abortion policy. Except in Albania, Poland, Romania and possibly the former Czechoslovakia, there was no strong opposition to abortion. It was a convenient arrangement for a convergence of interested parties, from the women or couples who did not have to take the necessary preventive measures, to the physicians and medical professionals who performed a useful service to society, and the political

[1] The former Czechoslovakia, Hungary and Poland had consistent policies to make modern contraception available to their citizens. Associations promoting family planning in those countries were affiliated to the International Planned Parenthood Federation (IPPF). The former Czechoslovakia, the former GDR and Hungary had considerable contraceptive industries, producing both for the national as well as the international market.

leadership which was promoting the welfare of women and safeguarding a sufficient supply of labour.

At that time, the Eastern European countries had the highest abortion rates in the world, although all countries experienced periods of restrictive access to abortion. However, there was considerable variability in the use of abortion by different countries, and also within countries between their different regions and between urban and rural areas. In four countries - the former USSR, Romania, Bulgaria and Hungary - women resorted with greater frequency to abortion than elsewhere. In spite of the introduction although erratic availability of contraceptives over time, it appears that only in Hungary, where there was a consistent policy of providing access to modern contraceptives, did the use of abortion decline after the mid-1970s. Even its level, however, remained high compared with Western European countries.

Table 2. Abortion ratio in Eastern Europe, 1960-1990 (induced abortions per 1000 live births)

Year	Bulgaria	Hungary	Romania	Former USSR	Former Czechoslovakia	Former GDR	Poland	Former Yugoslavia	Albania
1960	364	1107	2186	1240	406	3	225	177	na
1965	768	1356	3997	1707	344	41	308	447	na
1970	863	1267	685	1650	437	86	271	564	161
1975	832	495	859	1547	282	488	214	615	na
1980	1063	544	1036	1444	403	376	192	778	225
1985	943	630	844	1309	528	397	199	998	263
1990	1213	719	3153	1276	758	373	108	na	318

Sources: David (1999) and United Nations (1995)

Some observers have concluded that abortion was the main fertility control method in Eastern Europe. Although abortion was widespread and frequently used, Frejka (1983), analysing available information from demographic surveys from Bulgaria (1976), the former Czechoslovakia (1959 and 1970), Hungary (1966 and 1977), Poland (1972) and the former Yugoslavia (1970) for its effect on fertility, concluded that abortion had not been the main factor in determining the level of fertility.

Using the so-called Bongaarts proximate determinants method, he has shown that, in the countries considered, the inhibiting effects of marriage patterns and contraceptive use were more important than that of induced abortion.

Systematic data on the characteristics of women who resort to abortion are incomplete and scarce. Nevertheless for the last decade of the socialist era some information is available, which shows an interesting age pattern when comparing the Eastern European countries with those of the west, especially the Anglo-Saxon countries. Available data (Henshaw and Morrow, 1990) show that in 1987 in Bulgaria, the former Czechoslovakia and Hungary 7.8, 7.7 and 11 per cent of women undergoing an abortion were younger than 20 years, while 25.2, 23.5 and 16.7 per cent belonged to the 20-24 year age group. This indicates that the majority of abortions were carried out on older women. This contrasts sharply with the situation in the west, but especially in the Anglo-Saxon countries. In Australia (1988), England and Wales (1987) and the United States of America (1985) the corresponding percentages were 19.1, 24.9 and 26.2 per cent for the group younger than 20 years, and 28.1, 31.5 and 34.5 per cent respectively for the age group 20-24. There is partial evidence that the age distribution of women undergoing abortion was changing during the 1980s, with a modest increase in the younger age groups and a corresponding reduction in the older age groups.

With the improvement of health care in all Eastern European countries except Romania, abortion was generally carried out in a hospital setting and, as a result, maternal mortality was reduced considerably during the period 1950-90. However, because of periodic restrictions of access to abortion, and its outright illegal nature in Romania, without any compensatory enhanced access to efficient contraception, women continued to resort to clandestine abortion to a greater or lesser extent. The consequence was relatively high abortion-related deaths. Nowhere is this more apparent than in Romania, where after 1970 abortion-related deaths accounted for more than half of all maternal deaths; during the period 1980-88 this percentage varied between 84 to 89 per cent (Baban, 1999). Although the number of maternal deaths had been drastically reduced, the proportion of such deaths caused by abortion-related causes is still considerable.

3. Fertility and fertility regulation in the post-socialist era

The fall of the socialist regimes during 1989-91 set in motion a host of changes that profoundly changed the face of Eastern Europe. The former federal states of Czechoslovakia, the Soviet Union and Yugoslavia split into twenty-two new successor countries. The dissolution of the latter two states was accompanied by secession and civil wars, which even up to the time of writing have resulted neither in political stability nor in agreements resolving territorial disputes and the re-establishment of integrity of some of the new countries. These include the three Caucasian countries - Armenia, Azerbaijan and Georgia - and the two successor countries of the former Yugoslavia - Bosnia and Herzegovina and Serbia and Montenegro. In some instances, for example in Estonia and Latvia, the status of ethnic minorities is not yet fully settled.

The change of the regimes resulted in momentous political, economic and social reforms, which were underpinned by profound institutional changes. The political reforms brought about parliamentary democracies, ranging from solid to weak, and in the reinstatement of pre-war freedoms and civil rights or their introduction in the post-Soviet countries where they had barely begun to take hold prior to the Bolshevik Revolution. Economic reforms tackled the problem of converting the inefficient and stagnant centrally planned economies into dynamic free-market economies, resulting in economic restructuring and crises of varying intensity and duration. Being largely influenced by economic reforms and their consequences, social reforms, and in particular, social policy changes resulted in a myriad of adjustments, some radical, others perfunctory, in the extensive “cradle to grave” programmes and policies of the former socialist regimes.

These various historic developments had profound effects on fertility and fertility regulation throughout Eastern Europe. We turn to them next, describing them and seeking to shed light on how the post-socialist transformation influenced them.

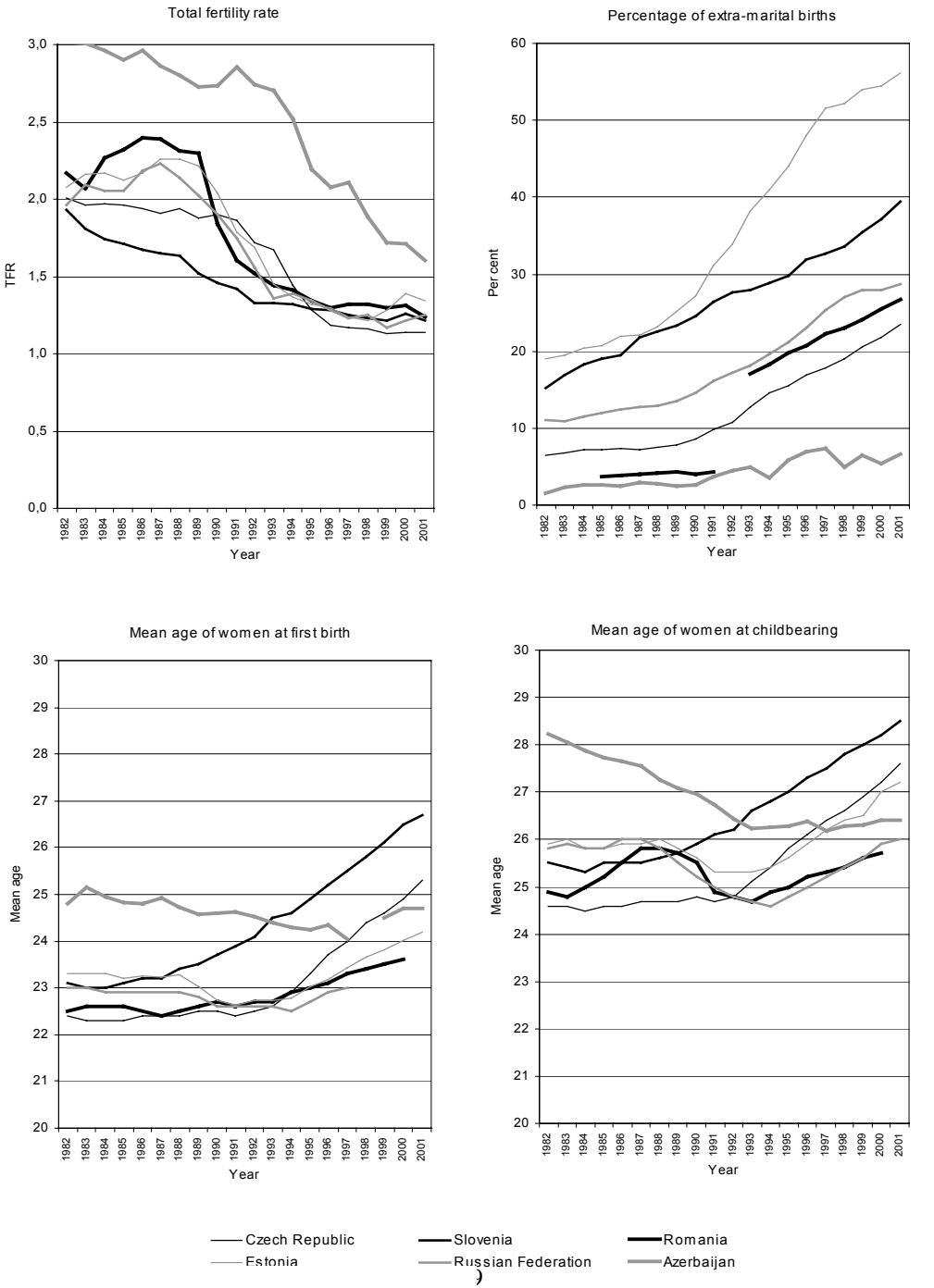
3.1. Post-socialist-era fertility patterns

Decline in period fertility

The transformation of reproductive behaviour during this transition era has been profound, resulting in fertility patterns in much of the region increasingly resembling those of Western Europe. The most striking aspect of this transformation was a sharp fertility decline to very low levels during the 1990s in a number of transition countries. These were predominantly countries whose populations had completed the transition towards replacement fertility by the 1980s. Prior to the decline, during the 1980s, these populations had witnessed mostly moderate shifts in fertility. Some of these changes had been upward, at least for a while. Such developments occurred in Hungary and Romania, the European Soviet republics, Armenia and Georgia. In other cases, for example in central Europe and throughout the former Yugoslavia, the trends were downward (Macura *et al*., 2002)[2]. The sudden shifts towards lower levels occurred around 1989, the year when the former socialist regimes began falling. The former Yugoslav republics were an exception, where the previous mostly moderate downward trends continued unabated as the country began to disintegrate as a result of secession and civil wars. This does not necessarily apply to Bosnia and Herzegovina for which the data are not available for the first half of the 1990s. In the predominantly Muslim countries of the region, the completion of the fertility transition continued largely unabated. These trends are presented for selected countries in Figure 1 along with trends for the same countries in other fertility indicators.

[2] This and another study conducted by M. Macura and colleagues referred to in this paper and are cited using the specific names of the authors of the studies rather than the corporate author, the United Nations Economic Commission for Europe. They were published by the United Nations Economic Commission for Europe in *Economic Survey of Europe 1999 No. 1* and *Economic Survey of Europe 2000 No. 1* respectively. The reason for this comment is that in a few recent papers the studies were attributed solely to M. Macura rather than, as would have been appropriate, to him and the other authors. This rectifies the situation.

Figure 1. Fertility indicators in selected Eastern European countries, 1982-2001



The specific year when the steep fall began could clearly be distinguished in Bulgaria, the former GDR, the Czech Republic, Hungary, Poland and Slovakia. The trend towards very low fertility started in Bulgaria in 1989 or 1990 and in the former GDR in 1990. In the Czech Republic, Hungary, Poland and Slovakia it began in 1992. These dates could less easily be pinpointed for the republics of the former Soviet Union and Romania. The Soviet Union introduced a package of enhanced family policy measures during 1981-1983, while Romania strengthened its coercive pro-natalist measures around 1984. This sent period rates up in both countries before they began to descend again, thus making it difficult to determine the beginning of what could be considered as the onset of the sharp decline towards very low fertility. In Romania and most of the European Soviet republics it appears that 1989 or perhaps 1990 could be accepted as the years of the onset of decline (Macura *et al*., 1999). In Armenia and Georgia, the onset of the sharp downward trend lagged by a few years. In sum, for most of these countries the years in question span the four-year period 1989-92, which, in turn, is centred on the interval of just over two years during which the former socialist regimes fell, between late 1989 and the end of 1991. The overlap of the onset of the rapid fertility decline and the fall of regimes for these countries as a group appears almost perfect.

By 1999, ten years after the decline started, it had largely run its course, with TFRs as a rule falling more precipitously in the early 1990s than later. This is true for all the European transition countries but not for those in the Caucasus region or central Asia. More specifically, the majority of the European transition countries were seeing their declines decelerating or coming to an end towards 1999. The results were some of the lowest TFRs ever recorded: 1.09 in Bulgaria in 1997, 1.13 in the Czech Republic in 1999, 1.10 in Latvia in 1998, 1.21 in Russia in 2000, not to mention 0.77 in the former GDR (now East Germany) in 1993 (Council of Europe, 2002). In a few - Bulgaria, Belarus, Estonia and Latvia - the end of the decline came in 1997 or 1998, after which a recovery followed. It appears, however, that the recovery is not being sustained, as it stalled after two or three years. It resulted in TFRs higher by 0.10 to 0.15 births per woman in all four countries but Belarus, where the increase was less.

In the year after which the recoveries began to take place - 1997 - the mean period TFR for the European transition countries (excluding Albania and Bosnia and Herzegovina but including East Germany) was 1.37, a level one-third lower than that in 1988. The mean for all Western European countries having a population of more than a million was 1.55 in 1997, only slightly lower than that of ten years earlier. Thus, within less than ten years the European transition countries became the leaders in what over the past few decades had become a pan-European drift toward ever-lower fertility. Clearly, the magnitude and pace of the recent abrupt fertility declines in these countries have shifted the centre of gravity of fertility change in Europe to the east (Macura *et al*., 2002).

Ageing of fertility

In low-fertility settings a decline in fertility often goes hand in glove with ageing of fertility, in particular with the postponement of the onset of motherhood and a delay in childbearing in general. All the present day transition countries whose populations had their fertility around replacement level in the early 1980s saw their fertility ageing towards 2000-2001. However, the trajectories of ageing judged by both the mean age of women at first birth and the mean age of childbearing have been anything but uniform. We focus below on the changes in the mean age of onset of motherhood, which were closely associated with changes in the mean age of childbearing.

Among the leaders towards older fertility were the successor states of the former Yugoslavia. This happened in all except Bosnia and Herzegovina, for which limited data suggest that it did not move in step with the other former Yugoslav republics. Slovenia, followed by Croatia, moved swiftly forwards during the 1990s, building on similar but less pronounced trends in the 1980s. The age of onset of motherhood in the two approached or surpassed 26 in 2001. Serbia and Montenegro and the former Yugoslav Republic of Macedonia trailed behind after experiencing limited, if any, ageing of fertility during the previous decade. To the north, Hungary followed a trend very similar to that of Croatia.

When the Czech Republic, Poland and Slovakia joined the trend, roughly at the same time as when their fertility began falling sharply in 1992, the development was fastest in the Czech Republic, paralleling that of

Slovenia in the second half of the 1990s and outpacing the rest of the transition countries. As regards the pace, Poland and Slovakia trailed behind but the two moved in step. Around the same time, but three years after seeing the onset of rapid fertility fall, Bulgaria joined these three countries at a pace comparable to that of Poland and Slovakia. As regards the age of the onset of motherhood, the Czech Republic caught up with Hungary's of somewhat above 25 in 2001, but they both trailed Slovenia, which had had a head start, by about a year and a half. Significantly enough, however, the Czech Republic, Poland, Slovakia and Bulgaria saw no significant trend toward ageing before their fertility fall began; in fact Poland experienced a mild trend in the opposite direction. For these four countries, the break with past fertility levels and age structures of fertility was truly sharp.

The ageing of fertility in the successor states of the former Soviet Union and Romania exhibited a quite different pattern. A broad-brush picture reveals a trend towards younger fertility in the former Soviet republics in Europe and the Caucasus in the years following the onset of rapid fertility decline. Then followed a bottoming out and a shift towards older fertility. The movement towards younger fertility was a continuation of a trend that had emerged at least a few years earlier. The bottom of the depression was reached earlier in the Baltic states than the European CIS countries - in Belarus, Moldova, Russia and the Ukraine - and the Caucasus. The subsequent ageing was faster in the Baltic countries, led by Latvia, than in the other post-Soviet countries, where Russia appears to have emerged as the leader. The age of onset of motherhood in the Baltic states nevertheless trailed that of many of the central European and Balkan countries considered earlier. Lastly, the case of Romania is odd: during the 1990s the age of entry into motherhood moved upward, and that of childbearing did the same, although only after dropping sharply for a few years following the onset of the fertility decline.

In sum, the ageing of fertility followed widely different time patterns, nevertheless resulting in consistently older fertility by around the year 2000. As we shall see later, these patterns have been associated with the declines in period fertility in a variety of ways. These declines have ranged between those primarily driven by a postponement of childbearing, to those that had nothing to do with them, at least for some years after the onset of the rapid decline. This brought about a somewhat

larger dispersion in the age of onset of motherhood and of childbearing in 2000 than that at the end of the 1980s.

S*pread of extra-marital childbearing*

Towards the end of the 1980s half of some 22 future transition countries for which the data were available to us (Council of Europe, 2002) had had one or more out of ten children born to unwed mothers. In all of them but Lithuania the share of babies born out of wedlock rose during the 1980s, in some of them sharply. By the time the regime changes began it was, however, only in Estonia, Slovenia and the former GDR that the proportion of extra-marital births was two out of ten or above. The next decade saw a radical shift upward: by 2000-01 two-thirds of the 21 countries for which the data are available or whose trends can pretty safely be extrapolated appear to have surpassed this level. The data show that Bulgaria, Georgia, Latvia and Slovenia approached or just about surpassed four out of ten. Estonia was closing on six out of ten, having overtaken Norway and Sweden, the west European champions of extra-marital childbearing. In absolute terms, the shift during 1989-2001 was particularly large in Bulgaria and Lithuania - a 3.7-fold increase - and in Hungary and Latvia - a 2.6-fold growth. However, these increases are dwarfed by the 7.2-fold jump in Romania, up from a four per cent share of extra-marital births in 1991.

Clearly, in many countries for which information is available - note that it is unavailable or very fragmentary for Albania, Bosnia and Herzegovina, Tajikistan and Uzbekistan - it became increasingly irrelevant as to whether or not a woman was married when having a child. However, we should not lose sight of the fact that in several of the countries the information shows that in spite of gradual increases in the prevalence of extra-marital childbearing, it remains rare. These countries include Azerbaijan, Bosnia and Herzegovina, Croatia, Poland and the former Yugoslav Republic of Macedonia. In 2001 all had fewer than one out of ten births to unwed mothers except Poland which had just over one in ten. Bosnia-Herzegovina was the only country that showed a gradual fall in the proportion, which happened during a three-year period after the war there came to an end in 1995. Although religion may play a role in countries like these, interestingly enough the percentage of births

occurring to unmarried mothers reported in Kazakhstan and Kyrgyzstan shot up to the low and high twenties respectively.

A closer look into fertility decline

Bongaarts and Feeny (1998) recently showed how to circumvent the difficulties of analysing fertility trends based on period TFRs in the presence of changes in the timing of fertility. The procedure they have devised, which is based on a seemingly restrictive assumption, enables one to derive TFRs that are by and large unaffected by changes in timing - the so-called adjusted TFRs. After exposing the procedure to a battery of tests, Philipov and Kohler (2001) concluded that for many practical purposes, the results obtained by the procedure are sufficiently robust to warrant wider application. Advantages of the procedure appear to greatly outstrip any possible disadvantages. Philipov and Kohler (2001) used it to analyse fertility trends in Bulgaria, the Czech Republic, Hungary, Poland and Russia during a good part of the 1990s. Philipov (2001) extended the area under study by adding Lithuania and Slovakia, while Dorbritz and Philipov (forthcoming) further added Croatia and Romania. Sardon (2001) also analysed many of the same countries and in addition Serbia and Montenegro, Slovenia and the former Yugoslav Republic of Macedonia. Importantly, his work covered both the 1980s and the 1990s. Avdeev (2001) performed the same type of analysis for Russia but for a much longer period - from the late 1950s to the late 1990s. We built on these previous studies, calculating the various Bongaarts-Feeny indicators anew for the countries studied by these authors and expanding the geography of the analysis to include the two other Baltic states, Estonia and Latvia, as well as several other CIS countries - Armenia, Azerbaijan, Belarus, Kazakhstan, Moldova and the Ukraine. We focused on the period since the early 1980s. The expansion into the former Soviet Union came at a price: many countries had a lack of data, and so we had to settle for intervals whose earliest year and duration varied greatly country to country[3].

The results we arrived at mirror the shifts in the ageing of fertility discussed above, which was to be expected. More importantly they

[3] The periods were as follows: Armenia, 1988-97; Azerbaijan, 1982-97; Belarus, 1991-97; Estonia, 1986-2000; Latvia, 1982-98; Kazakhstan, 1991-93 and 1995-97; Moldova, 1990-1997; Ukraine, 1982-94. All these periods encompass the critically important first half of the 1990s.

greatly enrich the picture; the results for six selected countries are presented in Figures 2 and 3. As suggested earlier, the successor states of the former Yugoslavia, except Bosnia and Herzegovina, had experienced the postponement of childbearing since some time in the 1980s. This caused period TFRs - observed TFRs in Bongaarts-Feeny terminology - to fall faster than would have been the case in the absence of a delay. A positive tempo effect emerged in Slovenia in 1984 and grew stronger in subsequent years, peaking at about 0.5 children per woman in the second half of the 1990s. Had Slovenia not experienced strong postponement, its TFR would have approached, although only temporarily, 1.8 children per women in 1997. In Croatia and Serbia and Montenegro the positive effect emerged in the 1980s, grew stronger later in the decade, peaked in 1992 and then abated somewhat. It was in 1992 that the wars in Croatia and Bosnia and Herzegovina, in which Serbia and Montenegro were deeply involved, were in full swing. The tempo effects in the former Yugoslav Republic of Macedonia, positive but weak through much of the 1980s, grew stronger after 1992, after the former republic peacefully broke away from the disintegrating state. It appears that these Bongaarts-Feeny estimates are capable of shedding light from a fertility-change vantage point on the demise of the former Yugoslavia.

The countries that emerged from the collapse of the former Soviet Union also show broad similarities in terms of changes in quantum and tempo effects. This is true of the Baltic states, the European CIS countries and the two Caucasian countries for which information is available - Armenia and Azerbaijan. For the others, including the five central Asian countries, we have no information. In the former two groups of countries, the years following the guesstimated onset of rapid fertility fall were times of rapid quantum decline countered by negative tempo effects. In 1989-90, Estonia, Latvia and Russia experienced some of the strongest negative tempo effects, of between -0.2 and -0.3 children per woman. During 1987-88 Lithuania's tempo effect was around -0.5. This state of affairs, which is more complex than can be described here, lasted until around 1993-95.

Figure 2. Observed and adjusted total fertility rates and the difference between them in selected Eastern European countries, 1982-2001

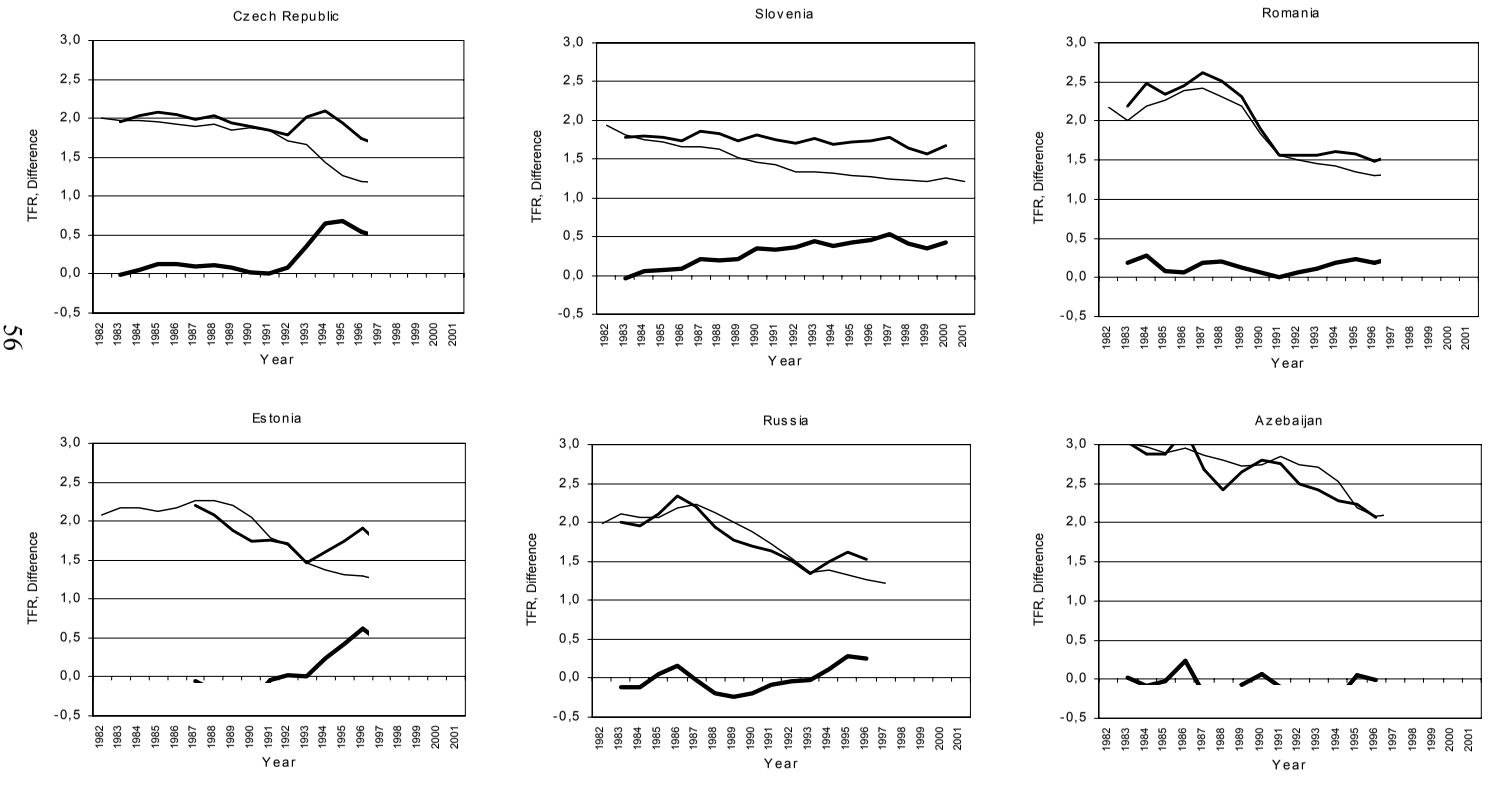
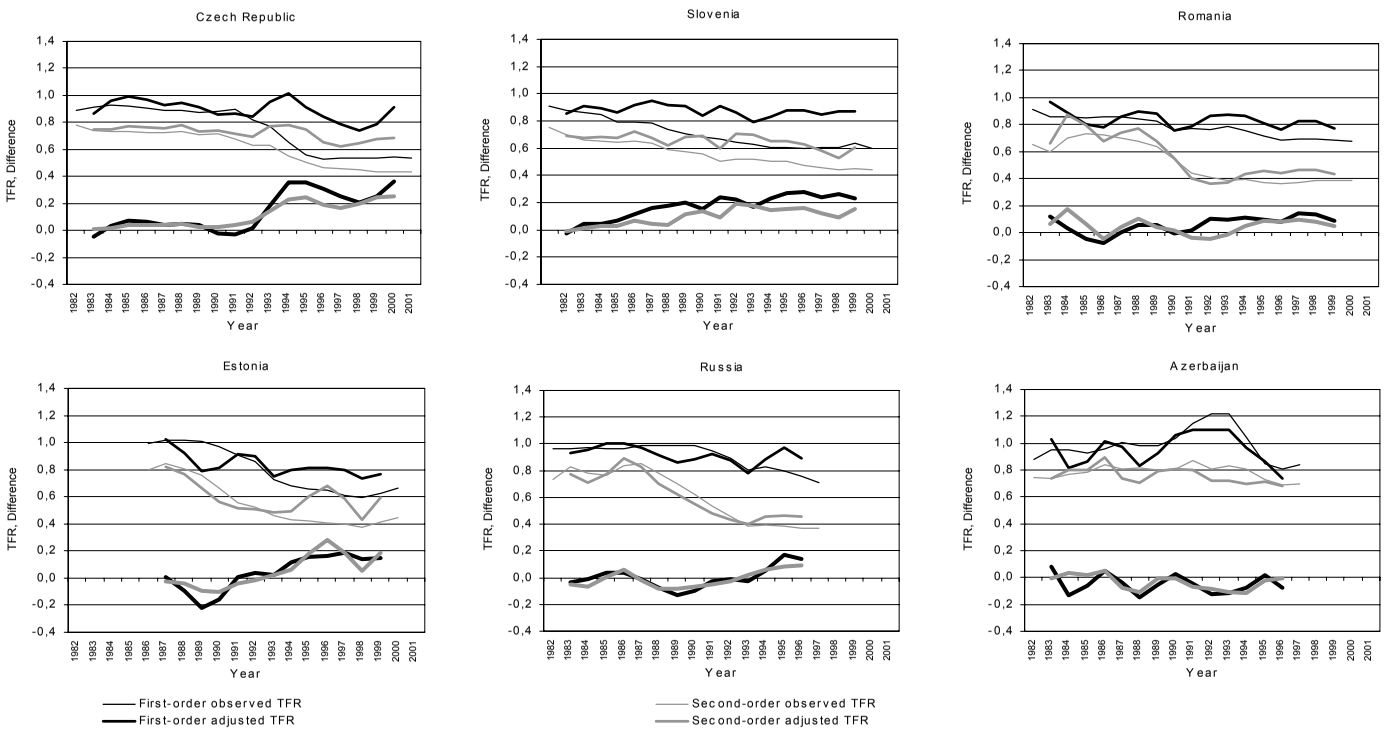


Figure 3. First- and second-order observed and adjusted total fertility rates and the difference between them in selected Eastern Europen countries, 1982-2001



It is important to note that the negative tempo effect emerged around 1987. Its appearance, *i.e.* the advancement of fertility, could perhaps be perceived as a reaction to a temporary postponement that preceded it, which, in turn, arrived on the coat-tails of an earlier advancement triggered by the introduction of pro-natalist measures during 1981-83. Why it endured until 1993-95 in the face of the sharp quantum drop is more difficult to comprehend. It is worth remembering that during this period the former Soviet Union went through a period of political and economic instability in stark contrast to the relatively stable period of domestic politics beforehand. We will consider this in more detail later.

During 1993-95 a positive tempo effect emerged and as a rule grew in strength subsequently. In some of the Soviet successor states it reached 0.3-0.5 children per woman for some years during the second half of the 1990s. In other words, the postponement of fertility began to play a role in the unfolding decline of the TFR, specifically after the end of the period of steep descent. Had there been no postponement, for example in countries where it was strongest, *e.g.* in the Baltic States, the TFRs would have been around 1.5 in the second half of the 1990s.

The rest of the transition countries display a variety of experiences. In Hungary, a relatively weak positive tempo effect was present at least after the beginning of the 1980s. Its effect grew stronger after 1992 and matched Slovenia's peak in 2000 when the adjusted TFR peaked at slightly over 1.8. In the Czech Republic, simultaneously with the onset of rapid fertility decline, a positive tempo effect suddenly emerged, shot up to nearly 0.7 in 1994-95, then fell only to recover to the same level in 2000. The adjusted Czech TFR in 2000 was comparable to that of Hungary. Slovakia exhibited a broadly similar but considerably weaker time pattern of change in the tempo effect. Poland also saw the emergence of a positive effect in 1992, which had been preceded by a slight negative effect, but during much of the 1990s the effect was stable around 0.3 children per woman. Bulgaria's and Romania's experiences are somewhat different from those of central Europe and were more similar to those of the Baltic and European CIS countries. After being positive and relatively weak during much of the 1980s and disappearing in 1991, the tempo effect reached by 1994-95 was about 0.3 and 0.2 respectively.

Before trying to pull these threads together, we need to follow in the footsteps of Philipov (2001) and Dorbritz and Philipov (forthcoming), and take a look at the developments in birth-order-specific TFRs. Here we will summarise them, focusing on first- and second-order rates, TFR1 and TFR2, rather than discussing them in any detail. As we do so, we make the rough and ready assumption that a TFR1 below 0.9 is a fairly clear yet imperfect indication of the presence of voluntary childlessness. Where necessary we will also comment on adjusted order-specific TFRs.

Prior to the onset of rapid decline, all the former Soviet republics for which the data are available had TFR1s solidly above the specified borderline level, a situation that had existed since at least the early 1980s. Similarly, TFR2s were also relatively high, mostly in the range 0.7-0.8. This combination of first- and second-order rates underpinned the existence of the two-child norm. All this had changed by the second half of the 1990s. The Baltic states' TFR1s were in the range 0.60-0.65 around the year 2000 and their adjusted TFR1s below 0.8 a year or two earlier.

Their TFR2s fell to 0.45 or lower, while the adjusted TFR2s were all below 0.6. The European CIS countries (most of our results for these end in the middle of the second half of the 1990s) displayed the same general trend, although they appear to have lagged behind the Baltic countries. The same is broadly true for Armenia and Azerbaijan, the latter of which appears to lag behind the Baltic and the other European CIS countries. In sum, we can conclude (though tentatively due to data limitations) that the former Soviet republics had bid a farewell to its earlier pattern of rare childlessness and the two-child norm.

In the other transition countries, just before rapid fertility decline began in those that experienced it, and already in the late 1980s in the former Yugoslavia, TFR1s below 0.9 were the norm. The lowest were those in Croatia, Hungary and Slovenia with an approximate range of 0.75-0.80. However, most of the adjusted TFR1s were generally 0.9 or lower. As a rule, TFR2s were lower than those in the former Soviet Republics, and the corresponding adjusted rates were also not much higher, if at all, than the observed TFR2s. Clearly, the break with the almost universal motherhood and the two-child norm in most of these countries had already taken place or was under way between the late 1980s and early 1990s. By the end of the 1990s this process had deepened.

A new fertility regime

Some ten year after the abdication of the Eastern European communist-led governments, a new fertility regime had taken hold in this part of Europe. The unfolding of the new regime in many of the countries, including most probably also those in central Asia is still under way; nevertheless, its key features, recently summarised by Philipov (2001) and Dorbritz and Philipov (forthcoming) are starkly different from those of its socialist-era counterpart. Firstly, the two-child norm continues to melt away: the two-child family is now a relic of the past in most of the region. Secondly, the postponement of childbearing, reflected by the ageing of fertility, is permeating the region, bringing it closer to Western Europe trends. Thirdly, almost universal motherhood is also disappearing rapidly, almost everywhere where near-replacement fertility became established relatively early. It appears that this process had begun prior to the fall of the communist-led governments everywhere except the former Soviet
republics. And fourthly, marriage is increasingly no longer a prerequisite for motherhood. However, there are a few countries that do not share in this latter trend. In this respect, Eastern Europe has much in common with Western Europe, where extra-marital childbearing is far from becoming common everywhere.

In search of interpretation

Explaining the shift from the old to the new fertility regime of Eastern Europe is an extremely tall order. We posses neither sound theory nor adequate data to contemplate, let alone attempt, such a lofty task. Besides, even if we had both, embarking on it would be out of the question, as the results would not fit into a paper requested for the present volume; it would require a volume of its own. Our aim must, therefore, be far more modest. In what follows we shall seek only to shed light in a succinct manner on conditions that could have contributed to the fertility decline considered above, giving additional or different insights from those thrown on the subject in various recent works. Among these are Philipov (2001), Sobotka (2002) and Dorbritz and Philipov (forthcoming).

Let us, however, start by explicitly stating key premises of the analysis that follows. Firstly, the onset of post-communist transformation in

Eastern Europe - the launching of the multifaceted reforms aimed at transforming centralised, one-party, centrally-planned Stalinist societies - did not necessarily coincide with the fall of the communist-led regimes. In some countries its onset was not an event that could be neatly associated with the regime falling on this or that date, even a year as famous as 1989, but rather it was a process, the duration of which varied from country to country. Secondly, it does not suffice to try to identify the conditions that brought fertility from around replacement to very low levels. It is preferable to seek to understand the conditions that initiated the decline, sustained it and brought about very low and generally stable fertility levels by about 2000[4]. Admittedly, this must be an exceedingly elusive aim but should nevertheless be identified as an aim. Thirdly, the Eastern European region, vast and heterogeneous as it is, is better viewed as a collage of countries that have been to varying degrees successful in their pursuit of multifaceted reforms, rather than a dichotomy of countries - those that are successful and those that are not. And fourthly, we shall rely on the alternative theoretical frameworks that McDonald (2001) recently proposed for the study of reproductive behaviour in low fertility affluent Western societies as a promising starting point, which we then adapt to Eastern European conditions.

Frameworks

McDonald's first theoretical paradigm - the demand for children theory - is the one proposed by Becker (1981). In a nutshell, according to it, whether or not a couple choose to have a child is the result of their calculation as to whether or not the benefits of a child outweigh the costs. According to Coleman (1998), the benefits can be safely assumed to be purely psychological, equalling the differences between psychological gains and psychological losses associated with a child. People draw satisfaction not only from children but also consumption, including goods, services and leisure. Given the utility function, which depicts preferences for children versus consumption, the number of children a couple will have depends on the couple's resources, which roughly equal earnings and transfers - public and private, monetary and in kind - accruing to the couple, less the taxes they pay. It also depends on the

[4] This point is inspired by McDonald (2001) who recently argued that students of fertility transition theory should concern themselves not only with the question of what was behind its onset but also its progression and end.

costs of children, direct and indirect, the latter typically being opportunity costs. All these variables are liable to change over time and, as a result, so is a couple's demand for children.

"Risk and opportunity [which is McDonald's second paradigm] add another dimension to the demand theory." As having a child is the start of parenting stretching many years into the future, and since the future is uncertain, and increasingly so, risk aversion is a mindset that gains ground. Reich (2001) argues that risks are an outcome of the "new economy" and that they are spreading as the "new economy" continues to permeate society. But they go hand in hand with new opportunities, which if not seized upon today may not be there tomorrow. The risks and opportunities thus make the calculus concerning children more difficult than it used to be. People face other uncertainties, including those associated with the growing fragility of unions. Perhaps more importantly in this context, as we have recently seen, uncertainties and risks can be a product of political upheavals and concomitant economic and social transformations as well as wars.

The third paradigm is the one proposed by Lesthaeghe and Van de Kaa (1986) and van de Kaa (1987). In McDonald's words, it postulates that spreading "values of self-realisations, satisfaction of personal preferences, liberalism and freedom from traditional forces of authority," "made possible by emancipation from material concerns in modern prosperous societies" lead in their own right to fewer children (among other things). Portraying this opinion as "a classic example of the 'ecological fallacy'", McDonald offers a different view of how modern-era capitalism - the "new economy" in Reich's terminology - and its institutions bring about sub-replacement, including very low fertility. At the same moment, in increasingly liberalised markets, people are expected to be both "competitive, individualistic and risk averse" at work, yet in the family be "self-sacrificing, altruistic and risk accepting". Switching from one mode to another within a 24-hour cycle simply does not work and the "competitive, individualistic and risk averse" triad gets the upper hand, driving, *inter alia*, their partnership and reproductive behaviour, resulting in low fertility. Although McDonald may well have a point, the fact that the socialist regimes, with their norms and values and attendant curbs on freedoms and liberties, fell quickly is likely to have opened ample

opportunities for the spread of values that Lesthaeghe and Van de Kaa have written about extensively.

The "gender equality theory" is the last framework McDonald (2001) proposes and he does so briefly, so we will quote: "In countries with very low levels of fertility, the levels of gender equality in institutions that deal with people as individuals, such as education and market employment, are high while, on the other hand, the levels of gender equality applying in institutions that deal with people as members of families, such as industrial relations (the terms and conditions of employment), family services, the tax system, social security and the family itself are low." "If women are provided with opportunities near to equivalent to those of men in education and market employment, but these opportunities are severely curtailed by having children, then, on average, women will restrict the number of children that they have…"

Let us now see how these various, mutually supportive frameworks can help us elucidate, tentatively at least, the onset and progression of the recent fertility decline in Eastern Europe.

Onset

We begin with the former Soviet Union, focusing on its European part when we discuss fertility developments after the late 1980s. The dismantling of the Stalinist society began with the Gorbachev reforms initiated in 1985 - not with the dissolution of the Soviet Union in December 1991. The aim was a restructuring - *perestroika* - of the ossified Soviet political and economic system. "In shifting his emphasis from economics to politics, Gorbachev had by 1987 embraced an approach in which comprehensive reform from above - the *perestroika* - was to be reinforced and even driven by deliberately released social pressures from below - the famous *glasnost*. The latter in turn was meant to stimulate a more wide-ranging democratisation - *demokratizatsiia* - of the Soviet system in general" (Brzezinski, 1989). The *glasnost* campaign "stimulated nothing short of a nation-wide debate over the Soviet present and past". The debate led to a special party conference in 1988 where the debate "threatened to escalate into a severe political conflict. As a result, the totalitarian Soviet Union increasingly was becoming a volatile Soviet disunion". At the time of writing, Brzezinski identified "ten dynamics of

disunion", which in the end led to the failed *coup d'etat* against Gorbachev in August 1991 and the eventual demise of the Union at the end of that year.

The failed reform effort, which stretched over half a decade and increasingly turned into a profound political and social crisis, we think must have been a traumatic period for the average Soviet citizen who had become accustomed to stability no matter how drab and stultifying. This crisis, which was not accompanied - at least not until 1991 - by an economic crisis (Macura *et al*., 1999) created what Philipov (2001) called "discontinuity, disorderliness and anomie". And it bred a growing uncertainty, making long-term commitments associated with having a child increasingly unpalatable. Hence there commenced a steep drop in period fertility well before the onset of what later became the post-communist reforms and the economic downturn in the countries that emerged from the dissolution of the Soviet Union. What, however, caused fertility advancement rather than postponement of fertility during these years is something for which we have no answer. One possibility is that there was a selection process at work, namely that women in the population strata that generally started motherhood earlier continued to procreate, although at a falling rate, while the type of women who generally started later experienced an even more rapidly falling rate.

Elsewhere in Eastern Europe there were no "last-minute" attempts to rescue the socialist system through reform. As a result, people were spared the troubles that the former Soviet Union went through during its last years of existence. However, in some of these countries, in particular in the former GDR and Romania, the regimes resisted popular pressure to abdicate; this lasted longer in the former than the latter. In both cases the result was political turmoil, which in Romania had a bloody ending, capped by the summary execution of Ceausescu. Immediately after the regimes were deposed, a steep fertility decline ensued in both countries. We believe that in both instances the shock of change raised questions in the minds of people, who had been tightly controlled by the state and its security apparatus for decades, as to what difficulties the future, and in particular the short-term future would bring. We deduce that uncertainty suddenly shot up, making the decision to have a child highly risky proposition. What ensued after the abolition of the draconian anti-abortion law in Romania almost immediately after the regime fell at the

end of 1989 illustrates the point: the number of abortions reached some 80,000 in the following 12 months, a quadrupling of the annual numbers during the late 1980s (Macura, *et al.*, 1999). Needless to say, some of the babies on the way were not wanted in the first place for reasons other than insecurity.

The fall of the regimes in the other countries was less or far less traumatic. In Hungary and Poland it came as a result of round-table discussions that occurred between the authorities and the emerging political opposition following its recognition by the government (Crampton, 1994). In the former Czechoslovakia, the government put a stubborn resistance to the popular demands for change but the "Velvet Revolution" ended relatively swiftly and peacefully in December 1989. The change in Bulgaria was apparently less smooth. In the former Yugoslavia the paralysis of the federal government was protracted, deepening as the country approached the proclamation of independence by Croatia and Slovenia in June 1991 and the beginning of a string of wars.

In all these countries except the former Yugoslavia the uncertainty that the switch to multi-party democracy occasioned was probably not so profound to cause the almost panic retreat from childbearing as seen in the former GDR and Romania. In particular, this might have well been the case in the former Czechoslovakia, Hungary and Poland where the fertility fall began roughly two years after the regime change. Surprisingly enough, in the various parts of the former Yugoslavia, there was no perceptible acceleration of the decline already under way. In sum, we suppose that in the countries other than the former GDR, the former Soviet Union and Romania, where the fertility decline did start in 1989 or later, factors other than an outbreak of "fear of the future" underpinned the onset of decline.

We are of the opinion that the break towards very low fertility in these countries was driven by the onset of an economic crisis which was sudden but, as we shall see later, generally less profound and protracted than in other parts of the region. We use data from Macura *et al.* (2000) and focus on four central European countries to illustrate the fact that the crisis was more dramatic than a cursory look at the GDP/NMP data may

suggest[5]. (For the sake of simplicity we will refer to the more familiar GDP measure, keeping in mind, however, the fact that the NMP was the measure in use until it was phased out.) For example in the Czech Republic GDP fell by about 15 per cent in 1992, in Hungary by 18 per cent in 1993, in Poland by 18 per cent in 1991 and in Slovakia 25 per cent in 1993, relative to 1989 levels; thereafter recovery began.

If these declines do not seem dramatic enough, the combined outcomes of employment and real wage declines certainly do. The drop in the so-called real wage bill - the product of the number of people employed and the real wage rate - relative to 1989 levels, amounted to 35 per cent for the Czech Republic in 1991, 37 per cent in Hungary in 1996, 40 per cent in Poland in 1993 and 39 per cent in Slovakia in 1993. These years were the ones when this measure reached its lowest levels. In other words, within a short time span (except in Hungary where the period was longer) the aggregate wage income for the country dropped by more than a third. On top of these came a curtailment of financial and other benefits and services to families with children that the population had grown accustomed to during the socialist era. These acquired rights were increasingly taken away as government revenues fell. In sum, incomes fell, children became costlier and, as a result, Becker would tell us, fewer children were desired.

A major rise in economic insecurity accompanied the onset of the economic crisis. It was fuelled by the drops in earnings and government benefits but also by the emergence of unemployment and inflation, phenomena unknown to people in these countries in the past. By 1991-1992 these had reached levels that were much higher than those observed in many west European countries since the middle of the 1980s; the generally low unemployment rate in the Czech Republic was the only exception[6]. This economic insecurity, we believe, bred caution when it came to having children. Put differently, averting the risk of having children in what quickly became uncertain economic times was prudent, and this reinforced the "fall in the demand for children" driven by economic conditions.

[5] GDP and NMP stand respectively for gross domestic product and net material product, the latter being a measure of the total output of an economy as used by the former socialist countries.

[6] See Appendix Tables B.7 and B.8 in United Nations Economic Commission for Europe (2002) and compare them respectively with Appendix Tables A.10 and A.11.

We have focused on central Europe; however, we would not like to leave the impression that the emerging economic crisis did not play a role in the onset of rapid fertility decline in some other parts of the region. Judging only by GDP data which, as we saw, portray a more favourable picture than employment and wage data, the crisis developed in Bulgaria and Romania at least as quickly as it did in the four central European countries described above. The same happened in the former Yugoslavian republics and their successor states. In these various countries the beginning of the economic downturn reinforced the onset or continuation of the fertility decline. And as in the former Soviet Union, "discontinuity, disorderliness and anomie" added to the picture everywhere, with the possible exception of Slovenia where the secession from the former Yugoslavia and the break from the communist past, although very brief and possibly traumatic, were by and large swift and clean.

Progression

What has been said about the effects of the onset of the economic crisis regarding fertility developments applies in a specific way to the former Soviet Union and its successor states. As indicated earlier, the rapid fertility decline that was already underway by 1989 does not seem to have been associated with the beginning of an economic collapse in many of the future Baltic and CIS countries. Only in two of the 15 former Soviet republics - Azerbaijan and Georgia - did signs of the economic decline appear in 1989. In most of the others it began as of 1990, whereas the central Asian republics lagged by a year or two (see Appendix Table B.1 in United Nations Economic Commission for Europe, 2002). The economic downturn, we suppose, exerted an additional downward pressure on fertility, operating through both the pocketbook and the mind, first and foremost among young people.

The GDP data can illustrate but cannot give a full flavour of the severity of the crisis that ensued and was still continuing at the time of writing in most of the former Soviet republics (United Nations Economic Commission for Europe, forthcoming). Compared to their 1989 level, the economies of the Baltic countries contracted dramatically: by one-third in Estonia by 1994 and almost one-half in Latvia by 1995. Lithuania had nearly matched the decline in Latvia by 1994. These were the lowest

points reached, after which a gradual recovery followed. By 2002 Estonia had climbed back to 94 per cent and the other two to 81 and 74 per cent of their 1989 levels. In Belarus, Russia and the Ukraine the GDP of 2002 stood respectively at 90, 70 and 47 per cent of the 1989 levels. Recovery began in 1999 or 2000 (somewhat earlier for Belarus) from relative levels similar to or lower than those in the Baltic countries. In Georgia and Moldova the 2002 GDP levels were just 35 and 39 per cent of their initial levels - the lowest in the CIS countries. In sum, the economies of the former Soviet Republics have not yet recovered to their 1989 levels; the only exception is Uzbekistan.

Combined changes in employment and real wages produced even more dismal outcomes. For example, in the Baltic countries in 1998 - data for more recent years are not available to us - the real wage bill amounted to about one-quarter in Lithuania and about four-tenths in the two other Baltic countries of their respective 1989 levels. In Russia it equalled one-half of the original level. In the other former Soviet republics, for most of which we have no data, the wage bill outcomes were probably even less favourable. Furthermore, throughout much of the former Soviet Union, the benefits and services that couples with children had once enjoyed, particularly after these had improved with the enhanced family policies of the early 1980s, were probably greatly reduced. Here, as elsewhere in Eastern Europe, the result has been a fall in the "demand for children" due to both lower incomes and the higher direct cost of children.

There have been major variations among the former Soviet republics in the duration of their economic decline and the depth of depression reached on the one hand, and the robustness of their recovery thereafter. In view of this, it is likely that the time pattern of the influence of economic adversity on childbearing probably varied greatly from one former republic to another. It may not be pure coincidence that Estonia and Belarus coped best with the economic crisis and that they saw their fertility rates recovering in the late 1990s, while Georgia, which was the worst hit by the crisis right through to 2002 had witnessed a renewed acceleration of its fertility decline in 2000.

In the four central European countries discussed above (Poland, Czech Republic, Slovakia and Hungary) and in Slovenia, the recovery began after less profound declines than in the Baltic and CIS countries. It began

in Poland in 1992, in Slovenia in 1993 and in the remaining three in 1994. The Polish GDP was the first to surpass its 1989 level in 1996; by 2002 it had attained a level 30 per cent higher than in 1989. The Czech GDP was the last to cross the threshold in 2001. The economies of the five continued to expand through 2002. However, in none of them had the real wage bill surpassed 1989 levels by 1998. The highest achieved was 92 per cent of the initial level in the Czech Republic and the lowest, 66 per cent, was in Slovenia. It is true that these countries led the rest of the region towards economic recovery, yet in 2002 they were economically only by 6-30 per cent better off than 13 years earlier. In terms of incomes and benefits it is likely that families were not even that much better off. In the intervening years, economic welfare and security of people declined markedly before beginning to improve. In our view, this decline contributed, at least in part, to the fertility downtrend, while more recent improvements may have worked in the opposite direction.

The labour market performance was even more chequered. According to the Labour Force Survey (LFS) data, in Poland and Slovakia in the first three quarters of 2002 nearly one out of five people in the labour force were unemployed (United Nations Economic Commission for Europe, forthcoming). In Poland 3.3 million people were out of work in February 2002, of which some 2.7 million were not eligible for unemployment benefits. The LFS-based youth unemployment rates - those of people under 25 - about a year earlier were just above and below 40 per cent in Poland and Slovakia respectively (United Nations Economic Commission for Europe, 2002). In the other three central European countries, for the same three quarters of 2002, unemployment rates were far lower, between 6 per cent and 8 per cent. In 2001, the youth unemployment rates ranged between about 10 per cent in Hungary to above 15 per cent in the Czech Republic and Slovenia. The share of long-term unemployed (looking for work for a year or longer) ranged between above 40 per cent to above 60 per cent. In sum, labour market performance was mixed. Certainly Poland and Slovakia have not created labour market conditions conducive to making the long-term commitments that having a child entails.

The economies of the other countries of the region, namely the Balkan countries (excluding Albania and Bosnia-Herzegovina) fared on average even worse than the central European countries. The only exception is Serbia and Montenegro which have barely experienced economic

recovery after reaching their lowest point in 1993. All but Romania have seen considerable declines in employment levels. Where available, LFS-based unemployment rates in 2002 varied widely, from less than 10 per cent in Romania, to 15-18 per cent in Croatia and Bulgaria, and up to 32 per cent in the former Yugoslav Republic of Macedonia. The only youth unemployment rate available is that for Bulgaria in 2001, which was on a par with those in Poland and Slovakia. The share of long-term unemployed in Bulgaria and Romania were above 60 per cent and just below one-half respectively. The economic and labour market conditions in these countries certainly have not encouraged young people contemplating having children.

When and where the economies began to improve, they began creating conditions that in their own right, we believe, started influencing childbearing decisions. These conditions began taking hold first and foremost in the central European countries, so in what follows we will primarily focus on them. However, similar conditions probably began permeating other countries that, in economic terms, did not lag much behind the leaders. The conditions we will consider are those generated by the free-market capitalist economy, especially the "new economy". As we proceed, we have less relevant data on which to base our discussion, as they are not readily available.

Unlike their predecessors, the new free-market societies are per force consumer societies. Moreover, with some exceptions aside, such as Slovenia and the rest of the former Yugoslavia, these are societies where the socialist era created a pent-up demand for consumer products of all kinds. Consequently, the consumer culture has been on the rise and is certain to take deep roots in time. The likely consequence is a change in the "shape" of the Beckerian utility function, whereby preferences for consumer products are gaining strength at the expense of a desire for children. To the extent that this has been happening, which is highly likely, one can safely suppose that part of the fertility decline, particularly among the economic-reform frontrunners, can be attributed to the spread of the consumer culture. Sobotka (2002) makes a similar point.

Like their western cousins, the emerging free-market economies of Eastern Europe can only prosper if the supply of skilled, motivated and disciplined labour is abundant. On the other hand, those who aspire to

succeed in this economy, professionally and materially, know that undergoing thorough high-quality and longer education and training, capable of creating these desirable attributes, is a precondition for success. It is probable that for these reasons the proportion of young people in tertiary education, especially young women, has been growing rapidly everywhere, especially in central Europe and in Bulgaria and Romania during the 1990s (Macura *et. al*., 2000; Sobotka, 2002). This trend has also contributed to fertility reduction (Macura *et al.*, 2000), most likely by strengthening the positive tempo effect. The fact that longer and better education is the road to success has also probably been making an impression on young parents and parents-to-be. Longer and better means costlier. This fact, namely that the direct cost of children is bound to rise as a result of greater emphasis on training and education has probably increasingly entered into the "demand for children" calculus, contributing to lower fertility.

There are also indications that the opportunity cost of motherhood has been on the rise. As economic restructuring advanced and the service sector began to grow, the gender wage gap - the excess of male over female wages - has shown a tendency to decline in most countries for which the relevant data are available (Hungary, Latvia, Lithuania, Poland, Romania and Slovakia). Russia was the only exception, possibly due to the slower pace of reform. The gender gap in 2000-2001 was considerably lower than in the mid-1980s (United Nations Economic Commission for Europe, forthcoming). An accompanying trend in several countries has been an increase in the general level of real wages, male and female, made possible by economic recovery. These two trends probably also contributed to the decline in the "demand for children" as there was an increase in the opportunity cost for women, *i.e.* the cost of their staying away from the labour market to raise children.

As employment and the labour force contracted during the 1990s, women left the labour market in greater relative numbers than men (United Nations Economic Commission for Europe, forthcoming). This was a step back towards the male breadwinner model of the family, a model that had been largely eliminated in the economically more developed areas of Eastern Europe during the socialist era. This might have eroded the status of women in the family, especially in countries where improvements in their labour market status had not begun. In countries that were among the

first to see economic recovery, the deterioration of the labour market position of women was reversed as they were drawn back into employment, especially in the service and informal sectors. However, in most countries state-sponsored support to families with children became a casualty of fiscal austerity associated with the transition to the free-market economy, making it more difficult for mothers who remained employed or resumed work to balance maternal and market work roles. Both trends, which decreased the status of women with children, may have made motherhood less attractive than before, possibly also contributing to low fertility.

These various changes in the economic and labour market increasingly reward hard work and discipline at the work place and penalise poor work performance and absenteeism, work habits which were typical in the socialist era. The rewards and penalties in turn nurture a spirit of competition, individualism and risk aversion, especially in economies where it is increasingly clear that professional advancement and material rewards are earned rather than, as was the case in the past, conferred by authorities in response to loyalty or obedience. And this spirit, as argued by McDonald, is not conductive to family life, specifically parenthood. However, as Lesthaeghe and Van de Kaa would argue, the picture is more complex. The changes in the economy have been made possible by an overhaul of the political system, a change that removed the socialist-era norms and values nurtured by the communist-led regimes. This, in turn, provided fertile ground for the blooming of norms, values and beliefs similar or identical to those that took root and spread in Western Europe after the 1960s. The communist-led authorities that empowered themselves to prohibit and direct abdicated, making the freedom to choose how to live personal and family lives seemingly limitless. In sum, both economic and political changes created conditions favourable to a new variety of life pursuits that are, at least in part, incompatible with family life and parenthood.

3.2. Post-socialist-era fertility regulation patterns

As a result of economic difficulties associated with the transition to the free-market economy, the national production of health and contraceptive commodities in many countries was severely restricted or discontinued due to a lack of funds for raw materials, and their inability to compete

with products from well established western multinational companies (World Health Organisation/Europe, 1997; Popov and David, 1999). Lack of adequate contraceptive supplies and services led to a deteriorating reproductive health situation in many of the successor states of the Soviet Union and a number of other Eastern European countries. The result was an increase in reliance on induced abortions, a growth in maternal morbidity and mortality and an increase in STDs, including HIV/AIDS.

The plight of the countries in transition was recognised by the international community at the 1994 International Conference on Population and Development (ICPD) in Cairo, Egypt. Countries with economies in transition were recognised as a special category requiring technical and financial support from the international donor community. Since then the multilateral agencies - WHO, UNFPA, UNICEF, UNDP and the World Bank - as well as the European Union, bilateral donor agencies and international NGOs have provided technical and financial assistance. Assistance with policy and programme development was provided to all countries, although to varying degrees. A number of selected countries received additional support for staff training, upgrading of facilities and the provision of contraceptive commodities and supplies.

Contraception

In none of the transition countries is there free access to all contraceptives. There is a wide range of access to contraception and reproductive health services, including abortion. In some countries there is limited access to free services and commodities, but national health services in many countries are under-financed and lack suitable supplies of commodities. Free access to commodities may be available in some countries which have nationally produced commodities (World Health Organisation/Europe, 1997). However, in most countries the supply is limited and their quality is deemed inferior to those produced by multinational companies. Imported contraceptive commodities are limited and their cost is relatively high.

There are private sector commercial service providers for reproductive health services, but these require payment for services and commodities. Costs are relatively high when compared with average income levels, but patients or clients use these services because of their easy access and

ready availability, the alleged superiority in the quality of care and assurances of confidentiality (Bajos and Guillaume, 2003). In some countries partial cost recovery is possible through national or private health insurance schemes. There is no systematic information on the cost of contraceptives and reproductive health services. In a 2000 editorial of *Choices*, the situation is described as follows: "The price of one Pill strip varied between 100 and 170 roubles (US$ 4-7). The average income per head in Russia was 764 roubles (about $30) in 1996 and, after the August 1998 economic crisis, this has probably become less than that, at least for large parts of the population. It means that the Pill will cost an average Russian woman some 13-22 per cent of her income. In other parts of Eastern Europe the situation is rather similar" (Ketting, 2000).

Policy re-orientation and technical and financial support have led to some modification in contraceptive behaviour in the transition countries. The use of modern contraception is on the increase, albeit not consistently in all countries. All countries that were not yet affiliated with the IPPF made contact with this organization and received technical support. Available information from demographic and fertility surveys provides an insight into contraceptive use since the demise of the socialist regimes. The emerging patterns exhibit both persistence of old patterns and the introduction, acceptance and wider diffusion of modern methods.

In the Baltic countries there are considerable differences in contraceptive prevalence rates, ranging between 56 and 70 per cent if all methods are considered. The modern-method rates are high - between 41 and 57 per cent - and much higher than the traditional-method rates. The IUD is the most popular method, followed by the condom as the second most popular method. In Estonia, Latvia and Lithuania these two methods account for 91, 73 and 68 per cent respectively of all modern-method contraceptive use. Given the fact that the data refer to the mid-1990s, it may well be that at the time of writing the Baltic countries have been among leaders in the transition to modern contraceptive use.

In central Asia the all-method contraceptive prevalence rates are relatively high, ranging from 56 per cent to 66 per cent. The modern-method prevalence rates are remarkably high - between 49 per cent and 53 per cent. The IUD is the most popular method: between 38 per cent and 46 per cent of women who contracept use it. The second most

popular methods are traditional methods, except for Turkmenistan where injectibles and implants are the second preferred methods. In Kyrgyzstan and Uzbekistan the second most popular method is withdrawal, while in Kazakhstan it is a mixture of traditional methods. The reliance on these methods is generally low. This pattern of contraceptive use has undoubtedly developed because of the technical assistance provided to these countries by the international donor community (World Health Organisation/Europe, 1997).

Table 3. Contraceptive prevalence rates by type of method and the two most commonly used methods among women of childbearing age currently in marital or consensual unions for selected Eastern European countries in the 1990s

Area/Country	Year	Prevalence rate (%)			Most used methods (%)			
		Modern methods	Traditional methods	All methods	First		Second	
Central Europe								
Czech Republic	1993	45	24	69	Withdrawal	22	Condom	19
Czech Republic [a]	1997	56	11	67	Pill	26	IUD	16
Hungary [a]	1992-93	68	9	77	Pill	40	IUD	18
Poland [a]	1991	19	30	49	Rhythm	19	Withdrawal	11
Slovakia	1991	41	32	73	Withdrawal [b]	32	Condom	21
Slovenia [a]	1994-95	56	15	71	Pill	23	IUD	22
Balkans								
Bulgaria	1995	46	40	86	Withdrawal	34	IUD	22
Bulgaria [a]	1997	32	19	51	Withdrawal	16	Condom	14
Romania	1999	30	34	64	Withdrawal	29	Condom	9
Baltic States								
Estonia [a]	1994	57	14	70	IUD	36	Condom	16
Latvia [a]	1995	41	9	50	IUD	20	Condom	10
Lithuania [a]	1994-95	40	16	56	IUD	14	Condom	13
European CIS countries								
Belarus	1995	42	8	50	IUD	29	Pill	7
Republic of Moldova	1997	50	24	74	IUD	38	Withdrawal	22
Ukraine	1999	38	30	68	Withdrawal	20	IUD	19

Table 3. Contraceptive prevalence rates by type of method and the two most commonly used methods among women of childbearing age currently in marital or consensual unions for selected Eastern European countries in the 1990s, continued

Area/Country	Year	Prevalence rate (%)			Most used methods (%)			
		Modern methods	Traditional methods	All methods	First		Second	
Caucasus								
Armenia	2000	22	38	61	Withdrawal	32	IUD	9
Azerbaijan	2001	12	44	56	Withdrawal	44	IUD	6
Georgia	1999-2000	20	21	41	Withdrawal	11	Rhythm	10
Central Asia								
Kazakhstan	1999	53	14	66	IUD	42	TM [c]	6
Kyrgyzstan	1997	49	11	60	IUD	38	Withdrawal	6
Turkmenistan	2000	53	9	62	IUD	39	OMM [d]	9
Uzbekistan	1996	51	4	56	IUD	46	Withdrawal	3

Sources: United Nations (2002) and Serbanescu *et al.* (2002)

Notes: [a] FFS.
[b] Includes rhythm method.
[c] TM stands for traditional methods, including prolonged abstinence, breastfeeding, douching, various folk methods.
[d] OMM stands for other modern methods, including implants and injectibles.

In central Europe, the all-method prevalence rates are among the highest in the region. However, modern-method rates are hardly on a par with those in central Asia, ranging between 41 per cent and 68 per cent. In three of these countries - the Czech Republic, Hungary and Slovenia - the most frequently used method is the pill; in the other two - Poland and Slovakia - it is the rhythm method and withdrawal respectively. Except in Poland, all countries have modern methods as their second choice. In Poland withdrawal is the second most frequently used method, while in the other countries it is the IUD or condom. The predominance of the pill in Hungary might be due to the continuation of past trends. Since the mid-1970s the pill has been the preferred choice of Hungarian women.

Remarkable is the sudden spread of modern contraceptives in the Czech Republic, in particular the pill. In 1993 the most popular modern method was the condom with a prevalence rate of 19 per cent, followed by the

IUD with 15 per cent and the pill with 8 per cent (United Nations, 2002). The three methods combined involved just 42 per cent of women. Four years later, according to the Czech Fertility and Family Survey (FFS) data, 26 per cent of women used the pill, followed by 16 and 14 per cent for the IUD and condom, respectively. The total for the three methods had increased to 56 per cent. As can be seen from Table 1, in 1977 the IUD, condom and pill users combined accounted for 48 per cent of women. If the 1997 figures can be trusted, there was a decline in the use of these three methods prior to 1993, followed by a major increase.

Data for the Balkan countries are scarce; they are available only for Bulgaria and Romania. They indicate high all-method prevalence rates but low modern-method rates, though they are nevertheless higher than the modern-method rate in Poland. In these two countries, withdrawal and condom are the methods of first and second choice. Note that the data suggest that in Bulgaria the condom became the method of second choice between 1995 and 1997, displacing the IUD. This may suggest, if the data are accurate, deterioration in the supply of IUDs. Overall, these two countries have a long way to go to catch up with the Baltic countries, central Europe and central Asia.

In the European and Caucasus CIS countries the all-method rates vary greatly, as do the modern-method rates, the latter from a low of 12 per cent in Azerbaijan to 50 per cent in Moldova. A similar wide range exists for traditional-method rates, from 8 per cent in Belarus to 44 per cent in Azerbaijan. Withdrawal is the most commonly used method, except in Belarus and Moldova where the IUD is the first choice. In countries that use withdrawal as the preferred method, the second choice is the IUD, except in Georgia where the rhythm method is the second choice. Of the countries favouring the IUD, in Belarus the pill is the second preferred method, while in Moldova it is withdrawal.

The above evidence shows a persistence of reliance on ineffective traditional methods in many of these countries, probably because of the availability of abortion as a back-up procedure, and the relatively high cost of modern contraceptives. On the other hand, it shows that external support can influence the patterns of contraceptive behaviour. The countries that have received priority attention from the international donor community now show a preference for modern contraceptives, albeit with

a preponderance of methods that still rely on medical intervention, *e.g.* the IUD. This is a reflection of the pre-transition legal and administrative arrangements under which contraceptive services were practically the exclusive domain of medical professionals. These findings should be interpreted with caution, as the data on which they are based span an entire decade, 1991-2001, a period that at least in some countries has seen rapid changes in contraceptive use patterns.

The enhanced availability of modern contraceptives has probably had important consequences for sexual and reproductive behaviour, especially of young women, who increasingly have opted for cohabitation as opposed to marriage and childbearing outside of marriage. Young women at risk of conceiving, *i.e.* those aged 20-24 and 25-29, both in marital and non-marital unions and not in unions, show high contraceptive use. Except for Poland, in all countries for which FFS data are available, the all-method contraceptive prevalence rates for young women not living in unions were generally high, ranging for both age groups between just below 65 per cent in Lithuania in 1994-95 to about 95 per cent in Hungary in 1992-93 and the Czech Republic in 1997 (Macura *et al*., 2002). The very low rates in Poland in 1991 appear to grossly understate contraceptive prevalence within this category of women.

For young women living in unions, the all-method rates were highest in Hungary, being 82 and 90 per cent for the younger and older age group respectively. The lowest rates were observed in Bulgaria in 1997, with 50 and 53 per cent for the two age groups respectively. Poland's rates of young women in unions, who were mostly married, were 55 and 63 per cent respectively. Poland aside, in most of the countries in question, the prevalence of use of any method was higher for women not living in unions. This is certainly not surprising, as these women would be expected to be more wary of unwanted pregnancies than whose living in unions.

There are further interesting patterns among these four groups of women. When the use of modern and traditional methods across the groups are compared, it is clear that everywhere except in Poland, where the data should be viewed with scepticism, women not in unions show a greater relative propensity to use modern as opposed to traditional methods than women who are in unions. Moreover, women in the 20-24 age group who

were not in unions were more likely to use modern methods than their 25-29 year old sisters; the younger women were clearly moving away from unsafe methods. This did not apply to women in unions. These results suggest an overwhelming desire among young women to avoid unintended pregnancy and childbirth, and an increasing preference to use modern contraceptives in spite of their relative high cost.

It is often argued that enhanced contraception, especially the use of efficient methods, should reduce the recourse to induced abortion. As we shall see below, using data that can be considered relatively reliable as they were collected using the same survey methodology, there is support for this view although the data do not offer a proof of causality. However, these data are only available for a small number of countries, which are not representative of the entire Eastern Europe. Moreover, they are only available for selected years. As a result, exploring the link between modern contraceptive use and induced abortion is largely out of reach. The added complication arises from the fact that drawing conclusions about the contraception-abortion link using contraceptive-use data from surveys and induced abortion data from registers is made very difficult by the unreliability of abortion registration statistics.

Abortion

Popov (1996) has provided a detailed description of the complicated and unsatisfactory situation of family planning and health statistics in Russia and concluded that "[t]he new statistical system is an incomplete reflection of actual trends and is not comparable with the previous one". Similar deficiencies are to be expected, albeit to varying degrees, in a number of other Eastern European countries after their change of regimes (Henshaw, Singh and Haas, 1990); the only likely exceptions are the central European countries. The reasons are many, including the introduction of commercial health services, changes in definitions, lack of adaptation to the new situations of statistical data collection procedures, and a deterioration of the statistical infrastructure. Besides the abortion data, statistics on other related phenomena, such as maternal mortality and its causes, must be interpreted with caution. These show wide fluctuations over time in a large number of countries which cannot be explained by changes in policy or external causes such as wars and civil unrest.

A publication of the Centers for Disease Control and Prevention and ORC Macro (forthcoming) provides evidence regarding the unreliability of abortion registration statistics in several post-Soviet countries and Romania. It compares the abortion rates for women aged 15-44 derived from the Reproductive Health Surveys and the Demographic Health Surveys carried out after the middle of the 1990s with those calculated from government statistical information for three-year periods before the survey dates. The results are revealing. Of the nine countries with national data (all but Russia where three provinces were surveyed), in only one country, Moldova, do the two sources produce the same estimate. In the other countries the survey estimates are always higher than the register-based estimates. In two countries - Romania and Uzbekistan - there is a correspondence 80 per cent or more; in three countries - Kazakhstan, Kyrgyzstan and the Ukraine - the correspondence is between 68 and 76 per cent; while for the remaining three countries - Georgia, Azerbaijan and Armenia - it is between 14 and 21 per cent. Hence the register-derived statistics underestimate the level of abortions almost everywhere, but especially in the three Caucasus countries.

Table 4. Abortion ratio estimates from surveys and government sources for women aged 15-44 years in selected Eastern European countries *(abortions per 100 live births)*

Country	Survey year	Reference period	Survey-based estimate	Government-based estimate	Ratio of government-based to survey-based estimate
Uzbekistan	1996	1994-1996	20	16	80
Kyrgyzstan	1997	1995-1997	45	31	69
Moldova	1997	1994-1996	43	43	100
Georgia	1999	1997-1999	125	18	14
Kazakhstan	1999	1997-1999	47	32	68
Romania	1999	1997-1999	74	62	84
Ukraine	1999	1997-1999	55	42	76
Armenia	2000	1998-2000	81	17	21
Azerbaijan	2001	1998-2000	116	18	16

Sources: Centers for Disease Control and Prevention and ORC Macro (forthcoming).

The same study also compares the abortion ratios 6-8 years previously and with the ratios 0-2 years before the survey dates. Ukraine shows no difference. In Moldova, Romania, Armenia, Georgia, Kazakhstan and Uzbekistan there had been a reduction in the ratios, while in Azerbaijan and Kyrgyzstan they had increased.

In view of the findings of the study on the different levels of reliability of official abortion data, the use of this information to portray changes in the prevalence of induced abortion over time and across countries during the post-socialist era is bound to be difficult. Nevertheless, we shall attempt a rough overview of abortion trends using the WHO Europe Health for All database dating from the late 1980s, keeping in mind the data limitations and drawing attention to apparent trends that may be spurious. Moreover, we will try to explore the contraception-abortion link by also relying on accepted but tenuous information on conditions that are likely to have had an impact on contraceptive use.

In general, in the former Soviet Union, after the liberalisation of abortion legislation in the middle of the 1950s, easy access to abortion on demand remained the norm until the dissolution of that country. In spite of what must have been a common all-union abortion policy, in 1990 there were vast differences in the abortion ratio - the number of induced abortions per thousand births - across the Soviet republics, ranging from as low as less than 100 in Tajikistan to close to 2000 in Russia. The rates in the other predominantly Muslim republics were approximately in the range 200-700, while in a number of the European republics they were above 1000, with Belarus trailing Russia by some 150 abortions per thousand births. This was the time of grossly insufficient supplies of reliable contraceptives due to a lack of adequate production by the Soviet contraceptive industry (United Nations, 1993), and this only got worse after the closure of contraceptive factories in the early 1990s (Popov, 1996). As deficient supplies cannot explain the wide variations across the country, we can only guess that a “pervasive abortion culture” took root in some of the Soviet nationalities and republics but not in others.

Elsewhere in Eastern Europe, in the countries that followed the Soviet lead in liberalising abortion, the abortion ratios in 1990 were generally within the 600-1000 range. The exceptions were Bulgaria and the future Serbia and Montenegro, which had ratios above 1000. In Romania,

following the liberalisation of abortion legislation in early 1990, the level surpassed 3000. The Polish ratio in 1989, however, was below 200. Clearly the countries in this part of Eastern Europe with the lowest prevalence of induced abortion were some of those that had led the transition towards modern contraceptive use during the socialist era. It is quite likely that the state policy favouring the spread of modern contraceptive use also made it possible for couples to use induced abortion just as a back-up rather than their main means of birth control.

By the beginning of the 1990s all countries except Poland had enacted liberal abortion legislation (Kulczycki, 1995); however, there were variations in its implementation. In some countries abortion was free, but only under certain conditions. Contraceptives, in contrast, had to be paid for or were only partially reimbursed by the national health insurance systems (World Health Organisation/Europe, 1997). Imported contraceptives were expensive and remained so (Ketting, 2000), particularly in view of the decline in income and living standards that many of these countries experienced, at least for a while. These and other factors influenced the developments in induced abortion trends during the 1990s.

According to the WHO data, in practically all countries for which data are available the abortion ratios were lower in 2000 than in 1990; however, the data for 2000 are unavailable for Bosnia and Herzegovina, Poland, Serbia and Montenegro and Turkmenistan. The only exception to this rule was Azerbaijan, where there was a slight rise. However, the decline did not set in everywhere immediately after 1990: in some Baltic and European CIS countries there was a temporary rise during the early 1990s, after which a decline set in. It is impossible to say whether or not or to what extent the declines were spurious. In central Europe, the data suggest a decline from the start, and given the likelihood that these countries have the best abortion data, we are inclined to think that the trends were real. Significantly, in the Czech Republic the abortion ratio was cut by more than half. The progress in Slovakia and Slovenia was less impressive. The drop in Hungary that the data suggest was disappointingly weak; by 2000 the ratio fell by some 100 from an initial level of 720.

In spite of the declines, induced abortion still remained endemic in several countries in 2000. Russia remained at the top with a ratio exceeding 1500. Belarus, Romania and Ukraine still had ratios above 1000. Estonia was not much below this mark, which is puzzling in view of the use of relatively advanced modern contraceptives in that country. Bulgaria's ratio also remained relatively high, around 830. In Romania and Bulgaria a lack of reliable and accessible contraceptives is probably the cause. This probably also applies even more to Belarus, Russia and the Ukraine. These countries, overlooked during the 1990s by the international donor community, appear to have the greatest need of foreign assistance.

As indicated above, the low level of reliability of the statistical information we have used makes it difficult to establish clear relationships between modern contraceptive prevalence and induced abortion. However, for the relatively small group of countries included in the study by the Centers for Disease Control and Prevention and ORC Macro, a clear relationship can be shown. As the study used a common methodology, the survey estimates of abortion and modern contraceptive prevalence are good as one can get them. The relationship between the two measures is a strong negative one, viz.: Abortion Ratio = 140 - 1.99 x Prevalence Rate, with $R^2 = 0.85$; the Abortion Ratio is the number of induced abortions per 100 live births and the Prevalence Rate is the percentage of women using modern contraceptive methods.

When using the register-derived estimates with survey-based prevalence rates no relation is found at all.

4. Prospects

Instead of drawing the usual conclusions, we wish to speculate in this closing section on the prospects for change in fertility and fertility regulation patterns in the coming decade. As demographers and other social scientists know, this is a thankless task: so often they have failed to predict the future with any reasonable degree of accuracy. In spite of this, we will give it a try, aware of the pitfalls. We will focus on fertility trends and the possible changes in contraception and abortion.

It is unlikely that fertility will decline a great deal further, as its levels are already very low. Also, a considerable and sustained increase in fertility is unlikely, in spite of the fact that some countries have experienced major postponement of fertility and that fertility recovery as a result of recuperation at higher ages is a possibility. We believe that future economic, social and cultural changes will not be conducive to a sustained increase. In countries that are ahead of others along the path of economic growth, incomes will rise, making children more affordable. However, other economy-driven changes will probably counter the positive income effect. Among these are: the rise in consumerism and the increase in the direct and the opportunity costs of children. Related to this, there is also the likelihood that at these times of spreading globalisation these countries will find it difficult to embark on expensive adjustments in their institutions and policies which would be required to make children less costly and to render work and parenthood more compatible. In countries that are trailing behind in economic terms, incomes and state benefits will remain low or only gradually improve, making parenthood costly for the foreseeable future.

Additionally, the "new economy" will continue to put pressure on young people to become increasingly "competitive, individualistic and risk averse". To the extent that this materialises, they will find it difficult to remain or become "self-sacrificing, altruistic and risk accepting" in the family domain. Moreover, the "values of self-realisation, satisfaction of personal preferences, liberalism and freedom from authority" that they have experienced and continue to experience as a result of the abandonment of the old norms, values and beliefs will only reinforce the economy-driven cultural changes. This is likely to contribute to very low fertility norms and outcomes.

We have seen that in parts of Eastern Europe outside the former Soviet Union, young women who are sexually active and at risk of conception showed very high levels of contraceptive use, especially in their use of modern methods, in spite of the current high costs of modern contraceptives. One can therefore anticipate that the generalised use of modern contraception among the young will continue with increases in personal incomes and the realisation that contracepting is far more comfortable and healthier than experiencing accidental pregnancy and terminating it through abortion, no matter how safe. It is likely that

governments and family planning associations will alter the price differentials between these two methods of fertility regulations in favour of free or low cost modern contraception, accompanied by adequate educational and information campaigns. This is what happened in Western Europe and it is likely to continue to spread in Eastern Europe. Abortion is likely to become a measure of last resort to deal with cases of method failure and pregnancies caused by criminal or illegal acts.

As Eastern European countries, especially those that will join the European Union in 2004, continue their reforms, it is highly likely that their statistical systems will improve and that their statistical information will become increasingly harmonised with that of Western Europe. Among other things, we expect that their population and health statistics will improve. That will provide the necessary data to measure more adequately the phenomena we have examined and assess the complex relationships between fertility, contraception and abortion.

References

Avdeev A., 2001, "The extent of the fertility decline in Russia: is the one-child family here to stay?", First draft of a paper presented at the IUSSP Seminar on "International Perspectives on Low Fertility: Trends, Theories and Policies", Tokyo.

Baban A., 1999, "Romania," in: H.P.David (with the assistance of Joanna Skilogianis), *From Abortion to Contraception: A Resource to Policies and Reproductive Behavior in Central and Eastern Europe from 1917 to the Present*, Connecticut: Greenwood Press, 191-221.

Bajos N. and G. Guillaume, 2003, "Reproductive Health: Contraceptive Practices and Use of Abortion among Adolescents and Young Adults in Europe", *European Population Paper Series,* No. 13, Strasbourg: Council of Europe.

Becker G. S., 1981, *A Treatise on the Family,* Cambridge, MA: Harvard University Press.

Berent J., 1970a, "Causes of Fertility Decline in Eastern Europe and the Soviet Union, Part I, The Influence of Demographic Factors", *Population Studies* 24 (1)

Berent J., 1970b, "Causes of fertility decline in Eastern Europe and the Soviet Union, Part II, Economic and social factors", *Population Studies* 24 (2)

Berent J., 1982, "Family Planning in Europe and USA in the 1970s", *World Fertility Survey Comparative Studies*, Number 20, Voorburg: ECE Analyses of WFS Surveys in Europe and USA.

Bessel R., 2001, "The Great Civil War: European Politics, 1914-1945," in: T.C.W. Ianning (ed), *The Oxford Illustrated History of Modern Europe*, Oxford: Oxford University Press, 231-254.

Bongaarts J. and G.Feeny, 1998, "On the quantum and tempo of fertility", *Population and Development Review* 24 (2), 271-291.

Brzezinski Z., 1989, *The Grand Failure: The Birth and Death of Communism in the Twentieth Century*, New York: Charles Scribner's Sons.

Centers for Disease Control and Prevention and ORC Macro, forthcoming, *Reproductive, Maternal and Child Health in Eastern Europe and Eurasia: A Comparative Report*, Atlanta.

Coleman D., 1998, "Reproduction and Survival in an Unknown World: What Drives Today's Industrial Populations and to What future?", *NIDI Hofstee Lecture Series*, 5, The Hague.

Council of Europe, 2002, *Recent Demographic Development in Europe*, Strasbourg: Council of Europe Publishing.

Crampton R.J., 1994, *Eastern Europe in the Twentieth Century*, London and New York: Routeledge.

Demeny P., 1999, "Policy interventions in response to below-replacement fertility", in: *Population Bulletin of the United Nations. Below*

Replacement Fertility. Special Issue Nos. 40/41. New York: United Nations.

Dorbritz J., and D. Philipov, 2003, *Demographic Consequences of the Transition in Countries of Central and Eastern Europe,* Strasbourg: Council of Europe Headquarters (forthcoming).

Frejka T., 1980, "Fertility trends and policies: Czechoslovakia in the 1970s", *Population and Development Review* 6 (1), 65-93.

Frejka T., 1983, "Induced abortions and fertility: a quarter century of experience in Eastern Europe", *Population and Development Review* 9 (3), 494-520.

Henshaw S. K., S. Singh and T. Haas, 1999, "The Incidence of Abortion Worldwide", *Family Planning Perspectives*, 25, Supplement, January, S30-S38, 189-206.

Henshaw S. K. and E. Morrow, 1990, *Induced Abortion: A World Review Supplement*, New York: The Alan Guttmacher Institute.

Kamaras F., 1995, "The impacts of the population-related policies on fertility in Hungary", *Studia Demograficzne* 4/122, 105-116.

Katus K., forthcoming, "Long-term fertility development in Baltoscandia" in: K.Katus and A.Puur (eds.), *Unity and Diversity of Long-term Population Development: the Case of Baltic and South-Caucasian Regions*, RU, Serie A, 41. Tallinn: EKDK.

Ketting E., 2000, "Editorial: Let's talk about money," *Choices* 28 (1).

Kulczycki, A., 1995, "Abortion policy in post-communist Europe: the conflict in Poland", *Population and Development Review* 21 (3), 471-505.

Lesthaeghe R. and D.J. van de Kaa, 1986, "Twee demografische transities?" in: D.J. Van de Kaa and R. Lesthaeghe (eds), *Bevolking: groei en krimp*, Deventer: Van Loghum Slaterus, 9-24.

Macura M., 1974, "Population policies in socialist countries of Europe", *Population Studies* 28 (3).

Macura M., 1982, "Fertility Decline and the Emergence of Low Fertility in Yugoslavia", in M. Macura (ed), *The Population Renewal Issue and Population Policy*, Belgrade: Economics Institute (in Serbo-Croat).

Macura M. and Y.Mochizuki-Sternberg, 1999, "Fertility Decline in the Transition Economies, 1982-1997: Political, Economic and Social Factors", *Economic Survey of Europe 1999 No. 1*, New York and Geneva: United Nations.

Macura M., A. Kadri, Y. Mochizuki-Sternberg and J. Lara Garcia, 2000, "Fertility Decline in the Transition Economies, 1989-1998: Economic and Social Factors Revisited", *Economic Survey of Europe 2000 No. 1*, New York and Geneva: United Nations.

Macura M., Y.Mochizuki-Sternberg and J.Lara Garcia, 2002, "Eastern and Western Europe's Fertility and Partnership Patterns: Selected Developments from 1987 to 1999", in: M.Macura and G.Beets (eds), *Dynamics of Fertility and Partnership in Europe: Insights and Lessons from Comparative Research*, 1, New York and Geneva: United Nations.

McDonald P., 2001, "Theory pertaining to low fertility", paper presented at the IUSSP Seminar on "International Perspectives on Low Fertility: trends, theories and policies", Tokyo.

Mitchell B. R., 1981, *European Historical Statistics 1750-1975*, Second Revised Edition, New York: Facts on File.

Philipov D. and H.-P.Kohler, 2001, "Tempo effects in the fertility decline in Eastern Europe", *European Journal of Population,* 1.

Philipov D., 2001, "Low Fertility in Central and Eastern Europe: Culture or Economy", First draft of paper presented at the IUSSP Seminar on "International Perspectives on Low Fertility: Trends, Theories and Policies", Tokyo.

Popov A.A., 1996, "Family Planning and Induced Abortion in Post-Soviet Russia of the Early 1990s: Unmet Needs in Information Supply," in: J. DaVanzo, with the assistance of Gwendolyn Farnsworth (ed), *Russia's Demographic "Crisis*", Santa Monica: Rand Corporation, 84-108.

Popov A.A. and H.P.David, 1999, "Russian Federation and USSR Successor States", in: H.P.David (with the assistance of J.Skilogianis), *From Abortion to Contraception: A Resource to Public Policies and Reproductive Behavior in Central and Eastern Europe from 1917 to the Present*, Connecticut: Greenwood Press, 223-277.

Preston P., 2001, "The Great Civil War: European Politics, 1914-1945", in: T.C.W.Blanning (ed), *The Oxford Illustrated History of Modern Europe*, Oxford University Press, Oxford, 48-181.

Reich R. B., 2001, *The Future of Success*, New York: Alfred A. Knopf.

Sardon J.P, 2001, "Fecondité et transition en Europe centrale et orientale", paper presented at the Union International pour l'etude scientifique de la population, XXIV Congrès général de la population, Salvador, Brésil, Session S44.

Serbanescu F., L.Morris, S.Rahimova and L.Flowers, 2002, *Reproductive Health Survey Azerbaijan, 2001*, Atlanta: Centers for Disease Control and Prevention.

Sobotka T., 2002, "Ten years of rapid fertility changes in the European post-communist countries: Evidence and interpretation", *Working Paper Series,* 02-1, University of Groningen: Population Research Centre.

United Nations, 1976, *Fertility and Family Planning in Europe around 1970: A Comparative Study of Twelve National Surveys*, New York: United Nations.

United Nations Economic Commission for Europe, 1979, "Labour Supply and Migration in Europe": *Demographic dimensions 1950-1975 and prospects*, New York: United Nations.

United Nations, 1993, *Abortion policies: A global review. Volume II Gabon to Norway*, New York: United Nations.

United Nations, 1995, *Demographic Yearbook 1993*, New York: United Nations.

United Nations, 1996, *World Contraceptive Use 1994*, Wall Chart, New York: United Nations.

United Nations, 2002, *World Contraceptive Use 2001*, Wall Chart, New York: United Nations.

United Nations Economic Commission for Europe, 2002, *Economic Survey of Europe 2002 No. 1*, New York and Geneva: United Nations.

United Nations Economic Commission for Europe, forthcoming, "Some Aspects of Labour Market Performance in Eastern Europe and the CIS", *Economic Survey of Europe 2003 No. 1*, New York and Geneva: United Nations.

Van de Kaa D. J., 1987, Europe's Second Demographic Transition, *Population Reference Bureau*, 42, Washington, D.C.

World Health Organization/Europe, 1997, *Family Planning and Reproductive Health in CCEE and CIS,* Working document, Updated edition, Copenhagen: World Health Organization.

Fertility trends and prospects in Central and Eastern Europe: the cohort perspective

Tomas Frejka and Jean-Paul Sardon
with the assistance of Alain Confesson

1. Background and methods

This paper provides an overview and analysis of cohort fertility trends during the 20th century in Central and East European countries,[1] as well as an idea of what can be expected in the foreseeable future. It conveys an understanding of challenges that lie ahead. We are not, however, in a position to offer concrete suggestions of how to confront the challenges.

Our team Gérard Calot († 15. 3. 2001), Tomas Frejka, Jean-Paul Sardon with the assistance of Alain Confesson started to work on a project investigating long-term cohort fertility patterns in low-fertility countries in 1999. A first report on the findings was presented at the 2000 annual meeting of the Population Association of America (Frejka and Calot, 2000), which was then published in a modified form in 2001 (Frejka and Calot, 2001). A number of papers followed in 2001-2003 and a comprehensive report on the project will be published as a book (Frejka *et al.,* forthcoming 2003). In the paper prepared for this volume we will be referring to the book as there is not sufficient space to describe details of the methods and to present all the supporting statistical and other evidence.

The theoretical framework of the project is based primarily on the work of Hobcraft and Kiernan (1995), Frejka (1980) and Kohler, Billari and Ortega (2002). However, the contributions of numerous other authors were employed when exploring factors modifying fertility patterns. Hobcraft and Kiernan (1995) provide the background for understanding fertility patterns mainly but not exclusively in western market-economy

[1] Appropriate data compiled by the Observatoire Démographique Européen (ODE) were available for the following countries: Bosnia & Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Poland, Romania, the Russian Federation, the Slovak Republic, Slovenia and Yugoslavia.

societies, Frejka (1980) deals with the conditions that shaped fertility behaviour in the formerly socialist societies, and Kohler *et al.* (2002) provide a basis for comprehending fertility levels and trends around the turn of the century.

The methods applied in the project will be reviewed here very briefly. A more comprehensive description is in the book referred to above. The principal methodological tool is cohort fertility analysis, *i.e.* observing and analysing childbearing patterns of groups of women born in the same year in a country. Data permitting, birth cohorts beginning with those of the 1920s through those of 1980 were subject to analysis. The age of the mother at the time of birth is registered in individual countries in different ways. These data, provided by national institutions, are then processed at the Observatoire Démographique Européen (ODE) to guarantee comparability in time and space of all derived measures. Most of the analysis is based on registered data. There is one important exception, namely estimates of total cohort fertility rates, birth orders, parity progression ratios, parity distributions, and of mean ages of cohort fertility that were made for some cohorts which had not yet reached the end of their reproductive period. This is justified by the fact that in low-fertility countries only a small proportion of childbearing occurs late in the childbearing ages. Fifteen percent of the estimated total fertility is the limit, but it is always only the youngest cohort that contains an amount larger than 11 % of the resulting total fertility. The estimated proportion declines rapidly in preceding cohorts. The possible magnitude of error is then a fraction of the estimated amount. Particular attention is devoted to the analysis of age patterns of fertility. Some of this is done by distinguishing between the fertility of young versus older women. When applying relatively crude comparisons rather than single year measures, the 27th birthday is the point dividing women into groups of young and older women. Changes in the age structure of fertility are observed by comparing age-specific fertility rates of one cohort with that of another. When the particular age-specific fertility rate of a cohort born later (a younger cohort) is higher than that of a cohort born earlier (an older cohort), the difference is labelled as "a surplus", and in the reverse situation the difference is labelled as "a deficit". Simultaneously, when comparing age-specific fertility behaviour of different birth cohorts, it is determined whether and to what degree women who had relatively low fertility when young postponed births into later years, or conversely,

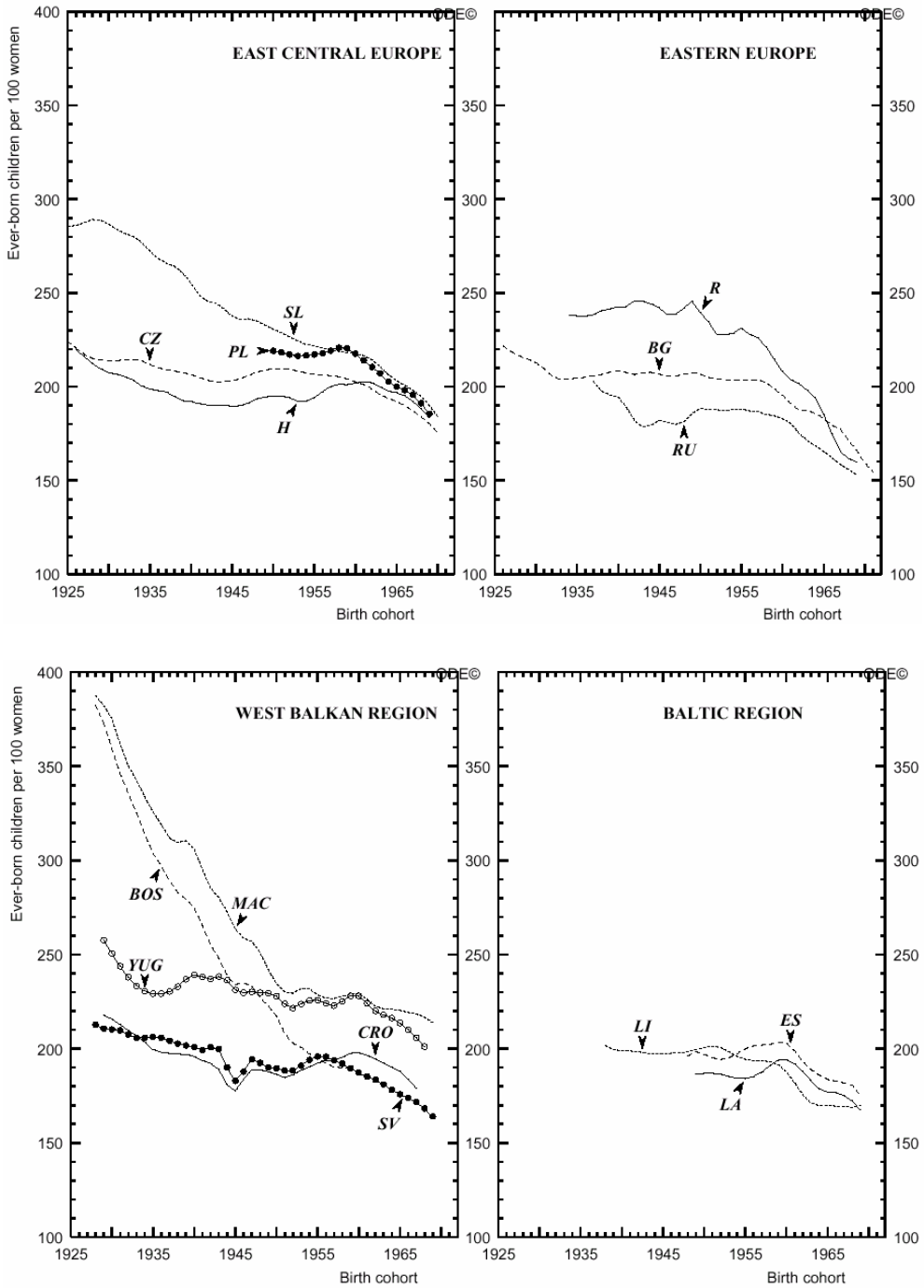
whether and to what degree women who had relatively high fertility when young advanced their childbearing. Another possibility is that fertility declined among women of all ages, young and older.

2. The historical record of completed fertility

The long-term trends of total cohort fertility rates (TCFRs) and of life-time strategies of childbearing tended to be of a common nature among the formerly socialist countries and among the Western market-economy countries, but each differed significantly from the other group. In the formerly socialist countries the TCFRs were relatively stable from the 1930s cohorts through those of the late 1950s and started to decline in subsequent cohorts. In the West, TCFRs were relatively high for the birth cohorts of the early 1930s and subsequently tended to decline through those of the 1960s, often with a lesser or no decline among the 1950s cohorts.

Origins of the differences in fertility behaviour between the two groups of countries in the post-war period can be traced to political and economic trends and policies. The baby boom in Western countries was the product of an advancement of fertility into the young ages among the cohorts born around 1940, coupled with the high fertility of the 1930s birth cohorts. This was in part brought about by the extraordinary economic growth of the 1950s and the wide-scale implementation of the welfare state policies (Hobcraft and Kiernan, 1995). In the formerly socialist countries there was no baby boom mainly due to the fertility depressing effects of the macro-economic policies in the first years after the second world war which gave major preference to investments in labour intensive heavy industries and which also generated a rapid increase in female employment (Frejka, 1980). The family, related largely pro-natalist policies in the formerly socialist countries thus had some impact in keeping TCFRs around the replacement level while TCFRs in the West were declining.

Figure 1 Completed fertility of female birth-cohorts, selected countries, birth cohorts 1925 to 1970



In the majority of the formerly socialist countries, total fertility rates of the cohorts born around 1930 through those of the late 1950s fluctuated within a narrow range around 2.0 (Figure 1). There were exceptions, namely in the countries that had experienced very little or no modern industrial development prior to the Second World War. In Bosnia & Herzegovina and Macedonia fertility of the cohorts born around 1930 was very high, but subsequently TCFRs declined precipitously and the 1951 birth cohorts had values of 2.1 and 2.3 births per woman, respectively; among the 1950s birth cohorts completed fertility continued to decline moderately. In the Slovak Republic TCFRs of the cohorts born in the late 1920s were around 2.9 births per woman and thereafter declined continuously. In Romania TCFRs were kept relatively high due to the severe restrictions placed on the availability of contraceptives and induced abortion of the authoritarian government (Baban, 1999). The relatively high fertility in Yugoslavia was due to the extreme heterogeneity of its population with low fertility in Vojvodina, and fertility levels and trends in Kosovo similar to those in Bosnia & Herzegovina and Macedonia.

Starting with women born in the late 1950s completed fertility declined from one cohort to the next in all the formerly socialist countries. Between the 1960 and the 1967 cohorts, the average TCFR for these countries declined from 2.04 to 1.84 births per woman, a drop of 10 %.

3. Changes in the life-time strategies of childbearing

In the formerly socialist countries women were bearing their children early in the reproductive period and the proportion of children born before the 27th birthday tended to increase (Table 1). Among the cohorts born in 1930, at least one half of all children were borne by young women in their teens and early to mid-twenties and in some countries this proportion was close to 70 %. In almost all countries this proportion tended to increase among successive cohorts. In more than half the countries the proportion of children born early increased, even among the 1960s birth cohorts when TCFRs were declining. In the 1965 cohorts the range of the proportion of early births was from 60 to over 80 %.

Table 1. The proportion of total cohort fertility completed by 27th birthday, 35 low fertility countries, birth cohorts 1930, 1940, 1950, 1960 and 1965

Country	Proportion of total cohort fertility completed up to 27th birthday of cohort born in					Annual change between birth cohorts (percent)			
	1930	1940	1950	1960	1965	1930-1940	1940-1950	1950-1960	1960-1965
Formerly socialist countries									
Bosnia & Herzegovina	49.6	58.8	65.8	...	...	1.7	1.1	...	...
Bulgaria	68.9	72.3	77.5	79.8	81.5	0.5	0.7	0.3	0.4
Croatia	60.8	65.0	66.3	65.6	61.3	0.7	0.2	-0.1	-1.3
Czech Republic	68.5	71.6	73.3	74.6	74.1	0.4	0.2	0.2	-0.1
Estonia	...	...	62.5	68.8	71.4	...	...	1.0	0.7
Hungary	68.8	65.9	71.7	68.2	66.7	-0.4	0.8	-0.5	-0.4
Latvia	...	...	61.2	67.9	72.0	...	...	1.0	1.2
Lithuania	...	48.6	59.6	65.1	67.5	...	2.0	0.9	0.7
Macedonia	51.2	58.2	63.7	66.6	64.6	1.3	0.9	0.4	-0.6
Poland	…	…	…	64.5	65.0	…	…	…	0.2
Romania	...	54.4	69.3	74.0	77.7	...	2.4	0.7	1.0
Russia	...	59.1	62.4	70.6	75.5	...	0.5	1.2	1.3
Slovak Republic	59.7	66.7	69.0	71.9	78.9	1.1	0.3	0.4	1.9
Slovenia	50.9	58.9	67.0	70.2	64.3	1.5	1.3	0.5	-1.8
Yugoslavia	62.6	62.3	63.9	62.8	62.0	-0.1	0.3	-0.2	-0.2
Selected western market-economy countries									
Canada	50.8	67.4	56.2	45.8	42.4	2.8	-1.8	-2.0	-1.5
England & Wales	47.0	61.8	56.9	47.0	44.3	2.7	-0.8	-1.9	-1.2
Former FRG	46.6	61.0	58.7	45.0	38.8	2.7	-0.4	-2.7	-3.0
Norway	45.4	60.7	61.1	44.1	41.2	2.9	0.1	-3.3	-1.4
Portugal	39.5	47.7	56.9	57.2	49.8	1.9	1.8	0.1	-2.8

In the Western market economies, among the cohorts of 1930, between 40 and 50 % of children tended to be borne by young women. This proportion increased among the cohorts of the 1930s, remained quite stable among the 1940s birth cohorts and then declined considerably among the cohorts of the 1950s and 1960s. In the 1965 cohorts it was usually 40 to 45 % of children that were borne by young women.

In brief, already in the cohorts born in 1930 larger proportions of children were born earlier in the reproductive period in the formerly socialist countries than in the Western market-economy ones. The patterns of early

childbearing were retained and for the most part reinforced in the Central and East European, formerly socialist, countries. In the cohorts of the 1960s the proportions of children borne by young women in Bulgaria, Romania, Russia and the Slovak Republic were close to 80 %, which was almost twice as much as in Western market-economy countries (Table 1).

A more detailed analysis of the age patterns of childbearing reveals that there were two different types of change in the formerly socialist countries among the 1930 to the 1965 birth cohorts (Table 2).

The proportion of children born before the 27th birthday was increasing in both cases, but in the first one the absolute values of the age-specific fertility rates of young women were increasing and the rates were declining when these women were older; some women/couples decided to have their children earlier than previous birth cohorts. This is considered an advancement of childbearing (the "shift ratios" in the last columns of Table 2 appear in parentheses[2]). The second type of change was characterised by age-specific fertility rates declining among women irrespective of age, there was no perceptible shift in the age pattern of fertility, and the letter "D" appears in the respective cell. The two types of changing age patterns of fertility were represented about equally, and it is difficult to detect any consistency. It does appear that among the cohorts of the 1960s advancement of childbearing has ceased. There were some exceptions, namely women/couples who were postponing some of their childbearing until they were older; fertility was declining when these women were young and having more births when older: women born in 1960 and 1965 in Hungary, the 1960 birth cohort in Yugoslavia and the 1965 cohort in a few other countries.

[2] A shift ratio of 100 means that the absolute increase of age-specific fertility before the 27th birthday equals the decline after the 27th birthday. Values below 100 mean that the increase of fertility among women when young was smaller than the decline when they were older. Values above 100 mean that the increase of fertility among women when young was larger than the decline when they were older.

Table 2. Differences in cumulated cohort fertility rates (CCFRs) between successive cohorts and shift ratios, up to and after 27th birthday, 20 low fertility countries, birth cohorts 1930, 1940, 1950, 1960 and 1965

Country	Differences in CCFRs up to 27th birthday of successive cohorts				Differences in CCFRs after 27th birthday of successive cohorts				Shift ratios[1] (Advancement in parentheses; Postponement without parentheses)			
	1930-1940	1940-1950	1950-1960	1960-1965	1930-1940	1940-1950	1950-1960	1960-1965	1930-1940	1940-1950	1950-1960	1960-1965
Formerly socialist countries												
Bosnia & Herzegovina	-0.163	-0.188	-0.219	…	-0.678	-0.388	…	…	D	D	…	…
Bulgaria	0.058	0.095	-0.042	-0.069	-0.078	-0.112	-0.071	-0.055	(74)	(85)	D	D
Croatia	-0.035	-0.038	0.055	-0.152	-0.158	-0.058	0.048	0.041	D	D	I	27
Czech Republic	0.012	0.056	-0.025	-0.092	-0.087	-0.027	-0.046	-0.019	(14)	(209)	D	D
Estonia	…	…	0.165	-0.095	…	…	-0.105	-0.112	…	…	(157)	D
Hungary	-0.161	0.134	-0.023	-0.070	0.007	-0.104	0.091	0.010	4	(129)	392	14
Latvia	…	…	0.174	-0.053	…	…	-0.103	-0.130	…	…	(168)	D
Lithuania	…	0.230	0.029	-0.081	…	-0.211	-0.156	-0.104	…	(109)	(18)	D
Macedonia	-0.131	-0.285	0.029	-0.107	-0.548	-0.426	-0.086	0.012	D	D	(34)	11
Poland	…	…	…	-0.104	…	…	…	-0.071	…	…	…	D
Romania	…	0.386	-0.086	-0.118	…	-0.345	-0.184	-0.136	…	(112)	D	D
Russia	…	0.025	0.116	-0.041	…	-0.088	-0.170	-0.133	…	(29)	(68)	D
Slovak Republic	-0.012	-0.106	-0.027	0.041	-0.307	-0.131	-0.104	-0.182	D	D	D	(23)
Slovenia	0.114	0.087	0.046	-0.187	-0.206	-0.199	-0.069	0.069	(55)	(44)	(67)	37
Yugoslavia	-0.073	-0.022	-0.028	-0.108	-0.031	-0.074	0.025	-0.038	D	D	89	D
Selected western market-economy countries												
Canada	0.094	-0.718	-0.251	-0.102	-0.782	-0.025	0.141	0.007	(12)	D	56	7
England & Wales	0.351	-0.281	-0.249	-0.097	-0.346	-0.009	0.152	-0.001	(102)	D	61	D
Former FRG	0.198	-0.206	-0.276	-0.144	-0.380	-0.068	0.177	0.030	(52)	D	64	21
Norway	0.359	-0.208	-0.359	-0.070	-0.392	-0.148	0.351	0.047	(92)	D	98	66
Portugal	0.109	-0.090	-0.095	-0.177	-0.386	-0.498	-0.082	0.103	(28)	D	D	58

Note: [1] Ratio of childbearing surplus or deficit of women before and after 27th birthday (for details see text)
D = Decline of fertility before and after 27th birthday

In the Western market-economy countries changes in the age patterns of childbearing were of a remarkably similar nature across the board (Table 2): an advancement of childbearing among the cohorts of the 1930s, a fertility decline among young and older women in the cohorts of the 1940s and starting with women born in the late 1940s, postponement of fertility until women were older. In almost all Western countries in the cohorts of the 1950s, women in their late 20s and 30s actually had 50 to 100 % of the births they had "postponed" when young. The propensity to

bear children later in life was still evident, but weaker than previously, among the cohorts of the 1960s.

Figure 2 demonstrates in greater detail changes of childbearing patterns between successive cohorts. In the formerly socialist countries the curves of the cohort age-specific fertility rates became narrower and shifted to the left, *i.e.* more childbearing among young women. The difference between the 1950 and the 1960 curves tended to be small, usually with an additional minor shift to the younger ages. This was in distinction to the Western trend as exemplified by England & Wales in Figure 2, where compared to the 1950 cohort the 1960 fertility curve had shifted considerably into the older ages.

Changes of the fertility age patterns are crudely reflected in trends of mean ages of childbearing (Table 3).

In the Central and East European countries the average age of childbearing tended to be already relatively low in the 1930 birth cohorts. Through successive cohorts of the following decades, the mean age of childbearing continued to decline, and in the 1960 birth cohort it was around 25 years in almost all countries. In the Western countries there was a sharp decline in the mean age of childbearing among the birth cohorts of the 1930s, and starting with the cohorts born around 1940 it increased in almost all countries and was around 28 years among women born during the 1960s.

Figure 2 Age-specific fertility rates, selected countries, birth cohorts 1930, 1940, 1950 and 1960

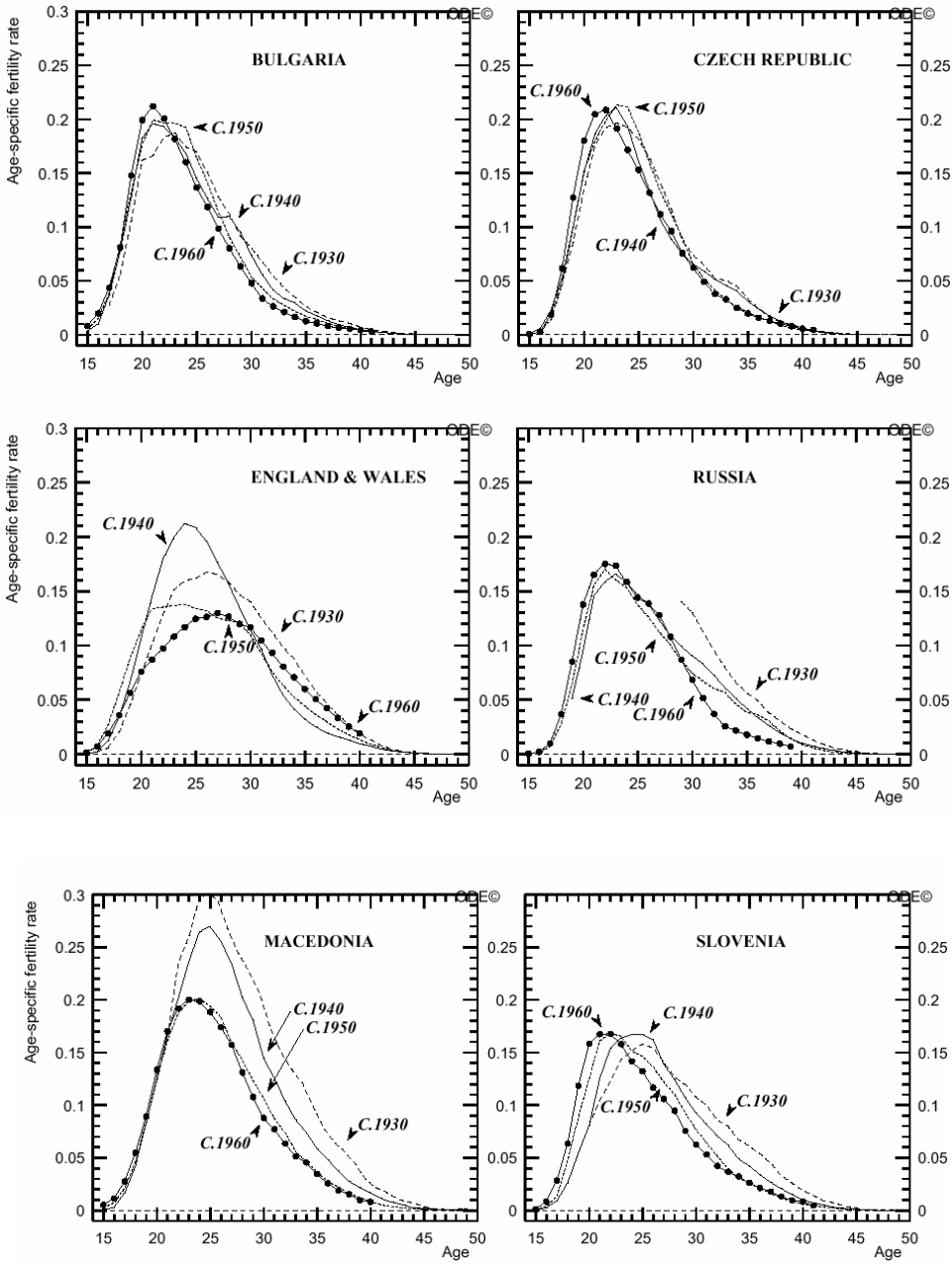


Table 3. Average age at childbearing, 20 low fertility countries, birth cohorts 1930, 1940, 1950, 1960 and 1965

Country	Average age at childbearing, women born in					Annual change between birth cohorts (percent)			
	1930	1940	1950	1960	1965	1930-1940	1940-1950	1950-1960	1960-1965
Formerly socialist countries									
Bosnia & Herzegovina	27.9	26.6	25.6	...	...	-0.5	-0.4	...	...
Bulgaria	25.2	24.6	24.1	23.7	23.5	-0.3	-0.2	-0.2	-0.1
Croatia	26.4	25.8	25.4	25.8	26.2	-0.2	-0.2	0.1	0.4
Czech Republic	25.4	25.0	24.9	24.5	24.7	-0.2	-0.1	-0.1	0.1
Estonia	...	...	26.2	25.3	25.3	...	...	-0.3	-0.1
Hungary	25.5	25.4	25.0	25.1	25.5	0.0	-0.2	0.0	0.3
Latvia	...	...	26.4	25.5	25.3	...	...	-0.4	-0.2
Lithuania	...	27.9	26.6	25.9	25.9	...	-0.5	-0.3	0.0
Macedonia	27.6	26.7	25.9	25.5	25.7	-0.3	-0.3	-0.1	0.1
Poland	…	…	26.5	26.0	25.9	…	…	-0.2	-0.1
Romania	...	26.6	25.0	24.5	24.2	...	-0.6	-0.2	-0.3
Russia	...	26.6	26.2	25.0	24.6	...	-0.2	-0.4	-0.4
Slovak Republic	26.5	25.6	25.4	25.0	24.9	-0.4	-0.1	-0.2	0.0
Slovenia	27.6	26.6	25.4	24.9	25.7	-0.4	-0.5	-0.2	0.6
Yugoslavia	26.2	26.2	25.7	25.9	26.0	0.0	-0.2	0.1	0.1
Selected western market-economy countries									
Canada	27.4	25.3	26.5	27.8	...	-0.8	0.5	0.5	...
England & Wales	27.9	26.2	26.5	27.8	28.2	-0.7	0.1	0.5	0.3
Former FRG	27.9	26.2	26.2	27.9	28.7	-0.6	0.0	0.6	0.6
Norway	28.2	26.2	26.2	28.1	28.6	-0.7	0.0	0.7	0.3
Portugal	29.4	27.9	26.8	26.6	27.5	-0.5	-0.4	-0.1	0.7

4. Fertility of cohorts in the middle of childbearing periods at the end of the 20th century

In Central and Eastern Europe, the changes taking place in the fertility levels, trends and patterns of the cohorts that had not yet completed their childbearing by the year 2000 were considerably more pronounced than those of the previous cohorts. These were the cohorts that to some extent were affected by the historical transformations of the political, economic and social systems. The younger the cohort, the more evident the impact of the system transition.

The fertility levels of young women before their 27th birthday, which in the majority of countries hardly changed between the cohorts born in 1930 and 1960, declined perceptibly among the 1960s birth cohorts, and this decline accelerated among the cohorts of the early 1970s (Table 4). In the cohorts born in 1960 the cumulated cohort fertility rates (CCFRs) ranged from 1.2 to 1.6, compared to a range of 0.7 to 1.3 births born per woman in the 1973 birth cohorts. In Western countries the fertility of young women had been declining consistently, starting with the cohorts born in the 1940s, and in the cohorts of the 1970s the CCFRs reached a range of 0.5 to 0.7 births per woman. Despite the rapid drop of fertility among young women in the Central and East European countries, its absolute level was still relatively high in the formerly socialist countries in the cohorts of the 1970s.

The conspicuous descent of childbearing among young women in the Central and East European countries raises formidable and challenging questions: what does this considerable decline of early childbearing imply? Are these young women/couples postponing births? Will the young generations catch up with the childbearing levels of previous cohorts when they will be older? Or is it an indication of a regime of markedly below replacement fertility of these cohorts?

Changes of the levels and age patterns of childbearing of successive cohorts in selected countries are depicted in greater detail in Figures 3 and 4. In the examples of Bulgaria and the Czech Republic in Figure 3, the shape and elevation of the 1965 cohort curves are not too different from those of the 1960 curves. In Macedonia and especially in Slovenia the elevation of the 1965 curve is lower. Note that the tail-ends of the 1965 curves tend to be higher than those of the 1960 curves indicating a moderate propensity to postpone births. The 1970 curves are generally lower than the 1965 curves. Up to the ages of 25 and 20, respectively, *i.e.* up to the ages for which data are available, the 1975 and the 1980 curves are unmistakably lower than those of the older cohorts are. The example of a Western population, England & Wales, illustrates that the elevation of the 1960 through the 1970 curves were lower than in the formerly socialist countries and more spread out over the reproductive period, a relatively "late" childbearing pattern with fewer births when these women were young and relatively more births when they were older. The

example also demonstrates that there was a gradual and fairly even decline of fertility among successive cohorts.

Table 4. Cumulated cohort fertility rates (CCFRs) up to 27th birthday, 20 low fertility countries, birth cohorts 1930, 1940, 1950, 1960, 1970 and 1973

Country	CCFRs up to 27th birthday						Annual change between birth cohorts (percent)				
	1930	1940	1950	1960	1970	1973	1930-1940	1940-1950	1950-1960	1960-1970	1970-1973
Formerly socialist countries											
Bosnia & Herzegovina	1.779	1.616	1.428	1.209	...	...	-1.0	-1.2	-1.7	...	...
Bulgaria	1.449	1.507	1.602	1.560	1.205	1.032	0.4	0.6	-0.3	-2.6	-5.2
Croatia	1.309	1.273	1.236	1.291	0.893	...	-0.3	-0.3	0.4	-3.7	...
Czech Republic	1.467	1.479	1.535	1.510	1.201	0.967	0.1	0.4	-0.2	-2.3	-7.2
Estonia	...	...	1.235	1.400	1.050	0.911	...	...	1.3	-2.9	-4.7
Hungary	1.427	1.266	1.399	1.376	1.108	0.890	-1.2	1.0	-0.2	-2.2	-7.3
Latvia	...	...	1.144	1.318	1.045	0.905	...	...	1.4	-2.3	-4.8
Lithuania	...	0.966	1.196	1.224	1.101	0.938	...	2.1	0.2	-1.1	-5.4
Macedonia	1.912	1.781	1.496	1.525	1.354	1.286	-0.7	-1.7	0.2	-1.2	-1.7
Poland	…	…	…	1.404	1.132	0.936	…	…	…	-2.2	-6.4
Romania	...	1.301	1.687	1.601	1.113	0.992	...	2.6	-0.5	-3.6	-3.8
Russia	...	1.150	1.175	1.291	1.083	0.970	...	0.2	0.9	-1.8	-3.7
Slovak Republic	1.710	1.699	1.592	1.565	1.287	1.084	-0.1	-0.6	-0.2	-2.0	-5.7
Slovenia	1.069	1.183	1.270	1.316	0.868	0.709	1.0	0.7	0.4	-4.2	-6.7
Yugoslavia	1.553	1.480	1.458	1.430	1.167	1.044	-0.5	-0.1	-0.2	-2.0	-3.7
Selected western market-economy countries											
Canada	1.707	1.801	1.083	0.832	0.685	...	0.5	-5.1	-2.6	-1.9	...
England & Wales	1.100	1.452	1.170	0.921	0.767	0.710	2.8	-2.2	-2.4	-1.8	-2.6
Former FRG	1.001	1.200	0.994	0.718	0.524	...	1.8	-1.9	-3.3	-3.1	...
Norway	1.128	1.487	1.279	0.921	0.758	0.670	2.8	-1.5	-3.3	-1.9	-4.1
Portugal	1.163	1.273	1.183	1.087	0.699	0.606	0.9	-0.7	-0.8	-4.4	-4.8

Figure 3 Age-specific fertility rates, selected countries, birth cohorts 1960, 1965, 1970, 1975 and 1980

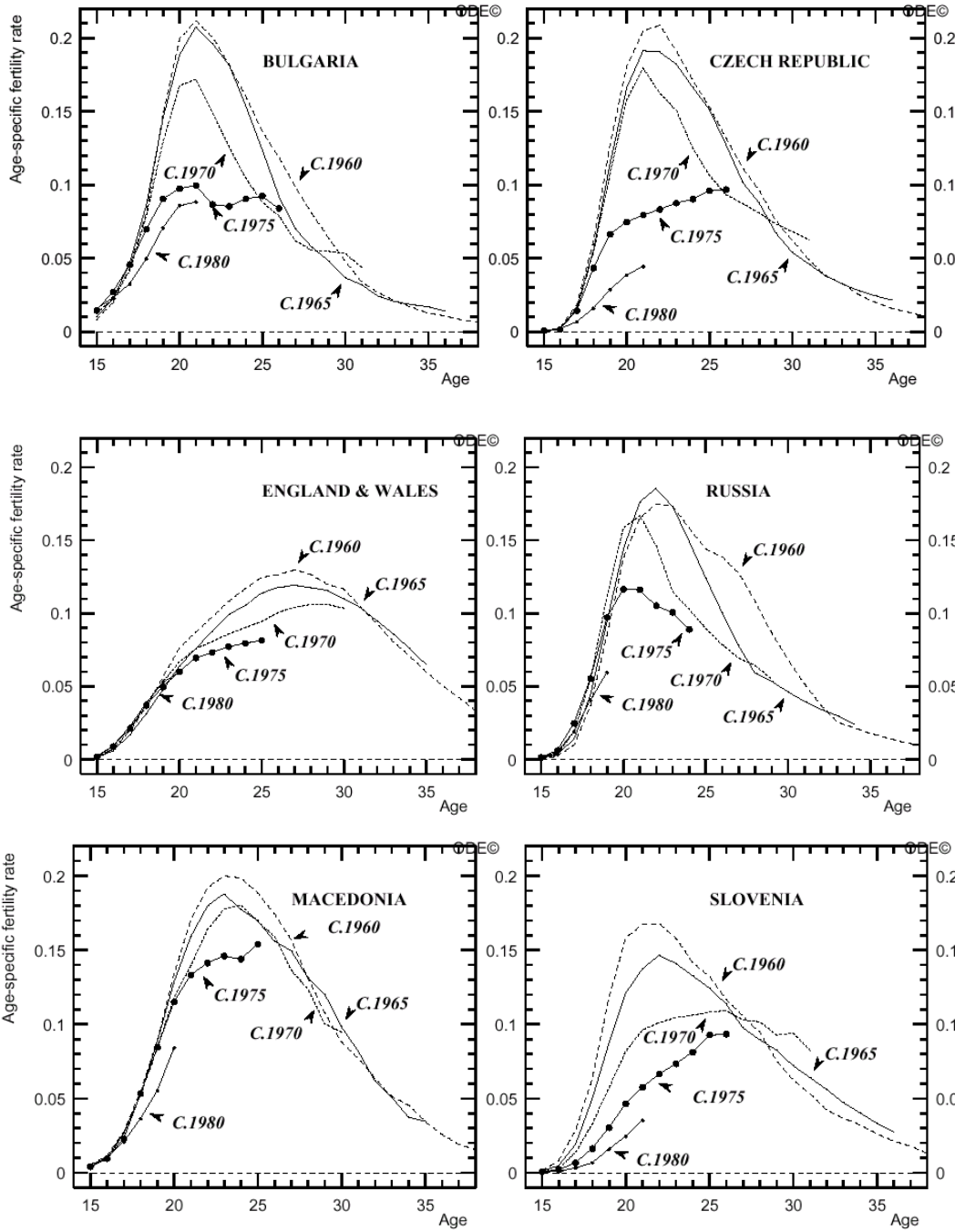
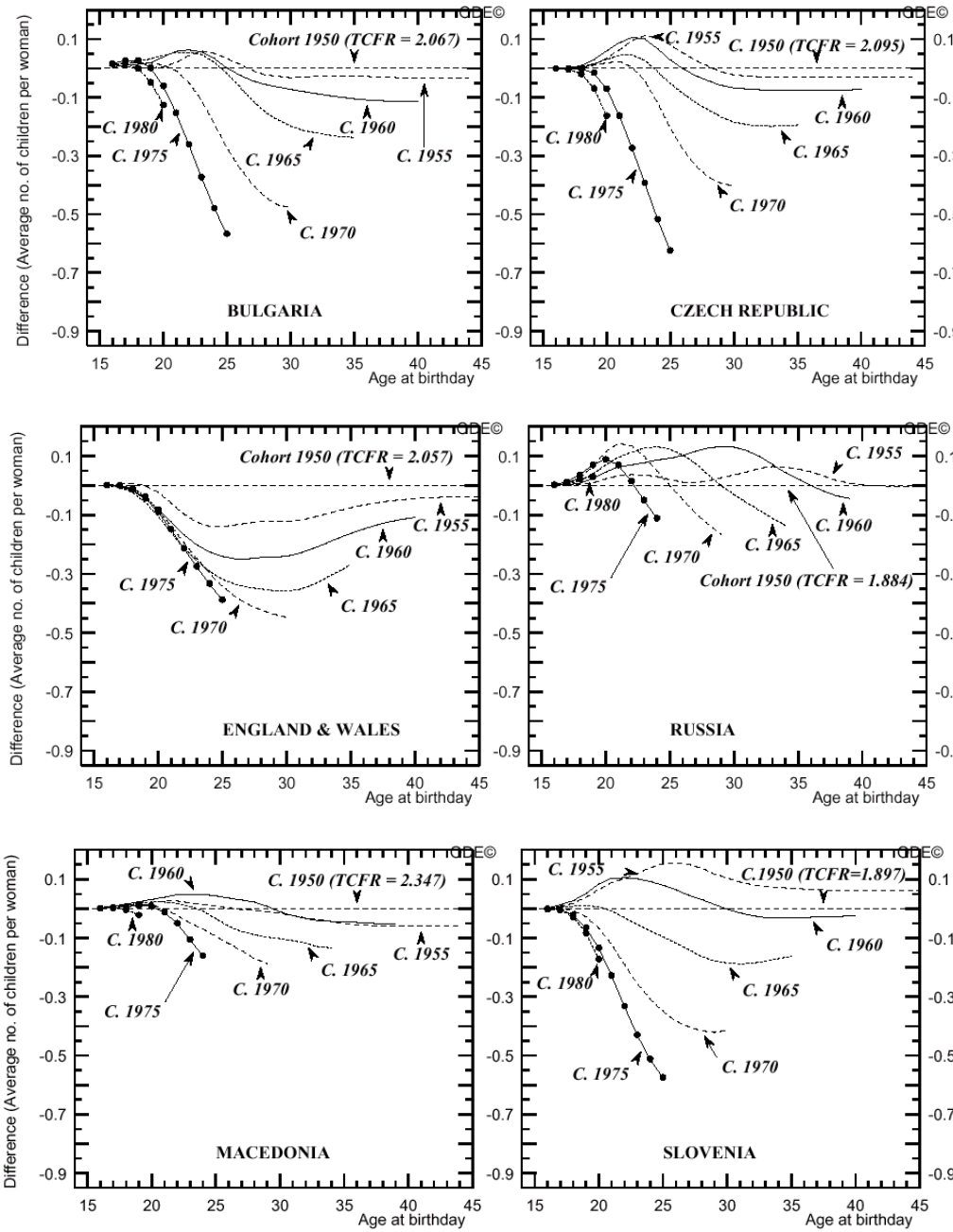


Figure 4 Differences in cumulative age-specific cohort fertility rates between base and subsequent cohorts, women born in 1950 (base), 1955, 1960, 1965, 1970, 1975 and 1980



Changes of the levels and age patterns of childbearing of successive cohorts in selected countries are depicted in greater detail in Figures 3 and 4. In the examples of Bulgaria and the Czech Republic in Figure 3, the shape and elevation of the 1965 cohort curves are not too different from those of the 1960 curves. In Macedonia and especially in Slovenia the elevation of the 1965 curve is lower. Note that the tail-ends of the 1965 curves tend to be higher than those of the 1960 curves indicating a moderate propensity to postpone births. The 1970 curves are generally lower than the 1965 curves. Up to the ages of 25 and 20, respectively, *i.e.* up to the ages for which data are available, the 1975 and the 1980 curves are unmistakably lower than those of the older cohorts. The example of a Western population, England & Wales, illustrates that the elevation of the 1960 through the 1970 curves were lower than in the formerly socialist countries and more spread out over the reproductive period, a relatively "late" childbearing pattern with fewer births when these women were young and relatively more births when they were older. The example also demonstrates that there was a gradual and fairly even decline of fertility among successive cohorts.

Figure 4 illustrates the development of life-time childbearing strategies in comparison to the base cohort born in 1950. In most of the subsequent cohorts in the countries of Central and Eastern Europe fertility was higher among women in their teens and early 20s compared to the 1950 birth cohort. It is also evident that up to the 1960 cohort, fertility patterns were not very different from those of the 1950 cohort. On the other hand, the childbearing patterns of the 1970 and subsequent cohorts obviously differed substantially from those of the previous cohorts. In the 1975 birth cohort in Bulgaria, the Czech Republic and Slovenia, the CCFRs by age 25 were lower than the comparable CCFRs of the 1950 cohort by about 0.6 births per woman, and it appeared that the CCFRs in subsequent ages could go even lower. In the example of the Western country each subsequent cohort had lower fertility than the previous cohort; however, after the mid-20s the curves turn upward and again come closer to the base. These women were bearing a considerable proportion of the children they had postponed earlier in life. To date, such propensities do not appear in the formerly socialist countries, except for a very slight indication in Slovenia.

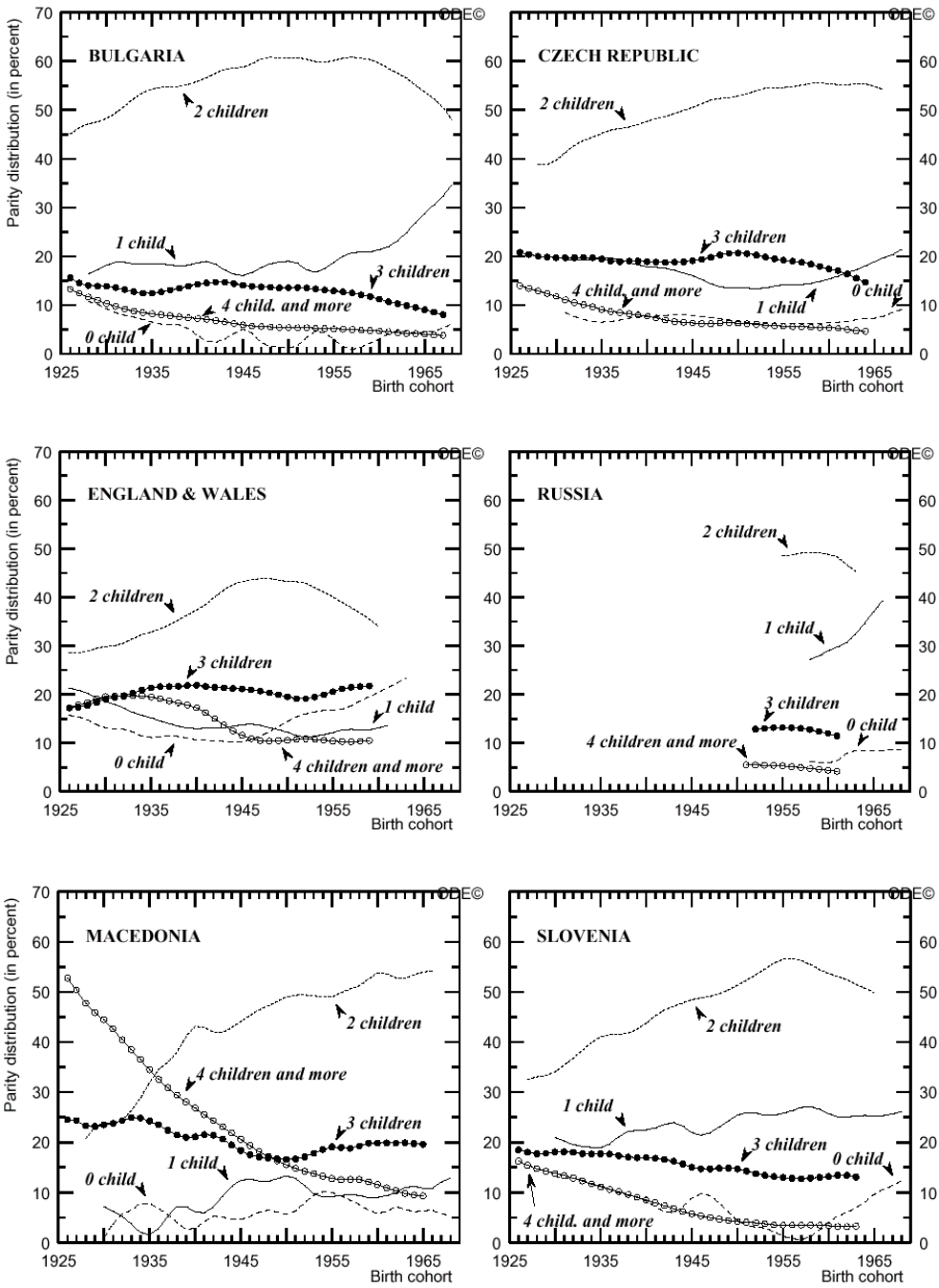
5. Parity distributions

Major changes were also taking place in birth order fertility rates, parity progression ratios and the parity distributions of the cohorts under study. In general, there was an appreciable decline of third and higher order births, especially among the cohorts of the 1930s. By the cohorts of the 1950s, the incidence of higher order births was low. The proportions of women having first order births in the Central and East European countries were above 90 percent up to the 1960 birth cohorts. The proportions of women with second births were around 70 to 80 percent. In most countries starting with the cohorts of the late 1950s the proportions of first and second order births set out on a downward trend.[3]

The trends in parity distributions depicted in Figure 5 reflected the trends of birth order fertility rates and parity progression ratios. Women with two children were the most prevalent parity. In Central and East European countries among the cohorts of the 1950s, about half of all women at the end of the childbearing period had two children. Among the cohorts of the early 1960s this proportion started to decline and in most countries it was women with only one child that were replacing them. An incipient increase of women who had no children at all was becoming evident. Preliminary evidence indicates that the number of childless women was rapidly increasing among women born in the mid- to late 1960s. This trend is not yet reflected in Figure 5. In the Western countries the "two-child family" tended to be the most prevalent in the birth cohorts of the late 1940s and early 1950s and started to decline among subsequent cohorts. The increase of women with no children started in the Western countries among the cohorts of the 1950s and continued among the 1960s birth cohorts.

[3] Statistical evidence of the developments described in this paragraph can be found in Frejka *et al*., forthcoming 2003.

Figure 5 Parity distribution of completed fertility, selected countries, birth cohorts 1925 to 1970 (in percent)



6. Reflections on fertility trends in the foreseeable future

For cohorts that were in the midst of their childbearing periods at the end of the 20th century it is possible to make some reasonable speculations based on calculations utilising data of past experience that provide a sense of trends of completed fertility in the foreseeable future.

One can, for instance, assess the amount of late childbearing that would be required for completed fertility of the 1970 cohort to equal the TCFR of the 1960 cohort or to attain replacement fertility. Calculations are made which illustrate that in order to attain such results in most countries the women born in 1970 would have to have considerably higher fertility than the 1960 cohorts had experienced after their 27th birthday (Table 5). Taking the example of Bulgaria, the 1970 cohort had borne 1.205 children per woman by their 27th birthday. For these women to reach the completed fertility of the 1960 cohort, 1.954 births per woman, they would have to have 0.749 after their 27th birthday. This would be almost twice as many births after their 27th birthday than the cohort 10 years older (see the last but one column in Table 5: 90 percent more). To attain replacement fertility, their late fertility would have to be even higher.

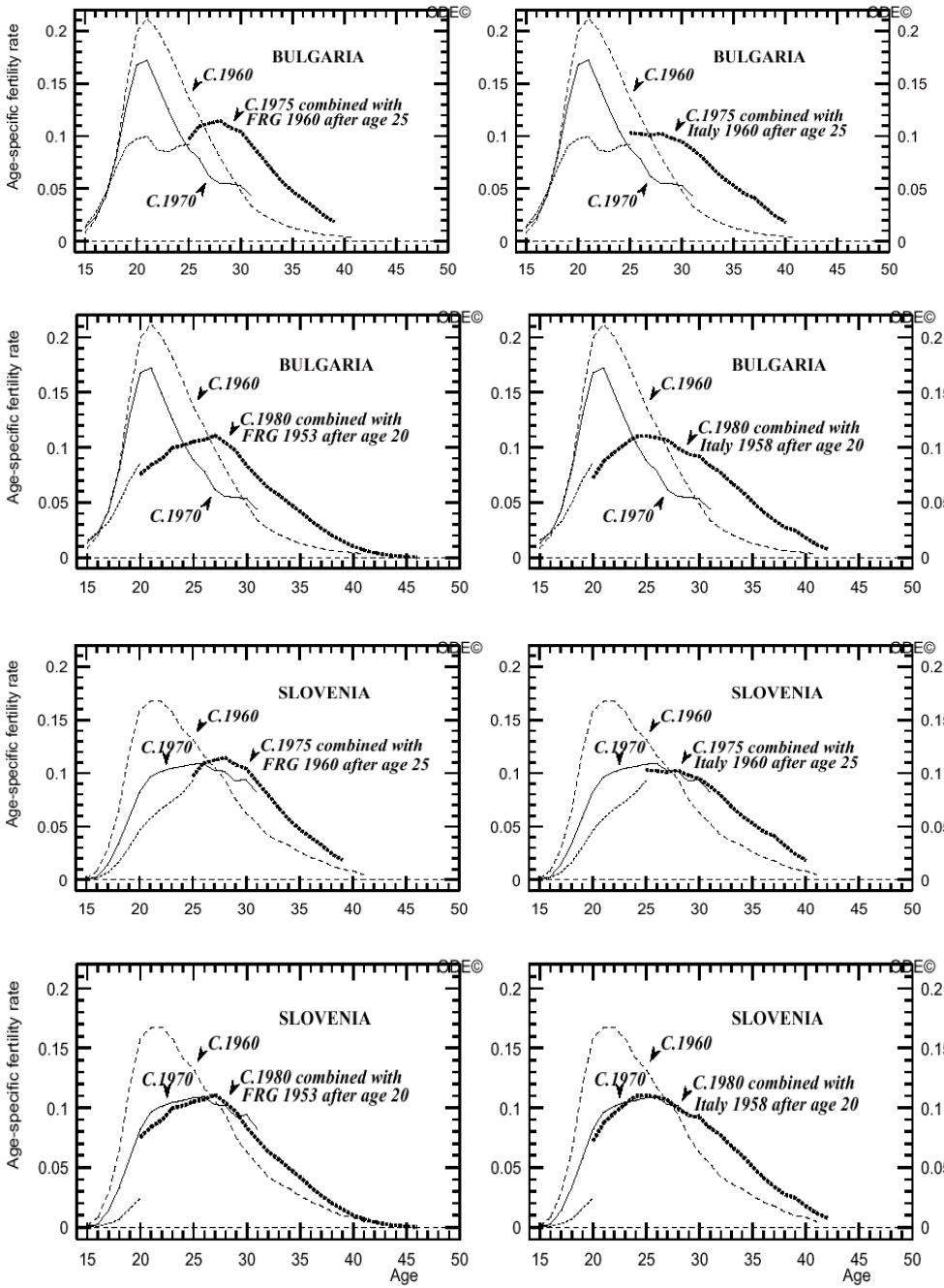
It is conceivable that the age patterns of childbearing in the countries of Central and Eastern Europe are going to change, that women/couples are going to adopt a regime of later childbearing. To some degree such a transformation was under way among the cohorts in the midst of their childbearing during the 1990s. The above analysis has shown that fertility has been declining among young women. There is also preliminary evidence that some of the births young women have foregone are being born later in their lives. Note in Figure 3 that the tail-ends of the curves for the 1965 and 1970 cohorts in all the examples are above previous cohorts. To date, however, this propensity is weak, yet the calculations for the 1970 cohort have demonstrated that fertility of older women in this cohort in most countries would have to be 40 to 90 percent higher than in the 1960 birth cohort if they were to aspire to attain the completed fertility of the 1960 cohort. So far fertility of women in their late 20s and early 30s was only marginally higher than that of previous cohorts. Furthermore, the fertility of young women among the cohorts of the 1970s and early 1980s continues to decline rapidly indicating that these women would have to have unusually high fertility when older for their

completed fertility to come anywhere close to that of the 1960 cohort or to replacement fertility.

Table 5. Childbearing (cumulated cohort fertility rate - CCFR) needed after 27th birthday for 1970 birth cohort to attain total cohort fertility rate of 1960 cohort or to attain replacement fertility, 20 low fertility countries

Country	Estimated total cohort fertility rate of 1960 cohort	CCFR after 27th birthday in 1960 birth cohort	CCFR prior to 27th birthday in 1970 cohort	CCFR after 27th birthday needed in 1970 cohort to attain		Difference (in %) between 1960 CCFR 27+ and 1970 CCFR 27+ needed to attain	
				1960 total cohort fertility rate	Replacement TCFR = 2.10	1960 TCFR	Replacement TCFR = 2.10
Formerly socialist countries							
Bosnia & Herzegovina	...	…	...	...	...	...	...
Bulgaria	1.954	0.394	1.205	0.749	0.895	90	127
Croatia	1.967	0.676	0.893	1.074	1.207	59	79
Czech Republic	2.025	0.514	1.201	0.824	0.899	60	75
Estonia	2.034	0.635	1.050	0.984	1.050	55	65
Hungary	2.018	0.642	1.108	0.910	0.992	42	55
Latvia	1.940	0.622	1.045	0.895	1.055	44	70
Lithuania	1.880	0.656	1.101	0.779	0.999	19	52
Macedonia	2.290	0.765	1.354	0.936	0.746	22	-2
Poland	2.176	0.772	1.132	1.044	0.968	35	25
Romania	2.163	0.562	1.113	1.050	0.987	87	76
Russia	1.829	0.538	1.083	0.746	1.017	39	89
Slovak Republic	2.177	0.612	1.287	0.890	0.813	45	33
Slovenia	1.874	0.557	0.868	1.006	1.232	81	121
Yugoslavia	2.278	0.848	1.167	1.111	0.933	31	10
Selected western market-economy countries							
Canada	1.818	0.986	0.685	1.133	1.415	15	44
England & Wales	1.960	1.039	0.767	1.193	1.333	15	28
Former FRG	1.594	0.877	0.524	1.070	1.576	22	80
Norway	2.086	1.166	0.758	1.328	1.342	14	15
Portugal	1.900	0.813	0.699	1.201	1.401	48	72

Figure 6 BULGARIA and SLOVENIA, Age-specific fertility rates, birth cohorts 1960 and 1970 (real), birth cohorts 1975 and 1980 (scenarios)



A few scenarios of "possible" future fertility trends for Bulgaria and Slovenia are depicted in Figure 6. The rationale for these scenarios is to explore what could be the level of completed fertility if these populations were to immediately adopt patterns of late childbearing which were experienced in other countries in the past. The actual experience of the 1975 and 1980 cohorts in Bulgaria and Slovenia was combined with previous experience of specific cohorts born in the 1950s or 1960 (after ages 25 and 20, respectively) in the former Federal Republic of Germany and Italy. The age-specific patterns of childbearing were selected from the experience 20 to 30 cohorts in 20 western countries (a sample of about 500 sets) to find the most reasonable continuation of life-time fertility patterns based on the past experience of the respective cohorts in Bulgaria and Slovenia, but the matches were not perfect. The point of transition from real experience at age 25 or 20 in Bulgaria and Slovenia to the "model" tended to be abrupt. The "model" age-specific fertility rates at ages 26 and above added on to the Bulgaria 1975 birth cohort were somewhat higher than presumed for a smooth transition. Even more precipitous was the transition from past experience up to age 20 of the Slovenia 1980 birth cohort to the "models". On the whole, the selected childbearing scenarios are almost certainly higher than what is reasonable to expect judging from the patterns customary in these countries in the past and, more importantly, judging from the childbearing paths these cohorts have traveled by the end of the 20th century. The result of these scenarios is that TCFRs of the 1975 cohorts in the Central and East European countries would be in the range of 1.5 to 2.0 births per woman and the TCFRs of the 1980 birth cohorts between 1.4 and 1.8.

In sum, the above hypothetical calculations and scenarios illustrate that the cohorts that were in the middle or at the onset of their childbearing careers would have to adopt regimes of late childbearing rapidly and that they would have to have unusually high fertility rates when older in order to attain TCFRs around or slightly below replacement levels. Such an outcome appears highly unlikely. Our preliminary conservative estimates indicate a range of TCFRs between 1.3 and 2.0 for the 1975 birth cohorts with an average of 1.7 births per woman, a decline of more than 15 percent compared to the 1960 TCFRs. It is quite likely that completed fertility is going to be even lower.

7. Summary and conclusions

The above analysis provides evidence that in the countries of Central and Eastern Europe cohort fertility is likely to continue to decline in the future. Such a conclusion is virtually certain for the cohorts that were in the midst of their childbearing periods at the end of the 20th century and very likely for young generations about to commence their childbearing.

This is confirmed by the formal statistical as well as by the socio-economic analyses. Completed fertility of the cohorts born in the 1960s was on the decline; fertility of young women was rapidly descending among the birth cohorts of the late 1960s and the 1970s; the absolute level of early childbearing was relatively high implying that there is plenty of room for a continued fertility decline; to date any increase in fertility when women were older has been modest at best; a considerable increase in childbearing of older women would be required to at least stabilise fertility trends; the mean age of childbearing was low and had started to increase among the 1960s birth cohorts; the proportions of women with 3 or more children was low, proportions of women with 2 children started to decline among the cohorts of the 1960s, proportions of women with only one child were increasing as were proportions of childless women.

Our study focused primarily on the demographic analysis of fertility trends while numerous other authors have attempted to assess social, economic, cultural and political factors and circumstances as well as value systems that have been affecting fertility in the countries of Central and Eastern Europe (for instance, Rabušic, 2001; Rychtaříková, 2000; Sobotka, 2002). While there is not complete agreement about what were and continue to be the decisive forces driving the fertility decline, scholars appear to agree that a reversal of the decline is not likely in the foreseeable future.

Undoubtedly societies will have to face numerous problems regarding such diverse areas of vital concern as national budgets, health care, social security, and immigration policies, to name but a few of the more obvious ones, if fertility will remain as low as it was at the beginning of the 21st century. These issues will become even more critical with a continuation of the fertility decline, which appears almost inevitable.

The logical conclusion is that it would be desirable to reverse the decline in childbearing. That is the general challenge. More specifically, the circumstances affecting fertility --the ways how young people are educated, how they initiate their working careers, their transitions into adulthood and partnerships, how they acquire independent housing, their value systems-- all or at least some of these and possibly other conditions will need to be modified to make childbearing more attractive. But this is merely a declaration. To design and implement measures that will bring about desirable change are the more specific and more complex challenges.

References

Baban, A., 1999, Romania, in: H.P.David (ed), *From Abortion to Contraception: A Resource to Public Policies and Reproductive Behavior in Central and Eastern Europe from 1917 to the Present*, Greenwood Press, Westport, Connecticut, 191-221.

Frejka, T., 1980, "Fertility trends and policies: Czechoslovakia in the 1970s*", Population and Development Review* 6 (1), 65-93.

Frejka T. and G. Calot, 2000, "The Cohort Fertility Story: Industrialized Countries in the Second Half of the 20th and in the Early 21st Century," paper presented at *Annual Meeting, Population Association of America*, Los Angeles.

Frejka T. and G. Calot, 2000, 2001, "Cohort reproductive patterns in low-fertility countries," *Population and Development Review* 27(1), 103-132.

Frejka T., G.Calot, and J.-P.Sardon, forthcoming 2003, *Childbearing Prospects in Low-Fertility Countries: A Cohort Analysis*, Kluwer Academic Publishers, Dordrecht, Netherlands.

Hobcraft J., and K.Kiernan, 1995, "Becoming a Parent in Europe," *Evolution or Revolution in European Population*, Proceedings of the European Population Conference, Milano.

Kohler H.-P., F.C.Billari and J.A.Ortega, 2002, "The emergence of lowest-low fertility in Europe during the 1990s," *Population and Development Review* 28 (4), 641-680.

Rabušic L., 2001, *Kde ty všechny děti jsou? (Where Have All the Children Gone?)*, Sociologické nakladatelství, Praha.

Rychtaříková J., 2000, "Demographic transition or demographic shock in recent population development in the Czech Republic?" *Acta Universitatis Carolinae, Geographica* 1, 89-102.

Sobotka T. 2002, "Ten years of rapid fertility changes in European post-communist countries," *Population Research Centre Working Paper,* Series 02-1, Groningen.

Post-transitional fertility development: new perspectives introduced by Central and East European nations

Kalev Katus

1. Introduction

The EAPS Population Conference in Warsaw is the first in the series to take place in part of the continent known as Central and Eastern Europe, or region uniting the countries of economic transition. For a half of a century (or even longer for some nations) this part of Europe has been under the regime which, among others, featured a specific concern regarding the population data. Namely, the access to quantitative data, its analysis and publishing have been covered by strict regulations. Those rules were not exactly the same across all countries of the region, however, from the viewpoint of demographic research the CEE region as a whole lacks the consistent population data and comprehensive analysis. Against the background of quick development of analytical tools in demography paralleled with the progress of PC technology, particularly sharp increase in the applications on microdata analysis etc, among others, the CEE region lacking most of that under the previous regime could look rather flavourless and unified indeed. Surely, from the ideological point of view, the similarities of demographic patterns were strongly stressed. Rather identical features of centrally planned society and economy contributed to the general picture of fairly unified rather than divergent population development in the region.

Understandably, demographers in the West particularly interested in the CEE were aware of the range of divergent trends and levels in population development across the countries of the region. In this connection the elucidating article by Ansley Coale, initially a conference report at one of the first major joint conferences with 'East' and 'West' demographers in the Soviet Union should be referred to (Coale, 1994). Coale showed that from a demographic point of view even the USSR did not form a single one country but consisted of four rather different constituents. Each of those four regions tended to be more similar with their neighbours, including China (for Central Asia) and Scandinavia (for Estonia and Latvia) rather than between themselves. Understandably, the range of differences became considerably larger when considering the whole

'socialist block' or the present CEE region. Nevertheless, even among the demographic community in Europe at large that knowledge was not widespread. Particularly because of already noted restrictions on data access, which outruled analytical case studies and in-depth comparisons to be published by demographers of the region.

In reality the demographic divergence of the CEE region is hardly a surprise, for a number of obvious reasons. First, the extent of north-south dimension ranges up to 3000 km, from Estonia to Cyprus. The significance of that dimension - one of the most important backgrounds for differences in Europe as a whole - is in no way less meaningful across the CEE countries. Second, the religious, ethnic and language composition of the CEE population tends to be evidently more mosaic compared to Western Europe. Third, economic development has been rather divergent in the region during the 20th century as well as before. Fourth, the CEE region has shared much less common historical developments across nations compared to the countries of Western Europe, excluding the post WWII decades of violently introduced socialism. Also, there are several other aspects and factors revealing broader differences among the CEE countries compared to other part of Europe.

From the population perspective, however, the most important contrast - probably related, among others, to those differences listed above - is the considerable variation in the timing of demographic development in the CEE region. The beginning and, correspondingly the end of demographic transition have been spread in time for about a hundred years in the region. At one end of the time scale stand Estonia and Latvia with the onset of transition in the 1850s and at another end Albania with corresponding changes taking start around the middle of 20th century. Moreover, the CEE region has been divided by the Hajnal line. Majority of the CEE countries has been not influenced by the European marriage pattern, however, the Red Army has transferred the iron curtain about 300-400 kilometres westward from the Hajnal line in the 1940s - according to the expression of David Coleman - and some CEE nations have had the corresponding experience.

In the western part of Europe there are also some divergent cases concerning long-term trends of certain demographic processes.

Concerning fertility and other processes related to human reproduction, the most prominent is very probably Ireland. Usually such cases, however, serve as exceptions from the 'mainstream'. On the other hand, the CEE region provides numerous exceptions alike, and sometimes there is no 'mainstream' left. A higher degree of variation of demographic development in the CEE region is, understandably, one of the most important factors behind the rapidly grown interest towards the region after the administrative limitations to data access and research had been lifted. In some cases the availability and particularly the quality of the data may place limitations but most of the countries are quickly catching up with the European standards of demographic information. Some countries like Poland and Hungary could be already regarded above the average of the continent.

Concerning fertility development more closely, particularly sharp changes have occurred in the CEE countries during the 1990. This has raised additional interest in the region *per se*. The article, however, is not making an attempt to summarise the numerous findings emanating from that body of research - this has been done by several authors already and a statistical overview could be easily accessed (Recent demographic developments in Europe, 2002) - but rather discusses the challenges for theoretical deliberations on fertility development and other processes related to reproduction, and more specifically, the concepts of post-transitional fertility.

2. Two stages of post-transitional fertility

During the past five-six decades demographers have made noticeable progress in understanding the fertility transition as a part of general demographic transition from traditional to modern regime of population reproduction. To summarise the findings in one sentence, the principal change in processes related to human reproduction has proven to be universal in all European nations, however, the timing of the transition and also the speed of progress, at least partly, has been varying. The beginning of the differences in the timeframe of fertility development may go back as far as the emergence of the European marriage pattern with the famous Hajnal line dividing Europe in demographic terms.

The Princeton project has mapped the European fertility transition in rather detailed geographical level (Coale and Watkins, 1986). Among others the knowledge generated by that outstanding project has been (and continuously is) useful for 'lining up' the European nations by corresponding stages in fertility development during the transition which has served an important prerequisite for the understanding of the general path of the process, and - frankly speaking - for any proper international comparison in the reproductive domain.

Conventionally, the completion of fertility transition marks the beginning of new period in fertility development, which has been growingly labelled in population literature as a post-transitional era. Among demographically advanced nations this new period has lasted for two or utmost two and a half generations (with an exception of France) which is not a particularly long period to have sufficient information for evaluating the emerging concepts on the regularities of reproduction-related processes during the period, and particularly future trends. Also, the existing demographic theory does not support the understanding of post-transitional fertility levels and trends, as noted by Caldwell already a couple of decades ago and repeated by many others (Caldwell, 1982). From that viewpoint the CEE countries could add some important information providing and integrating data on their experience, although mostly in limited scope as the duration of the post-transitional stage has been shorter compared to Western Europe in most of the countries of the region.

The aspiration of this short article is to raise new questions concerning the post-transitional fertility and other processes related to reproduction in more general terms, and to emphasise some others already addressed in the literature, in the light of post-transitional developments in the CEE region. Before coming to these theoretical challenges in the next section it seems useful to summarise briefly the existing knowledge as achieved by extensive research on mostly Western, Northern and Southern European countries which region is referred shortly 'western' in the article.

The classical model of post-transitional fertility includes the alteration of two distinguished sub-periods - referred as, correspondingly, baby boom and the second demographic transition - which follow the completion of fertility transition. Concerning the majority of European countries, at least up to the 1990s, unity of the patterns seems to prevail in mainstream

developments during both sub-periods even if there have been a number of noticeable diversities, among others, in the timing of shift from baby boom into the second demographic transition.

The baby boom period has been widely publicised also beyond demographic science, already the term adapted to that sub-period itself refers to that. Major features of the baby boom including noticeably high and above-replacement fertility, juvenation of childbearing and marriage have been in distinct contrast with the pre-war situation in many of the western countries whereas some other features concerning sexuality, abortion, female labour force participation more or less continued the pre-war trends, although temporarily interrupted by the war in many countries. Research results have indicated that reproductive-related processes and particularly the fertility development - which is in the centre of our interest - have proceeded by universal pattern in general terms in Western Europe (Festy, 1984; Gillis, Tilly and Levine, 1992).

It deserves attention that the causal mechanisms behind the baby boom are insufficiently studied up to now by demographers, and not so rarely even the principal questions are overlooked. Most probably, the increase (and juvenation) of marriage and fertility after the long years of war and societal disruption appear so natural compensatory reaction without a need to look for alternative explanation by the time. Among others, two of the following issues seem to be continuously important in order to understand the further fertility developments in Europe, and both of them envisage the need for deeper investigation and clarification.

First, the timing of the baby boom, particularly the timing of fertility increase and juvenation. Studies by Calot and Sardon have found that fertility among some under-replacement nations turned to the increase already at the eve of the WWII and not after it, although the new trend was interrupted by the war. In those few countries staying out of the war like Sweden and Switzerland, however, there was no such interruption and the fertility showed increase throughout the first half of the 1940s (Calot *et al*., 1998; Calot and Sardon 1997; Sardon and Calot 1997).

The second attractive issue concerns the juvenation of marriage, and correspondingly fertility as those processes were closely linked during the baby boom period. Some years after the war the European marriage

pattern which has been dominating in most of the baby boom countries for about couple of centuries has vanished very rapidly. In contrast of that rather 'silent' development with no capturing much research interest, currently the mean age at childbearing has not yet reached the pre-war levels in several countries of Western Europe although the fertility ageing is on-going for two-three decades already (and enjoying much interest). Later that issue needs to be returned in connection with developments in the CEE region.

The completion of baby boom and the emerging new trend-forming behaviours termed as the second demographic transition has been excellently summarised in 15-20 years after their onset (Lesthaeghe and van de Kaa, 1986; van de Kaa, 1987). Not surprisingly, the core of the new sub-period of post-transitional era has also been constituted mostly by the reproduction-related processes. To refer to the most essential developments, relatively sharp fertility decrease in combination with ageing of childbearing and various changes in marriage patterns have been complemented by sexual revolution (Bullogh and Bullogh, 1994) and contraceptive revolution (Leridon, 1987; McLaren 1990), or in the opposite order. Like in the case of the baby boom period, the main features of the second demographic transition were rather comparable in most of the Western European countries and even the timing of the shift from one sub-period to another took place rather synchronously with relatively small variations.

The last decade of the 20th century seems to be a continuation of the second demographic transition, but on another hand, various differences between European nations began to widen and attract more and more attention. During the 1990s, the CEE region was re-integrated to the Europe, and not surprisingly, the convergence in fertility and other reproduction processes between the West and East was concluded as a mainstream development. Among others, the previous EAPS European Population Conference in The Hague witnessed a growing unity above the remaining diversity (EAPS, 1999). At the same time, nevertheless, a growing body of evidence on the variation in fertility and other reproductive processes became reported, and the importance of those differences was acknowledged. Among these differences most importantly stands the recuperation of fertility levels as another side of fertility ageing. One could call symptomatic the study by Lesthaeghe - one of the fathers

of the concept of the second demographic transition - on six Western European countries with clear conclusion of the contrasting patterns of fertility ageing and particularly recuperation among these countries with references to greater diversity in a broader geographical context (Lesthaeghe, 2001). The referred diversity is discussed in the next section together with the CEE region.

The classical stages of post-transitional demographic development - the baby boom and the second demographic transition - have drawn on the experience on Western European nations. This is, understandably, a simplification as any other generalisation of the kind, particularly in view of the developments during the last decade, however, it has acquired the position of main concept for the periodisation of post-transitional era. Among others, the concept has been used for seeking explanations for latest developments in the CEE region. One can put a question, however, another way round: does the periodisation hold still valid after the integration of knowledge on the corresponding developments in the CEE countries?

3. Issues raised by CEE experience of the post-transitional fertility

During the past 10-15 years a growing number of studies on post-transitional developments in the CEE region has been published. Most of them are works at national level and comparisons of two-three countries which list includes also several extensive and informative monographs (Barkalov, 1999; Conrad, Lechner, Werner, 1996; Greitans, 1999; Fratczak 1998; Frejka *et al.,* 2001; Frejka, Sardon and Calot, 2003; Katus, Puur and Põldma, 2002; Kamaras, 1996; Philipov and Kohler, 2001; Rychtarikova, 2000; Shahotko, 1996; Speder, 2002; Stankuniene, Mitrikas, 1997; Stankuniene, 1997; Vishnevski, 1999; Zakharov, 2000; Zvidrins, 1996 and many others).

Among comparative studies some are discussing developments in majority of the CEE countries of the region (Dorbritz and Philipov, 2003; Klijzing 2000; Macura, Mochizuki-Sternberg and Garcia 2002; Sobotka, 2002). In this line is also the collection of overviews on main demographic developments including fertility and other reproductive processes in the CEE countries (Kucera *et al.,* 2000). Still, the most informative on fertility and other reproductive processes appears the series

of the FFS standard country reports (available for eight countries of the group), particularly when used in combination with corresponding in-depth studies (UNECE 1996-2002). Concerning the overall picture on post-transitional reproductive developments, the scope of research results obtained on the CEE region are understandably far behind compared to the Western Europe, however, already forming a relatively good basis to raising questions for future investigation of fertility in the integrated Europe.

In the following, four questions are formulated on referred basis, two concerning the baby boom period and other two the second demographic transition, related to post-transitional developments in the field of fertility and other reproductive processes.

When the fertility transition was completed and the post-transitional stage started

The issue has not attracted much interest in the case of Western Europe. Obviously, the transition was definitely at its end when fertility dropped below replacement level, and moreover, an increase typical to the baby boom has taken its start. Many Western European countries have experienced below replacement fertility already before the WWII (with some timing differences) and only few later. Also, the baby boom as a mainstream development appeared rather similar in terms of timing and included also the countries like Finland or Southern European countries, which had not experienced below-replacement fertility before the WWII. In addition, taking into consideration the war years with societal disruption, there was no need and probably no point in raising a question about the start of post-transitional stage with noting some more exact time interval of it. The time reference - after the war - was sufficient indeed and conventionally adapted.

In majority of the CEE countries fertility transition was not completed before the WWII and fertility held still relatively high levels. Even if some increase after the war the mainstream trend was towards decrease like in Russia as a textbook example. In other words, many CEE countries completed the fertility transition with considerable delay compared to Western Europe - in the 1960-1970s or in case of Albania at the eve of new millennium. At the same time at least two countries of the CEE

region, namely Estonia and Latvia had experienced below replacement fertility before the war.

In population science it is often useless to compare levels and patterns of processes at the same calendar date for the nations at different stages of demographic development. The comparison, however, becomes meaningful and could produce interesting results when arranging nations by comparable demographic stages. This holds true also for the post-transitional era and its sub-periods as well. To apply that methodological principle across modern Europe we need a better insight into the completion of the fertility transition and beginning of the post-transitional stage to be applicable for all countries of the continent. Without lining up the countries by demographic stages, and producing demographic comparisons among the CEE countries themselves as well as with Western Europe on purely calendar approach has already produced a lot of scientific nonsense, and very probably, more could be expected. In this view, the question about timeframe of post-transitional era is not at all the issue for historical demography but a matter of key interest for understanding the post-transitional developments in general.

Is the baby boom period an universal phase of the post-transitional development

This issue is closely related with the previous one but provides another important angle for distinguishing between universal and occasional trends during the post-transitional period. Sometimes demographers are keen to take the path of the demographic transition - universal and irreversible trends but different timing - granted also for the following demographic stages even without deeper contemplation over that approach. In case the baby boom period will be found not the universal stage after the end of fertility transition (and the drop of its level below replacement), *e.g.* not experienced in all European countries, we are facing the need to modify the classical model of our current understanding of post-transitional developments in population.

The existence of the baby boom period *per se* in the CEE countries could be questioned, from two different angles. First, due to somewhat later demographic transition in many countries of the region, fertility transition was not completed before the WWII, and maintained continuously

decreasing trend in general. Even if some growth after the war - of truly compensatory character like observed in many European countries after the WWI - this increase has often not brought fertility up to pre-war levels in the corresponding countries. Also, in many CEE countries fertility reached low levels after the war noticeably earlier compared to Western Europe where it occurred as a result of emerging second demographic transition. One of the first countries to reach the under replacement fertility after the war was Hungary, already at the end of 1950s, followed by many other CEE nations one by one. In short, post-war fertility increase was very limited or absent against the background of pre-war levels and the period of higher fertility has been notably shorter than baby boom in the Western Europe.

Second, both nations in the CEE with below replacement fertility before the WWII - Estonia and Latvia - did not witness any significant fertility increase after the war. In Estonia one could find a slightly increasing trend from 1939, continuing also during the war like found by Calot and Sardon in some other countries, but this trend was interrupted. These two countries represented the world's lowest fertility levels during the 1950s, before other countries in the CEE joined. Concerning levels alone one could find a relatively easy explanation in heavy repression carried out that time in these countries, but the timing of marriage as well as childbearing moved in complete accordance to the corresponding trends in baby boom Europe. The disappearance of the European marriage pattern and decrease of mean age of childbearing by about 5-6 years up to the end of 1960s, however, has not been supplemented by fertility increase. Also, during the 1940-1960s the parity distribution in Latvian and Estonian fertility underwent a major change, with particular decrease of childlessness from about 25% to 8-9%.

On the basis of current non-systematic state of art on the developments of fertility and other reproductive processes during the 1940-1960 one could summarise that in the CEE the post-war fertility increase if any was a short-term growth of compensatory character rather than principal change of intensity lasting for a generation, typical for the baby boom. Among others, cohort data available for the CEE nations do not disclose the fertility increase for the female birth cohorts of 1910-1940 (Sardon, 1990).

The baby boom period has ended decades ago in Europe but for theoretical considerations of post-transitional stage it is necessary to make a distinction between the universal and occasional character of that period. This is particularly important for the understanding of the next sub-period, the second demographic transition that in many ways carries the features opposite to the baby boom.

Is the second demographic transition an universal phase of the post-transitional development

In many countries of the CEE region the transitional fertility decrease was completed and low fertility levels were established during the 1960-1970s, however, the spread of the process was much wider in timeframe compared to Western Europe. Next decades are demonstrating some fertility increase in several CEE countries but not in all of them. Concerning the increase in stabilisation of fertility levels, in such countries like Hungary, Czech, GDR and others the demographic literature of those years usually indicates - sometimes also referring to causal links - to proclaimed population related policies aimed at pronatalist objectives.

In this connection it would be interesting to turn again to Estonia and Latvia which have experienced a prolonged (about forty years) period of under-replacement fertility, particularly in the context of no pronatalist policy up to the 1980s. The end of the 1960s - more or less of parallel timing with the second demographic transition in the Western Europe - marks the increase of fertility in Estonia and Latvia. Moreover, the increase was rather substantial, in Estonia, for example about 17% of total period fertility rate in four years (1967-1971). The referred increase also proved to be a long-term change, and up to the end of the 1980s the period fertility remained noticeably higher, compared to previous interval of 1928-1968. It is important to note that fertility increase took place in the conditions of emerging cohabitation, rise of non-marital fertility as well as other changes in marriage patterns, sexual revolution, increase of control over pregnancy outcomes (mostly via abortions, robust but not less effective compared to modern contraceptives), high female labour force participation (even if partly formal) etc which are usually regarded as belonging to context of the second demographic transition.

The period of maintaining higher compared to the Western Europe, or even increasing fertility levels in the CEE region in the 1970-1980s is difficult to integrate to the classical model of the post-transitional developments. Not surprisingly, this problem is usually avoided, however, it surely needs some theoretical consideration. In particular, for those theories looking at the large changes in the 1990s in the CEE region mainly as postponed second demographic transition (Zakharov, 2000; Vishnevski, 1999). Regarding the 1970-1980s in the CEE region as a baby boom, understandably, would change a lot in our understanding of the nature and rationale of that sub-period. On the other hand, some other possible solutions will very likely modify the classical scheme of post-transitional development.

Regarding the fertility decline, changes in marital, sexual, contraceptive trends and behaviours as well as those in (female) labour participation, emancipation, individualisation etc, paralleling the recent fertility decline in CEE region form evidently a rather different combination compared to that found in the Western Europe during the second demographic transition (and with a large variation within the region). Among others, in terms of economic environment, fertility decrease took place in relative prosperity in the Western Europe and under crises conditions in the CEE.

Looking for a key to the understanding of the described sub-period in the context of fertility development and reproductive-related processes in the CEE region, one specific need is obvious. Fertility should be regarded in wider context of pregnancy and pregnancy outcomes. Specifically abortion, as at least partly a result of state-controlled (but still different along the CEE region) contraceptive policies have created rather distinct pattern of parity-specific fertility control and family planning in the CEE countries compared to the Western Europe. It is still not much known about effects of that difference on fertility as well as marriage patterns. It is interesting to note that the previous EAPS intermediate European Population Conference in Helsinki collected the record number of abstracts for the theme “Fertility, Contraception and Reproductive Health” among which a half was devoted to reproductive processes other than fertility (EAPS 2001). At the same time none of them were based on comparative studies, which still remain few on the CEE region (Klijzing, 2000).

Do the changes in fertility and other reproductive processes in the CEE region in the 1990s refer to a divergence or convergence with Western Europe

Rapid changes in fertility in all CEE countries in the 1990s has acquired considerable scholarly interest, and a wide range of explanations have been proposed which could be summarised in two groups. In the framework of the first, for instance, Sobotka stresses the dissolution of socialist greenhouse (Sobotka, 2002). In one or another way some others are emphasising economic constrains on individuals and families in transitional societies (Rychtarikova, 2000; Steshenko, 2000). Lesthaeghe and Philipov are looking the reasoning of fertility decrease not so much in real but relative deprivation compared to living standards in the Western Europe, consumer aspirations and personal expectations (Lesthaeghe, 2000; Philipov, 2002). Kohler and Kohler as well as Ranjan stress the importance of uncertainty people are facing during the societal change (Kohler and Kohler, 1999; Ranjan, 1998). Another path of explanations lies on emergence of postponed second demographic transition in the CEE region, but probably accelerated by named constrains (Rabushic, 1996; Vishnevski, 1999; Zakharov, 2000).

Providing the list of authors giving different explanations on fertility change in the CEE region (and much more authors could be easily added) is making stronger highlight to the fact that all of them are regarding the timing effect, namely sharp fertility ageing in the CEE countries as uniformly important. Among others, the convenient techniques for adjusting period fertility measures recently proposed by Bongaarts and Feeney (1998) have been also applied for CEE countries (Dorbritz and Philipov, 2003; Kohler, Billari and Ortega, 2002; Philipov and Kohler, 2001; UN 2002 and others). Indeed, the timing effect has been significant and during the last decade some countries of the region have already more or less catched up with Western Europe which experienced the fertility ageing from the start of the second demographic transition.

Undoubtedly, sharp fertility ageing in the CEE region can be regarded as the convergence of the patterns in West and East. At the same time, however, it should be not forgotten that different nations involved have different histories behind them. For those on the left side of the Hajnal line the fertility ageing means just turning back to the situation prevailed

before the WWII. For those nations namely the early childbearing during the baby boom period has been a relatively short exception. For nations on right side of the Hajnal line, however, the late fertility is the first experience of that kind. In other words, the formal similarity of fertility ageing could have different explanations and different implications on the levels and patterns of reproductive processes in the future.

Preservation of relatively early fertility in the CEE region, and correspondingly the sharp transformation during the 1990s could be easily related to the greenhouse effect, namely to the housing policy in the CEE. To progress towards the same goal - one's own house or flat - young couples had to choose rather opposite strategies under the conditions of state socialism and market economy. First birth (at least), *i.e.* having an early childbearing pattern helped considerably to move on in the housing queue which was the only possibility to obtain a dwelling under socialism whereas under market economy buying a flat requires hard working and accumulation of resources, *i.e.* postponing the (first) birth. This difference in housing allocation could help to explain such a sharp fertility ageing in some of the CEE countries but hardly provides answers to more general questions.

4. Two outcomes of the second demographic transition

The change of the fertility schedule during the second demographic transition has two complementary sides. The postponement of childbearing in early phases of female reproductive career has drawn serious scholarly interest in the Western Europe as well as the CEE countries, when the rapid postponement of childbearing started, correspondingly. Among other outcomes of research, it could be concluded that the fertility ageing displays similar patterns although the timing as well as the speed have varied. Concerning the speed, there are particularly large differences between Western Europe and the CEE region. As usual, for general processes it is relatively easy to propose a number of explanations of which most (if not all) hardly reflect the causal linkage.

Another side of the change in fertility schedule is recuperation. Much less interest has been devoted to that process, probably at least in part because of additional data requirements and prolonged observation period

necessary. Nevertheless, there have been several hints that the process may proceed rather differently across countries even if no appropriate data and interpretations available (Lesthaeghe and Moors, 2000). One of the first systematic comparisons of six Western European countries by Lesthaeghe indisputably shows very different paths of recuperation: from high levels of replacement of fertility losses during postponement to rather low levels of that replacement (Lesthaeghe, 2001). The Southern Europe is not covered by that comparison but one could surely find a situation of near to non-existence of that replacement in that part of the continent.

In the present context large differences of recuperation - from nearly full replacement up to zero - means the definite divergence of future fertility developments, *e.g.* resulting in replacement versus half-deficit fertility levels, indicate that there is no uniform outcome of the second demographic transition. The trends, which seemed to be similar at the stage of fertility postponement (and accompanying decrease of period indicators), are leading to two rather separate outcomes of fertility levels, and patterns as well. One could only agree with Lesthaeghe that the future trends of recuperation would come to the centre of interest for demographers dealing with the domain of human reproduction. In particular, this concerns the CEE region where it is still too early to make definite conclusions about the extent of recuperation. Due to the very rapid postponement, however, it will take also much less time compared to Western Europe to reach the stage of recuperation in the CEE.

5. Future of population reproduction

The period of prevailing expectations that fertility will reach about replacement level after a series of fluctuations followed the completion of fertility transition - among others, systematically integrated to the UN projection procedures for a long time - has changed to reasoning the sustainability of low or very low fertility at least for coming decades (Demeny, 1997). According to Golini that stage of unsustainable fertility and depopulation will form a new phase of population development, different from the second demographic transition (1997). Probably this phase could be regarded as the third sub-period of post-transitional development if the present regimes will prevail for a longer period.

It is evident that the lowest low fertility cannot be maintained over several generations. Not only that such a population will disappear in the future but due to the deformed age-structure the economic collapse is very likely to take place before. The ideas of replacement migration are naturally groundless, not only because of contradictory or non-integration of mass inflow of immigrants but also for the rapid decrease of migration potential worldwide in near future. Understandably, generation or two could live on the demographic credit of successors and a decrease of world population may be desired, but at some point in the future the replacement fertility becomes a necessity.

In this view it is really remarkable that looking for paths which will lead to fertility growth, or more specifically, secure full recuperation after the universal postponement of fertility are anything but popular. Instead of, there is increasing popularity with sophisticated modelling techniques, which has given Coleman a ground to see a risk of ending up with "(technical) demography without population" (Coleman, 2002). Murphy and Wang have warned against the introduction of an increasing number of 'explanatory' co-variates to statistical models which unwillingly reduce fertility itself (and any other demographic processes) to some flat and nearly stable entity (Murphy and Wang, 2001). Moreover, the use of advanced techniques has often resulted in producing nonsense because of overlooking the transformation, sometimes principal, of statistical relationships between the variables over time and particularly across cohorts (Katus and Puur, 2003).

Much more promising results could be expected from extending the analysis of fertility and other reproductive processes towards the inclusion the variables of behavioural genetics (Morgan and King, 2001; Kohler, 2001). A similar pathway is proposed by Murphy and Wang who stressed the need for the analysis of reproductive performance of successive generations instead of separate family nucleus or households (Murphy and Wang, 2001). In other words, investigation of the continuity of fertility and other reproduction processes should not be replaced by the study of social and economic variation in reproduction.

It was discussed above that the classical model of time-related structuring or periodisation of post-transitional developments in Europe has been questioned by new trends in Western Europe, and even much more of that

by integration of the experience of the CEE countries. In a way, namely this seems to distinguish the mainstream of necessary approaches in future study of fertility and other reproductive processes in Europe.

6. Conclusion

The article raises several issues related to the post-transitional developments in fertility and other reproduction processes in Europe - is it a universal trend or a variety of patterns? Undoubtedly, our understanding of future human reproduction, and the mainstream of research in this domain will depend, among others, on the answer to that question, given either consciously or unconsciously. Integration of the CEE experience in the post- transitional developments into knowledge accumulated already by Western European countries exhibit indeed new perspectives for theoretical considerations in the field, and provides more solid empirical basis for research.

References

Barkalov N., 1999, "The fertility decline in Russia 1989-1996: A view with parity-progression ratio", *Genus* 55 (3/4), 11-60.

Bongaarts J., 2001, "The end of fertility transition in the developed world", *UN Working Papers* 152, New York, United Nations.

Bongaarts J. and G. Feeney, 1998, "On the quantum and tempo on fertility", *Population Development Review* 24 (2), 271-291.

Bullough V. and B. Bullogh (eds.), 1994, *Human Sexuality: An Encyclopedia*, Harland, New York.

Caldwell J., 1982, *Theory of Fertility Decline*, New York, Academic Press.

Calot G., A. Confesson, J.-P. Sardon, E. Baranzini, S. Cotter and P. Wanner, 1998, *Two Centuries of Swiss Demographic History*, Bundesamt für Statistik, Bern

Calot G. and J.-P. Sardon, 1997, "Etonnante fécontité suédoise", *Futuribles* 217, 5-14.

Coale A., 1994, Nuptiality and Fertility in USSR Republics and Neighboring Populations, in: W. Lutz, S. Scherbov, A. Volkov (eds.), *Demographic Trends and Patterns in the Soviet Union Before 1991*, Routledge, London-New York, 3-17.

Coale A. and S. Watkins (eds.), 1986, *The Decline of Fertility in Europe,* Princeton, Princeton University Press.

Council of Europe, 2002, *Recent Demographic Developments in Europe 2002,* Strasbourg: Council of Europe Publishing.

Coleman D., 2002, Partnership and fertility-an incomplete revolution?, in: M. Macura and G. Beets (eds.), *Dynamics of Fertility and Partnership in Europe. Insights and Lessons from Comparative Research,* vol. 1, United Nations, 145-152.

Conrad C., M. Lechner and W. Werner, 1996, "East German fertility after unification: Crisis or adaptation?", *Population Development Review* 22 (2), 331-358.

Demeny P., 1997, Replacement-level fertility: The implausible endpoint of the demographic transition, in: Gavin W.J. *et al.* (eds.), *The Continuing Demographic Transition*, Clarendon Press, Oxford, 94-110.

Dorbritz J. and D. Philipov, 2003, *Demographic Consequences of the Transition in Countries of Central and Eastern Europe*, Council of Europe, Forthcoming.

EAPS, 1999, *European Population Conference 1999. Book of Abstracts: European Populations. Unity in Diversity*, European Association for Population Studies, The Hague.

EAPS, 2001, *European Population Conference 2001. Abstracts*, European Association for Population Studies, Helsinki.

Festy P., 1984, *Fertility in Western countries from 1870 to 1970*, United Nations, Bangkok.

Frątczak E., 1998, *Declining fertility in Poland during the transition period 1989-1997*, Paper to Workshop "Lowest low fertility", Rostock.

Frejka T., J.-P. Sardon and G. Calot, 2003, *Cohort Fertility in Low-fertility Countries*, Forthcoming.

Frejka T., W.W. Kingkade, K. Katus, G. Calot and J.-P. Sardon, 2001, *Contemporary cohort reproductive patterns in the Baltic countries*, paper to XXIV General Population Conference, Salvador-Bahia.

Gillis J., L. Tilly and D. Levine (eds.), 1992, *The European Experience of Declining Fertility,* Cambridge.

Golini A., 1997, "Demographic trends and ageing in Europe", *Genus* 53(3-4), 33-75.

Greitans A., 1999, The acceptance of fertility regulation methods in Latvia and other countries of the Baltic region: Common and different features, in: V. Stankuniene, P. Eglite, V. Kanopiene (eds.), *Revue Baltique,* Vilnius, 137-151.

Kamarás F., 1996, *Európai termékenységi és családvizsgálat*, Budapest, KSH.

Katus K. and A. Puur, 2003, "Demographic perspectives and changing analytical paradigms: observations from the Estonian FFS", *Acta Universitatis Carolinae Geographica*, Forthcoming.

Katus K., A. Puur and A. Põldma, 2002, *Eesti põlvkondlik rahvastikuareng/Cohort population development in Estonia*, RU Series D, no. 2. Tallinn, EKDK.

Klijzing E., 2000, "Are there unmet family planning needs in Europe?", *Family Planning Perspectives* 32 (2), 74-81.

Kohler H.-P., 2001, "Three reasons why demographers should pay attention to evolutionary theories and behaviour genetics in the analysis of contemporary fertility", *European Journal of Population* 17 (1), 31-35.

Kohler H.-P., F. Billari and J. Ortega, 2002, "The emergence of lowest-low fertilityin Europe during the 1990s", *Population and Development Review* 28 (4), 641-680.

Kohler H.-P. and I. Kohler, 1999, *Fertility decline in Russia: Social versus Economic factors,* paper to European Population Conference, the Hague.

Kučera T., O. Kučerova, O. Opara and E. Schaich (eds.), 2000, *New Demographic Faces of Europe,* Berlin, Springer-Verlag.

Leridon H. (ed), 1987, *La seconde révolution contraceptive*, Paris, INED.

Lesthaeghe R., 2000, *Europe's demographic issues: Fertility, household formation and replacement migration*, paper to International Conference "Population Studies in Britain and in the Netherlands", Utrecht.

Lesthaeghe R., 2001, "Postponement and Recuperation: Recent fertility trends and forecasts in six Western European countries", *IPD Working Papers*, no. 1. Brussels/Gent, SOCO/Vrije University.

Lesthaeghe R. and D. van de Kaa, 1986, Twee demografische transities?, in: D. van de Kaa and R. Lesthaeghe (eds.), *Bevolking: krimp en groei*, Deventer, Van Loghum Slaterus, 9-25.

Lesthaeghe R. and G. Moors, 2000, "Recent trends in fertility and household formation in the industrialized world", *Review of Population and Social Policy* 9, 121-170.

Macura M., Y. Mochizuki-Sternberg and J. Garcia, 2002, Eastern and Western Europe's Fertility and Partnership Patterns: Selected Developments from 1987 to 1999, in: M. Macura and G. Beets (eds.), *Dynamics of Fertility and Partnership in Europe. Insights and Lessons from Comparative Research,* vol. 1, United Nations, 27-55.

McLaren A., 1990, *A History of Contraception from Antiquity to the Present Day*, Oxford, Basil Blackwell.

Morgan P. and R.Berkowitz King, 2001, *European Journal of Population* 17 (1), 3-20.

Murphy M. and D. Wang, 2001, "Family-level continuities in childbearing in low-fertility societies", *European Journal of Population* 17 (1), 75-96.

Philipov D., 2002, "Fertility in times of discontinuous societal change: The case of Central and Eastern Europe", *MPIDR Working Papers* 24, Rostock, MPIDR.

Philipov D. and H.-P. Kohler, 2001, "Tempo effects in the fertility decline in Eastern Europe: evidence from Bulgaria, the Czech Republic, Hungary, Poland and Russia", *European Journal of Population* 17, 37-60.

Rabušic L., 1996, "On marriage and family trends in the Czech Republic in the mid-1990s", *Socialni Studia* 38 (1), 29-42.

Ranjan P., 1998, "Fertility behaviour under income uncertainty", *European Journal of Population* 15, 25-43.

Rychtarikova J., 2000, "Demographic transition or demographic shock in recent population development in the Czech Republic?", *Acta Universitatis Carolinae Geographica* 35 (1), 89-102.

Sardon J.-P., 1990, "Le replacement des générations en Europe depuis le début de siècle", *Population* 45 (6), 947-969.

Sardon J.-P. and G. Calot, 1997, *Le reprise de la fécondité au milieu des années trente, phénomène non percu des observateurs du temps*, Saint-Germain-en-Laye, Observatoire Démographique Européen.

Shahotko L., 1996, *Naselenie respubliki Belarus v kontse XX veka*, Minsk, NII Statistiki.

Sobotka T., 2002, "Ten years of rapid fertility changes in the European post-communist countries. Evidence and interpretation", *PRC Working Papers* 1, Groningen, University of Groningen.

Stankuniene V., 1997, Transformation of Lithuanian family: A turning point of deformations of traditional features, in: K. Katus, V. Stankuniene and A. Vikat (eds.), *Special Issue of Revue Baltique,* Vilnius, 64-77.

Stankuniene V. and A. Mitrikas (eds.), 1997, *Šeima ir gimstamumas Lietuvoje,* Lietuvos filosofijos ir sociologijos institutas, Vilnius.

Steshenko V., 2000, Demographic situation in Ukraine in the transition period, in: T. Kucera, O. Kucerova, O. Opara and E. Schaich (eds.), *New demographic faces of Europe,* Berlin, Springer-Verlag, 347-369.

UNECE, *Fertility and Family Surveys in countries of the ECE Region. Standard country reports*, 1996-2002, New York and Geneva, United Nations.

UN, 2002, "Partnership and reproductive behaviour in low-fertility countries", *UN Working Papers*, no. 177, New York, United Nations.

Van de Kaa D., 1987, *Europe's Second Demographic Transition*, Population Bulletin 42 (1), 1-59.

Vishnevski A., 1999, "The demographic potential of Russia", *Russian Social Science Review* 40 (4), 4-29.

Zakharov S., 2000, "Fertility trends in Russia and the European newly independent states: Crisis or turning point?", *Special Issue of Population Bulletin* 40/41, 292-317.

Zvidrins P. (ed), 1996, *Latvijas iedzivotaju paadzu nomaina,* Riga.

On the way to one-child-family: are we beyond the point of no return?

Some considerations concerning the fertility decrease in Russia

Alexandre Avdeev

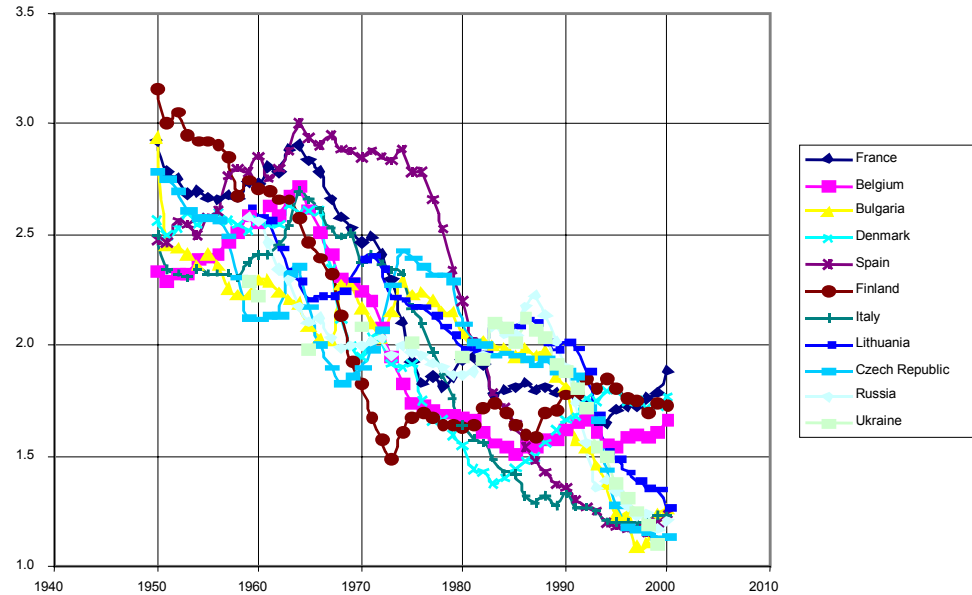
1. Introduction

It is obvious now that the below replacement fertility is established in all European countries. Nevertheless, in spite of numerous demographic and sociological investigations the causes and prospects of recent fertility decline remain unclear. Moreover, some demographic optimism or "magnetic force" to the replacement (Westoff, 1991), which stays intact in population projections as "a medium variant", is gradually vanishing from the internal demographic discourses (UN, 1997). That does not mean the below replacement fertility is now unanimously considered as a long-term prospect of humanity rather than as the way for the near future. I consider it to be a transitional phenomenon while cherishing the faint hope of the two-child family as an individual normative goal in contemporary society. This hope had been the cornerstone of demographic transition theory until the late 1980s. The incongruity between this hope and theory and the reality of 1980-1990s produced "the second demographic transition theory" (Lestheaghe and van de Kaa, 1986). Would it better to attribute the adjective "second" to the noun "theory" not to the "transition" (Cliquet, 1992)?

Since earlier 1990s, the fertility decreased to below the replacement level everywhere in Europe (Figure 1). Nonetheless, the discussion about the cause of this phenomenon was (and remains) sufficiently heterogeneous. The explanations proposed for western (and southern) part of Europe mostly pointed out the changes in values structures and those in family formation patterns (Lesthaeghe and Neels, 2002). At the same time, consideration regarding the fertility decline in the formerly socialist country of Europe often laid stress on peculiarity of transitional period in national economies and social systems (Macura, 1997; Sardon, 1998; Kohler and Kohler, 2002; Philipov, 2002). The discourses appearing in

the context of this concept point out again that fertility decline below replacement level as a temporary effect or a transitional one.

Figure 1. Total fertility dynamics since 1950 in selected European countries



Source : INED : Conjoncture des pays développés en chiffres Base des données. www.ined.fr

Since the end of 1990s, the political climate in Europe has changed. Now a number of formerly socialist countries are queuing up to get into the European Union. This new political atmosphere made inconvenient any discourses upon the hardship of the transitional period. Therefore, a 'transitional tune' in discussion concerning the fertility decline faded out, whereas the anxiety for structural changes in reproductive behaviours advanced to forefront. More specifically, this concerned the gradual postponement of fertility from one generation to the next, which affects mostly the period fertility indicators as to cohort fertility. One maintains the hope that it could remain intact or, at least, it should not decrease deeply (Philipov and Kohler, 2001).

Without further discussion about this matter, this papers looks at fertility patterns in Russia, questioning the transitory character of the present-day fertility decline. Its main aim is to provide some ground for reflection about where we are now in the period of transient: troubles or at the turning point towards one-child family and one-child life style.

2. Context: below-replacement fertility or fertility decreasing?

Recent investigations have shown that the below-replacement fertility became established in Russia on a permanent basis as early as the late 1960s (Avdeev and Monnnier, 1995, 1996; Scherbov and Vianen, 1999, 2002). However, until the beginning of the previous decade, the fertility decline was not so visible as after the impressive fall from 2.59 to 1.99 in the 1960s. The TFR remained relatively stable at slowly below replacement level during the 1970s simultaneously with the crude birth rate. In the 1980s, the new family policy stimulated a huge growth of TFR from 1.8 in 1980 to 2.3 in 1987.[1] Thus, the present fertility decrease in Russia followed a strong short-term increase, and this fact blurred the general picture. Therefore, at first one can consider the fertility decline as offsetting this earlier growth. (Darsky, 1993). Apparently very reasonable, this explanation implied the expectation that fertility would soon "catch up" again and stabilise at the end of 1990s at about the level observed in the 1970s (Barkalov and Darsky, 1994, 13). Reality shattered these illusions, although the hopes that an upturn would occur remained present.

Throughout the last decade, the fertility decline in Russia was the object of numerous studies by Russian demographers as well as by western researchers and mixed teams (Andreev, Bondarskaia and Kharkova, 1998; Darsky, 1993; Darsky and Bondarskaya, 1995; Zakharov, 1997; Zakharov, 1999; Zakharov and Ivanova, 1996; Zakharov and Ivanova 1996a; Avdeev and Monnier, 1995, 2000; Barkalov and Darsky, 1994; Scherbov and van Vianen, 1999). All these investigations describe in depth the recent fertility changes. However, the causes and prospects

[1] Up to the end of the 1980s, Russian and Soviet demographers could hardly conduct any detailed investigations of fertility trends because of lack or unavailability of vital statistics The first very concise Soviet Demographic Yearbook after the Second World War appeared only in 1973; the next one fifteen years later, in 1988.

remain scientifically unexplained. Three main theoretical statements are presented in most of these studies:

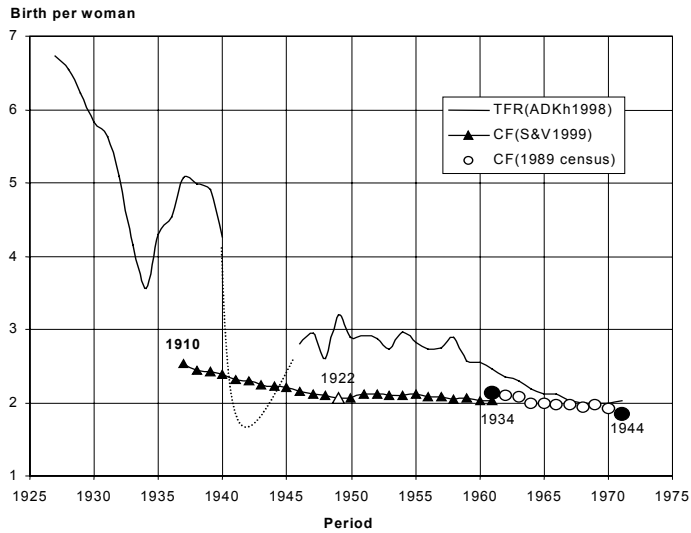
- the economic and social crisis (this term is usually used as a synonym for the social transformation) is not a main cause of fertility decline, but it accelerated the second demographic transition;
- at least in the first half of the 1990s, the reduction of the total fertility rate (TFR) is mostly due to the effects of compensation and the level of cohort completed fertility might be holding;
- the main cause for this period's fertility decline is the change in the age fertility schedule of cohorts or, in other words, the transition from early and highly concentrated fertility to later and more widespread fertility, like that observed in the western countries.

In the paper the arguments for and against each of these statements will be discussed.

3. Main features of below-replacement fertility in Russia

There are not reliable data in Russian statistics that could allow making the direct estimation of age specific fertility rates in Russia for the period prior to the 1959 census. Nevertheless, recent studies based on demographic modelling (Andreev, Darsky and Kharkova, 1998) or on the 1994 micro-census data (Scherbov and van Vianen, 1999, 2002) have given an idea about the fertility decline in the 1950s. In that decade, TFR decreased from 2.9 to 2.6. The completed fertility of the women born between 1924 and 1930, whose behaviour determined the period fertility indicators in the 1950s and 1960s, was gradually decreasing from 2.1 to 2.02 (Avdeev and Monnier, 1995). The dynamics of this period and cohort fertility indicators shows clearly that Russia became a low-fertility country by the end of the 1950s; and the two-child family as a common model of reproductive behaviour became settled here not in the late 1960s, but at least ten years earlier (Figure 2).

Figure 2. Fertility decline in Russia before 1959



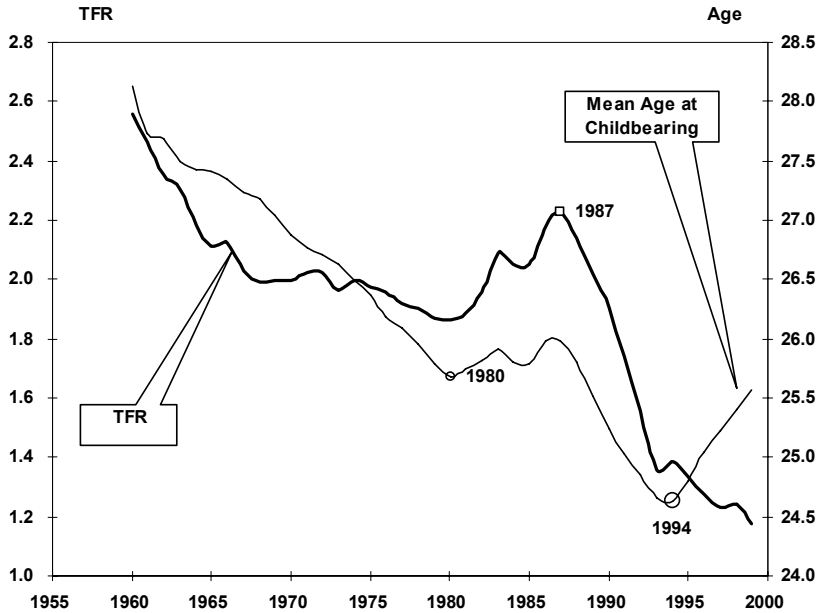
Source: Andreev, Darsky, Kharkova, 1998 (ADKh1998), 164-165; Scherbov and van Vianen, 1999 (S&V1999), 133

Note:Indicators of cohort fertility indicators are attached in this graph to the year of 27th anniversary of each cohort, because at that time it was about the mean age at childbearing.

Two factors determined the relatively important TFR decline between 1959 and 1968. The first one was acceleration in the decline of fertility in the countryside. In 1959, the TFR for the rural population was 3.3. By 1968, it had decreased to 2.5 (by 23%). The urban population TFR decreased by only 15% (from 2.0 in 1959 to 1.7 in 1968). At the same time, the proportion of the rural population diminished from 47% to 37% of the total Russian population. This change in rural-urban population ratio was the second factor of the acceleration of the TFR decline in 1959-1968. It maintained this status for the following decade, when the proportion of the rural population continued to fall to 30%. Because of this, the TFR decline for the whole population was greater than for each of its parts. In fact, while the urban TFR fell by only 3% and the rural TFR was practically unchanged between 1968 and 1979, the total population TFR diminished by 6% (Figure 3).

Since the early 1980s, the urban-rural population ratio has stabilised, and this structural factor has lost its importance.

Figure 3. Total period fertility rate (TFR) and mean age at childbearing (MAC) in Russia, 1959-1999.

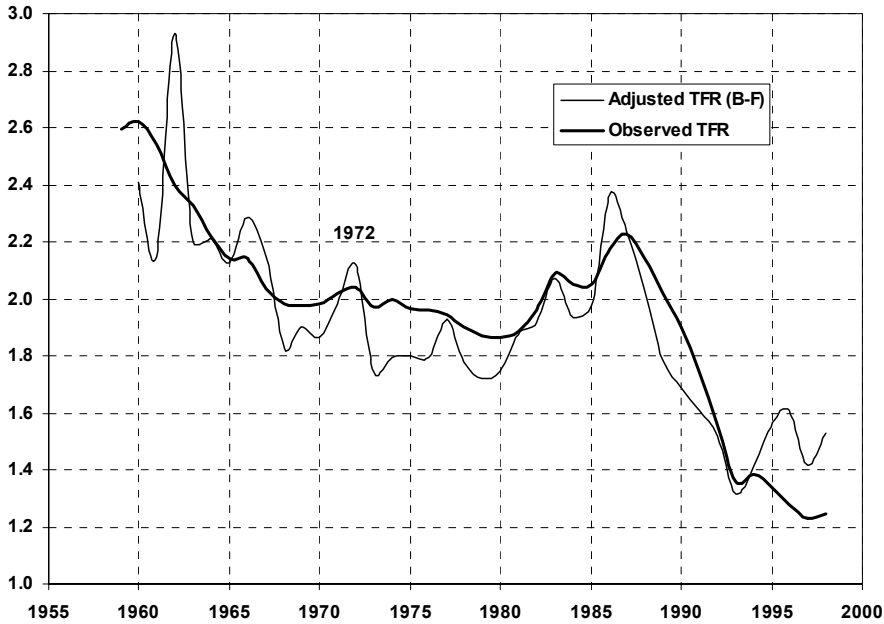


The parallel decrease of mean age at childbearing (MAC) and the TFR suggests that the Russian population adopted a "stopping model" of family formation. The analysis of trends in marriage in Russia from the beginning of the 1950s to the latter 1990s also supported this hypothesis (Avdeev and Monnier, 2000). In the 1968-1980 the continuous decline of the MAC, expressing an important fertility shift to the younger ages, implied a relative stabilisation of the TFR in the countryside and in the towns.

The impact of the change in fertility tempo in Russia on the period TFR, estimated using the Bongaarts-Feeney formula (Bongaarts and Feeney, 1998, 2000), is consistent with recent research on East European fertility (Philipov and Kohler, 2001). In the late 1960s and in the 1970s, the

adjusted TFR was lower than the observed one: the latter was fluctuated at around 2, and the former at about 1.8 (Figure 4).

Figure 4. Observed and adjusted with Bongaarts-Feeney formula for the TFR in Russia, 1959-1998



The mean age at childbearing may decrease because of a reduction of the frequency of high order births and/or because they shift to younger ages. Up to the beginning of the 1970s, the lowering of age at first birth was a principal factor of the MAC decline. Afterwards the situation changed, and from about 1972, age at birth of any order began to fall. The most significant decline was for age at fourth- or higher-order births. In the period 1980-1987, the situation with the MAC changed paradoxically. It grew for births of all orders at the same time it decreased for births of each order (Figure 5).

The inverse situation occurred in the US between 1965 and 1974, when the mean age for births of all orders decreased while mean age at birth of each order rose (Bongaarts and Feeney, 1998, 281). This upturn of the overall MAC trend in Russia was due to an increase in the relative

quantum of births of second (from 34% to 38%) and third (from 8% to 12%) orders (Figure 6).

Figure 5. Mean age at birth of different orders (Russia, 1959-1998)

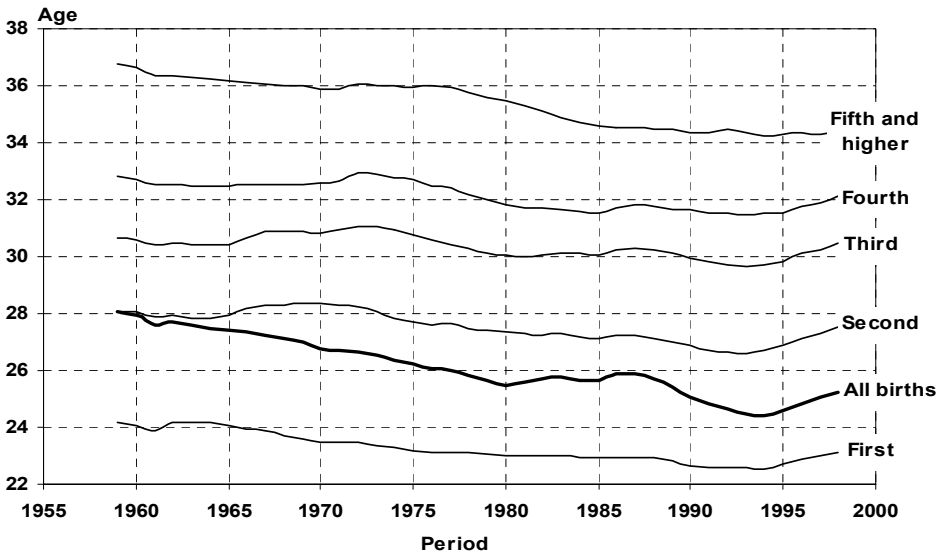
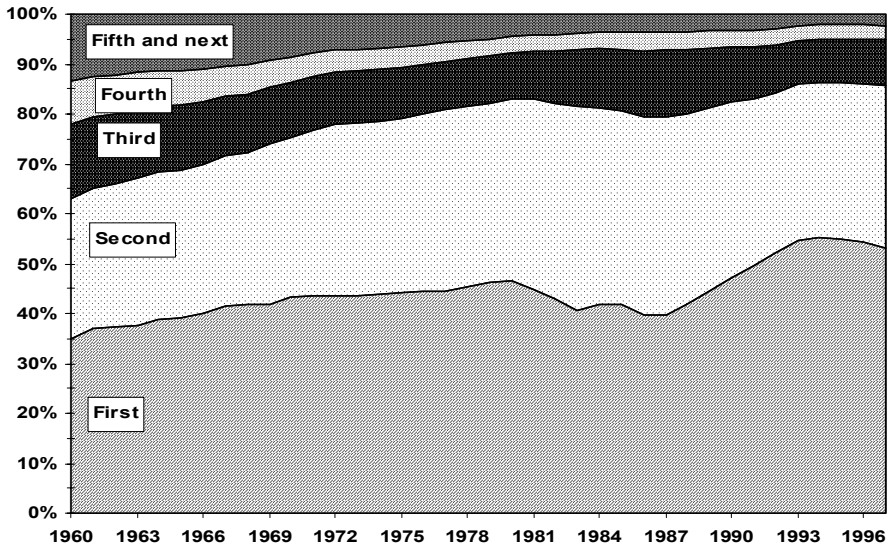
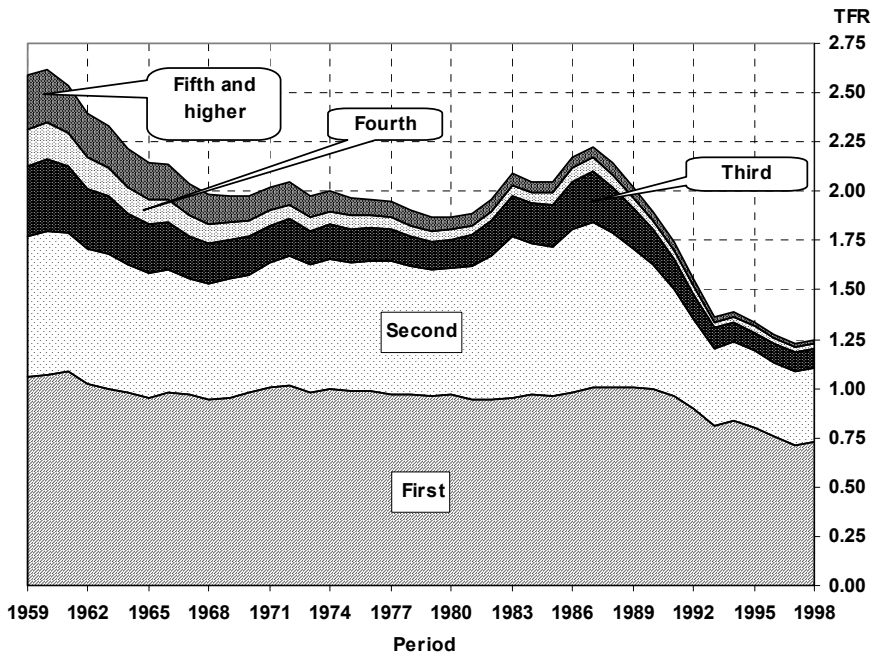


Figure 6. Change in structure of TFR by order of births, (Russia, 1959-1997).



As well as the fertility shift to younger ages, an almost complete disappearance of high order births and very low childlessness characterised the low fertility in Russia (Figure 7). Thus, "the average low fertility" in Russia expressed very homogeneous reproductive behaviour in Russian families. It is possible to say that since the early 1960s, the motto of Russian women with regard to fertility has been "Everybody, early, few and quickly."

Figure 7. TFR composed by total parity fertility rates, Russia 1959-1998

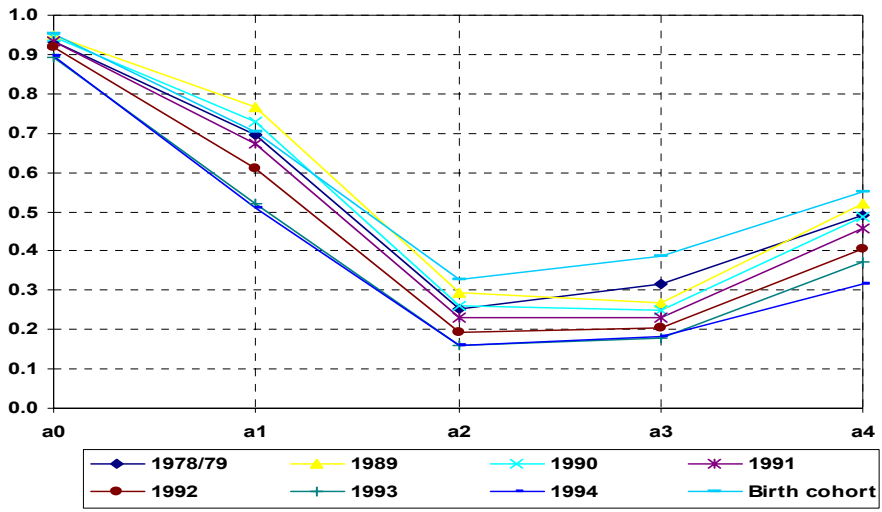


In contrast with the general homogeneity of "one-or-two child" reproductive behaviour, a few couples have continued to have large families of more than three children. (Avdeev and Monnier, 1995; Barkalov and Darsky, 1994; Andreev and Barkalov, 1999). Moreover, the probability of fourth- or higher-order births rises gradually, whereas the probability of third birth remains very low (Figure 8). This paradox of Russian fertility proves that that third birth in Russia is rather a stage in the formation of the "large family" than a deviation from the two-child model. Hence, in the Russian model of fertility, there is a strong quantitative relation between third and higher-order births, but an

insurmountable barrier between two opposite models of reproductive behaviour separates second- and third-order births.

In the period from 1981-1987, the introduction of a new family policy produced a significant rise in fertility, as well as in the mean age at childbearing, but the general model of Russian fertility has remained unchanged.[2] The effects of this policy are very complex. It influenced the *quantum* of fertility among the under-30s, as well as the fertility tempo of these cohorts.

Figure 8. Parity progression ratio for the period cohort 1979-1994 and birth cohort aged 45-49 at the 1989 Census.



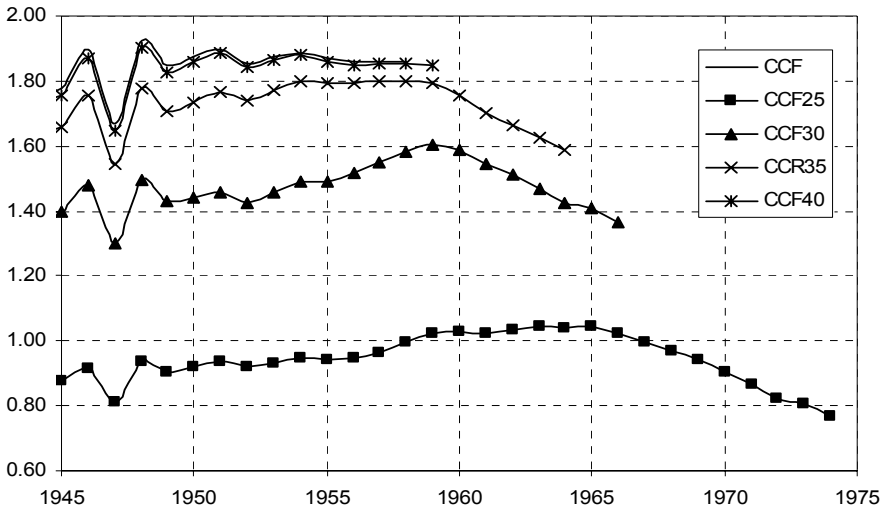
Sources: Barkalov and Darsky, 1994, p.19 (birth cohort); Andreev and Barkalov, 1999, 66 (period cohorts)

The primary result of this policy has been a strong compression of the fertility timing of women born between 1954 and 1965, which has produced a significant growth of cumulative fertility at ages 25 and 30. At

[2] Soviet history provides a good example of how social policy may influence fertility. There are numerous studies on Soviet family and population policy in which scholars sometimes draw quite different conclusions (David and McIntyre, 1981; Chambre, 1954, Glass and Stolee, 1987)

the same time, the increase at age 35 in cohorts born in 1954-1960 was very weak, and the cumulative fertility at age 40 has remained unchanged (Figure 9). Hence, the new family policy helped Russian families to accomplish their reproductive plans sooner, but it did not turn them away from the two-child family model.

Figure 9. Cohort completed fertility and cumulative cohort fertility at selected ages



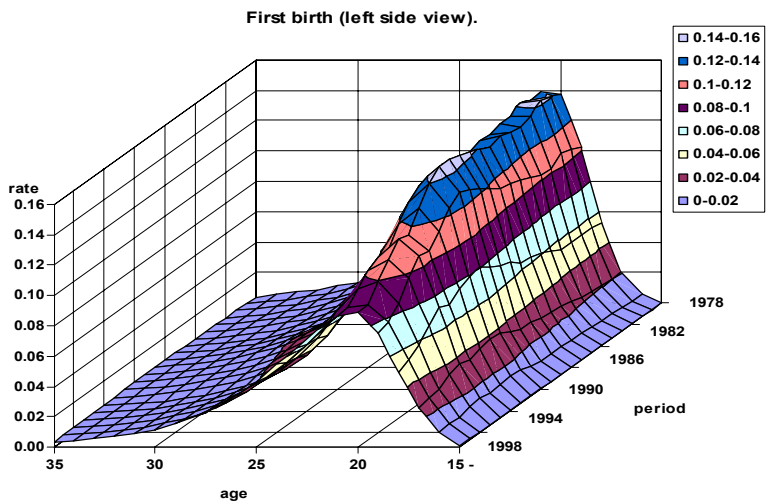
4. The "Catastrophe" of the 1990s

Fertility in Russia began to decline anew in the late 1980s, when the Soviet economy entered a deep depression and the real value of the fertility stimulating measures was reduced. The changes in age-specific fertility show that until the early 1990s, the fertility decline resulted mostly from the compensation of previous growth (Figure 10). Actually, between 1987 and 1994, not only the TFR but also the MAC decreased, signifying a low participation of older birth cohorts in the period fertility, and a substantial decrease of second- and third-order births (Figure 3, Figure 5 and Figure 7). But this "compensation period" ended in 1990, when the first-birth TFR started to decline, and the TFR of orders two and three relatively stabilised.

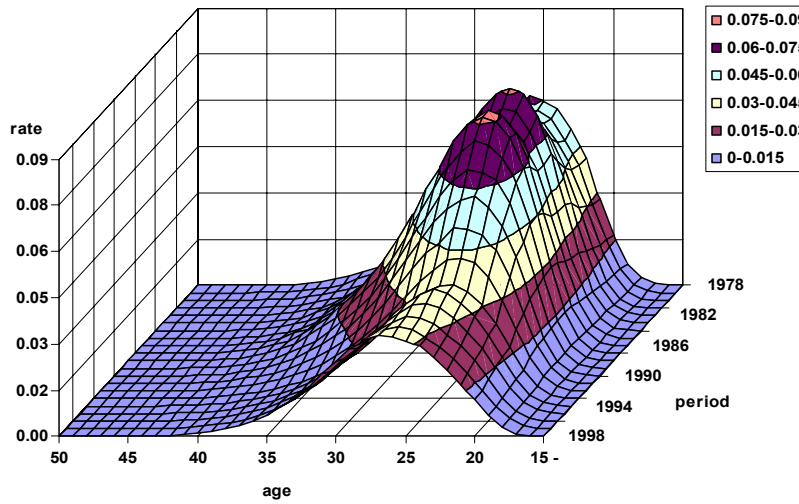
Since 1995, MAC has grown, in contrast with the continuous decline of the TFR. This situation might appear to conform to the fertility-ageing scenario, but a detailed analysis shows that this is not the case. Although MAC of each birth order increases, an important decline of age specific fertility is observed at all ages higher than 20. The modal age of fertility has moved from 21-22 years (as it had been for three decades) to 19-20, and the shape of age-specific fertility in 1995 seems even younger than it had been in 1978. Therefore, since the mid-1990s, the fertility decline in Russia should be attributed neither to the compensation of 1981-1987 growth, nor to fertility ageing. This apparently expressed a real fertility decline.

For 1999, the combined age-period-specific fertility rates for all birth orders maintain about the same structure as in the 1980s, with the modal age at 21. Even if the mean age decreases because of more significant fertility decline in the middle reproductive ages, one cannot say that fertility shifts to the older ages. The observed changes in age specific fertility rates for first, second and third births strongly support the hypothesis that the social and economic transformations, begun in 1992, have led to a real fertility decline (Figure 11).

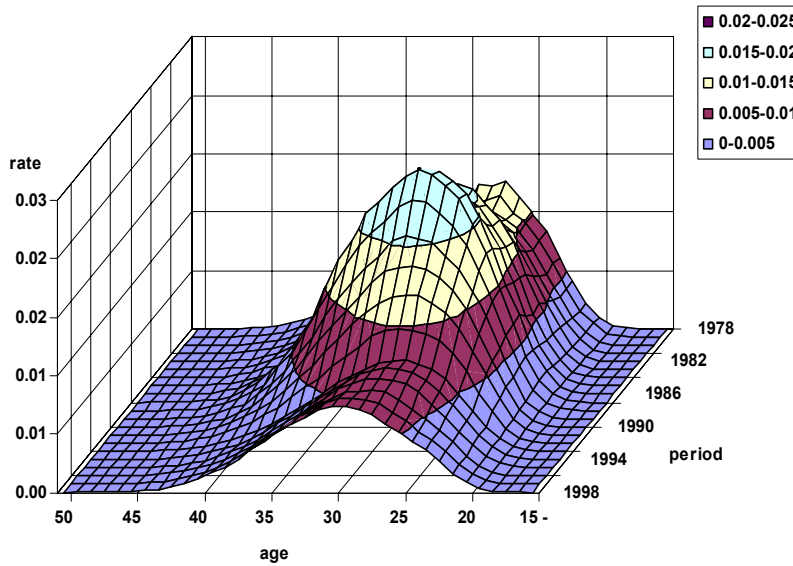
Figure 11. Age-period-specific fertility rates for first, second and third births, Russia, 1978-1998



Second birth (left side view).



Third birth (left side view).



5. Changes in regional and social fertility differentials: diffusion or adaptation

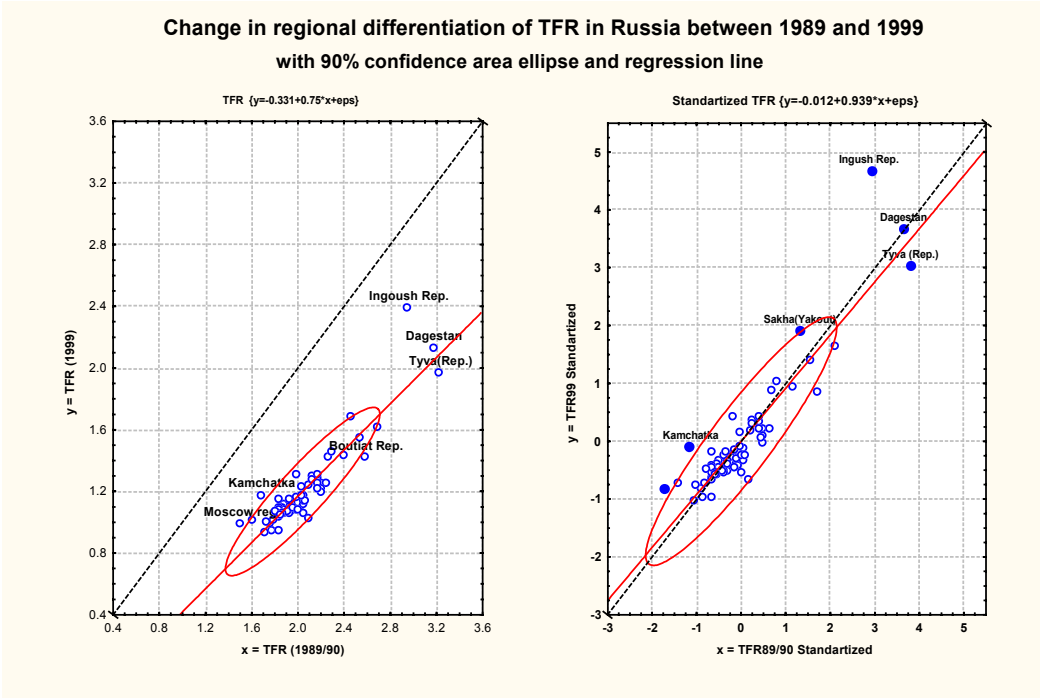
In their analysis, Zakharov and Ivanova explain the regional fertility differentials in Russia in 1959-1994 by an "adaptation model" of fertility transition. They argue that during the periods of slow evolution or relative stability of fertility, the regional differences' "descent to a certain limit appears as the leading vector of change in the periods of relative stability." In contrast, during periods of "quick change … regional differences grow significantly again" (1996, 354). This explanation might be questionable even for the long-term demographic transition (Guinnane, Okun and Trussel, 1994); and it is hardly coherent with fertility decline in Russia during the last decade.

The analysis of regional differentiation of the TFR in 1999, in comparison with 1989, shows that Russian fertility demonstrates rather an innovative than an adaptive model of fertility change. In fact, the TFR decreased throughout the country on average by 41%. The strongest decline was recorded in the region of Khabarovsk (Russian Extreme Orient), where the TFR decreased from 2.093 in 1989 to 1.03 in 1999 (by 51%). The smallest decline was recorded in the Caucasus, in the Ingoush Republic, where vital statistics for the previous decade are very uncertain. If we exclude this region from the analysis, then the minimum of fertility decline moves to Kamchatka where the TFR declined by 30%.

Although fertility decreased considerably in Russia between 1989 and 1999, its territorial structure has remained practically unchanged. Thus, in 1999 most regions maintained the same position relative to the national level of the TFR that they had in the early stage of the fertility decline (Figure 12).

The social differentiation of fertility in Russia has been insufficiently explored. But some results of a study on births recorded in 1993 indicate that the degree of the fertility decline was similar across all social strata (Andreev, Bondarskaya and Kharkova, 1998).

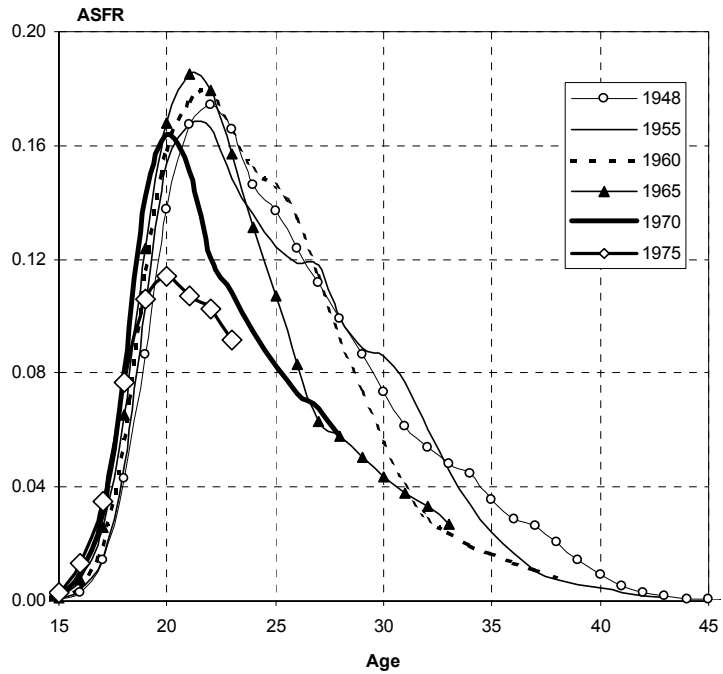
Figure 12.



6. The cohort dimension: questionable postponement and uncertain recuperation

Up to now, cohort fertility has decreased essentially at ages 20-25, and has held its ground above this age. It is interesting and important to note that the fertility peak has not shifted to higher ages, and has remained at about age 20 in the 1975 and 1970 birth cohorts. The mode of the fertility curve has even moved towards slightly younger ages (Figure 13). This change, in the shape of age-specific cohort fertility, signifies a substantial postponement of first births and a renunciation of subsequent births in the cohorts. However unpredictable the shape of age-specific cohort fertility may be, in contrast with period fertility, it is hard to imagine a recovery sufficient to bring completed cohort fertility to the previous level of 1.8.

Figure 13. Age-specific fertility rates of the selected female birth cohorts



Notes for Figure 13:

- Women born in 1948 had mostly achieved their fertility intentions before the reinforcement of family policy in the 1980s;
- Female cohorts born in 1955, 1960, 1965 were involved in the "baby-boom" of the 1980s;
- The young cohorts 1965-1975 were the main actors in the Russian fertility scene of the 1990s.

The analysis of cohort fertility gives weight to the argument that the recent fertility decline is not simply a matter of delayed child bearing, but more probably an expression of the transition from the two-child to the one-child family. This transition might be the above-mentioned fourth scenario of fertility evolution, which escaped the attention of demographers in the 1990s.

7. From two-child to one-child family: has the point of no return already been crossed?

Most demographic projections vary around some "medium variant" which presents more or less rapid, but always fatal, return of fertility to a replacement level. How realistic could such an assumption be today? The analysts from the Demographic Division of the UN Secretariat maintain their fidelity with the "medium" variant, trying to bring it into accord with observed trends by postponing the period of attainment of the "magic" replacement level. At the same time, they point out that "the historical experience up to date does not suggest the stabilization of fertility at replacement level" and "the methods of formulating fertility assumptions for countries whose fertility level is currently below replacement represent an evolving attempt at better approximating future reality." Nevertheless, the unlikely variants of fertility growth remain in population projection "partly because reproductive intentions stated in opinion surveys consistently reveal a strong trend toward the two-child family as a normative goal." (UN, 1997, 96-97, 101).

However, the question remains: what is the two-child family? Obviously, as normative goal, the two-child family is something nice, socially approved and appropriate to everyday consciousness. However, such a conventional norm ("normative goal") could be very far from reality as well as from the internal norms and attitudes (Andreev and Bondarskaya, 2000). On the contrary, the social and demographic meaning of the two-child family is less clear. First, because it is obvious that should the two-child family be a dominant social model, then fertility could never reach replacement level. The simple model of parity distribution in any generation, where two children is the statistical (and social) mode, illustrates this consideration. Only the first line on the table below presents parity distribution, assuming a replacement of generation. From that, we assume an accomplishment of the following conditions: every woman gets married and the proportion of childless women is closer to the natural infecundity level. It is easy to see that in these unrealistic circumstances, a quarter of women (of family) should have more than two children to assume the replacement fertility level.

Table 1. Model of completed cohort fertility (distribution in percentage of women 44 years old by number of alive children)

	Number of children						All	TCF
Type of model	0	1	2	3	4	5.7		
Two-children	5.0	10.0	60.0	20.0	2.50	2.5	100	2.143
Two-children	5.0	20.0	60.0	10.0	2.50	2.5	100	1.943
Two-children	5.0	20.0	65.0	5.0	2.50	2.5	100	1.893
Two-children	5.0	30.0	55.0	5.0	2.50	2.5	100	1.793
Two-children	5.0	35.0	50.0	5.0	2.50	2.5	100	1.743
Two-children	7.0	30.0	50.0	7.0	2.00	4.0	100	1.818
Two-children	10.0	35.0	45.0	7.0	2.00	1.0	100	1.597
Two-children	10.0	40.0	40.0	7.0	2.00	1.0	100	1.547
One-child	10.0	50.0	30.0	7.0	2.00	1.0	100	1.447
One-child	10.0	50.0	30.0	7.0	2.00	1.0	100	1.447
One-child	10.0	55.0	28.0	5.0	1.00	1.0	100	1.357
Urban women 40 years old in 1989 (Russia)	8.0	32.00	47.0	8.0	1.5	3.5	100	1.760
Rural women 40 years old in 1989 (Russia)	6.0	15.00	42.0	20.0	7.00	10.0	100	2.440
Russian women 40 years old in 1989	8.0	30.00	46.0	11.0	2.5	2.5	100	1.793

The simulation could continue, but evidently when the “two-child family” dominates as “a normative goal”, there are the third, fourth and subsequent births that assume the replacement level and these are presently disappearing from the European demographic stage. The absolutely unrealistic “pure” model of the two-child family (5% childlessness, 5% one-child, 85% two-child and 5% three and more children) assumes completed fertility only at the level of 1.9, which is far from the replacement level.

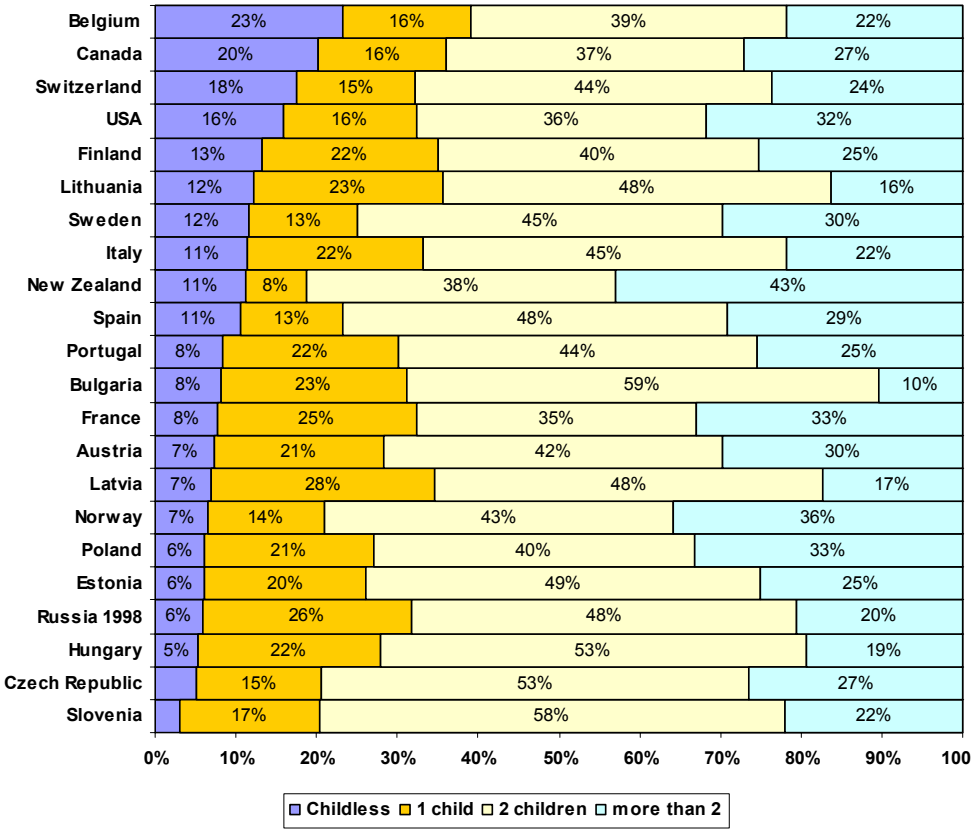
Comparison of line 8 and 9 in Table 1 also shows the frailty of such a notion as “two-child family as normative goal”, because the transition from “two-child” towards “one-child” happens imperceptibly. The final lines of Table 1 contain the data from the 1989 census on the number of children ever live born, including those who have already died. It is not

hard to see that in the urban population, female cohorts born at the end of 1940s are balancing between the two- and one-child family. However, the women of the same generation who were living at the time of this census in the countryside, keep the "two-child model" when 37% of them have three children and more. To suppose that demographic behaviour of a later generation of Russian women present the model for the future (normative goal of contemporary European society), one must have an unrealistic optimism, verging on the delusional. It is important to note that in European countries, the same female generations (40-44 years by the end of the 1980s – first half of 1990s) have parity distribution that balances between the two- and one-child model (Figure 14).

Usually, the "fork" of demographic projection varies around the "medium" variant, which is hardly realistic so far. Actually this "medium" variant presents an "independent" variable in the projection models. However, if the absolute domination of the two-child family could be established, where a key motivating factor to have a second child would be the desire for a child of the other sex, then total fertility would aspire to 1.4-1.7 by a woman with a relatively lower level childlessness. That is a propitious or optimistic scenario. Should this not be the case, the fertility will move to an older age (after 30), with an extreme postponement of childbearing, where the main motivating consideration would be a fear of staying childless. In this case, the transition to the one-child model is practically unavoidable and total fertility will gravitate towards 1.1-1.3 with a relatively high level of definitive childlessness. This is an inauspicious or pessimistic scenario. Apparently, there is not sufficient room here for the "medium" variant.

It seems that the time has come to change this position, and from this time forward, there ought to be discussions over minimum and maximums. Then the "magic" medium variant of fertility projection will turn into a simple statistical average and into a "dependent variable" in population projections.

Figure 14 . Distribution of women aged 40-44 years old at the time of survey by parity in selected European countries.



Source: Data of European Family and Fertility Survey, 1988-1997

It seems that since 1994, the Russian demographers have excluded the notion of "replacement fertility" from their lexicon, but they kept some of their optimism up to the end of the 1990s. Published at the beginning of 1995, the demographic projection of the Institute for the Economic Forecasting of the Russian Academy of Sciences shows the slow growth of the TFR to 1.62 by 2000, then to 1.74 by 2015. The low variant proposes the decline of the TFR to 1.54 by 2000 and to 1.43 by 2015 (Vishnevsky and Vassin, 1995). It is possible to presume that the authors made their projection using1992 as a base, because in 1995, the TFR had

already been below 1.4. The idea of the two-child family was obviously present in that projection.

The reality surpasses the worst expectations, and in 1999 TFR decreases to 1.75, that is a quarter below the low variant. Therefore, in 2000 the Center of Human Ecology and Demography (CHED) published a new projection of the Russian population, which gave a very pessimistic outlook of the fertility perspectives. The "upper" variant foresaw the growth of the TFR to 1.37 by 2020. This gave definitive approval to the one-child family as a future model of family and fertility in Russia (CHED, 1999 and 2000).

8. Conclusion

The Russian two-child family system had appeared to be very resistant, whatever the conditions created by the successive changes in Soviet family policy. Nevertheless, the deep social and economic transformations since the beginning of the 1990s have probably instigated the transition to a one-child family model. Our present experience and state of knowledge does not allow us to predict the future course of Russian fertility. That calls for investigations, especially into the social and psychological aspects of low-fertility reproductive behaviour. Nowadays, the optimists can expect the return to the two-child family system just as much as the pessimists can wait for the definitive adoption of the one-child family. Only one thing is more or less obvious, and that is that the fertility trends observed in 1990s Russia does not look like a temporary reaction or adaptation of the two-child system to a "new social environment".

References

Andreev E, L. Darsky, T. Kharkova, 1998, *Demographic History of Russia: 1927-1957,* Informatika, Moscow.

Andreev E., G. Bondarskaya and T. Kharkova, 1998, "Fall of fertility in Russia: hypothesis and facts", *Voprosy Statistiki* 10, 82-93.

Andreev E. M. and G. A. Bondarskaya, 2000, "Is it possible to use information on expected fertility for the population projections?", *Voprosy Statistiki* 11, 56-62.

Andreev E. M. and N. B. Barkalov, 1999, "Tables of fertility by birth order", *Voprosy Statistiki* 5, 64-66.

Avdeev A. and A. Monnier, 1995, "A survey of modern Russian fertility", *Population* (An English Selection) 7, (French version 1994), 1-38.

Avdeev A. and A. Monnier, 2000, "Marriage in Russia. A complex Phenomenon Poorly Understood", *Population* (An English Selection) 12, (French version 1999), 7-50.

Avdeev A. and A. Monnier, 1996, *Mouvement de la population en Russie 1959-1994: Tableaux démographiques,* Série « Données Statistiques » 1, INED, Paris.

Barkalov N. B. and L. E. Darsky, 1994, *Russia. Fertility, contraception, Induced Abortion and Maternal Mortality,* The Futures Group International, OPTIONS II Project.

Bongaarts J. and F. Griffith, 1998, "On the Quantum and Tempo of Fertility", *Population and Development Review* 24 (2), 271-291.

Bongaarts J. and F. Griffith, 2000, "On the Quantum and Tempo of Fertility: Replay", *Population and Development Review* 26 (3), 560-564.

Center of Human Ecology and Demography, 1999, *Population of Russia 1998,* 6th Annual report, A.G.Vishevsky (ed.), Institute for Economical Forecasting, Russian Academy of Sciences, Moscow.

Center of Human Ecology and Demography, 2000, *Population of Russia 1999,* 7th Annual Report, A.G.Vishevsky (ed.), Institute for Economical Forecasting, Russian Academy of Sciences, Moscow.

Cliquet R., 1992, *The Second Demographic Transition: fact or fiction*? Population Studies no. 23, Strasbourg: Council of Europe.

Darsky L. E. and G. A. Bondarskaya, 1995, Fertility in Russia 1985-94: Situational Crisis or Transition Continuation?, paper presented at the 3td European Population Conference, Milan.

Darsky L. 1993, "Quantum and Timing of Birth in the USSR", in: W. Lutz, S. Scherbov and A. Volkov (eds.), *Demographic Trends and Patterns in the Soviet Union before 1991*, IASSA Laxenbourg (Austria), 57-69.

Guinnane T. W., B. S. Okun and J. Trussel, 1994, "What Do We Know About the Timing of Fertility Transitions in Europe?", *Demography* 31 (1), 1-20.

Kohler H.-P. and I. Kohler, 2002, "Fertility Decline in Russia in the Early and Mid 1990s: The Role of Economic Uncertainty and Labour Market Crises", *European Journal of Population* 18 (3), 233-262.

Lesthaeghe R. and K. Neels, 2002, "From the First to the Second Demographic Transition: An Interpretation of the Spatial Continuity of Demographic Innovation in France, Belgium and Switzerland", *European Journal of Population* 18 (4), 325-360.

Lesthaeghe R. and D. van de Kaa, 1986, Twee demografische transities?, in: R. Lesthaeghe and D. van de Kaa (eds.), *Bevolking: groei en krimp*, Mens en Maatschappij, Van Loghum Slaterus, Deventer, 9-24.

Macura M., 1997, "Fertility and nuptiality changes in Central and Eastern Europe: 1982-1993", *Stanovnistvo* 3-4, 11-43.

Philipov D., 2002, *Fertility in times of discontinuous societal change: the case of Central and Eastern Europe,* Max Planck Institute for Demographic Researches, Working Paper WP-2002-024

Philipov D. and H.-P. Kohler, 2001, "Tempo Effects in the Fertility Decline in Eastern Europe: Evidence from Bulgaria, the Czech Republic, Hungary, Poland and Russia", *European Journal of Population* 17 (1), 37-60.

Sardon J.-P., 1998, "Fécondité, bouleversements politiques et transition vers l'économie de marché en Europe de l'Est", *Population, Espace, Sociétés* 3, 339-360.

Scherbov S. and H. A. W. van Vianen, 1999, "Marital and fertility Careers of Russian Women Born Between 1910 and 1935", *Population and Development Review* 25 (1), 129-143.

Scherbov S. and H.A.W. van Vianen, 2002, "Period Fertility in Russia since 1930: an application of Coal-Trussell fertility model", *Demographic Research* 6 (16).

United Nation, 1997, Future expectation for below-replacement fertility, paper presented by the Population Division (Department of Economic and Social Affairs of the UN Secretariat) at Expert Group Meeting on Below Replacement Fertility, New York, 4-6 November 1997, UN/POP/BRF/BP/1997/3, 93-113.

Vishnevsky A. and S. Vassin, 1995, "Demographic projection for Russia" *Nasselenie I Obstchestvo* 4, Information Bulletin of the Center of Human Ecology and Demography, Institute for Economical Forecasting, Russian Academy of Sciences.

Westoff C. F., 1991, The Return to Replacement Fertility: a Magnetic Force?, in: W. Lutz (ed.), *Future Demographic Trends in Europe and North America: What Can We Assume Today?,* London, Academic Press, 227-234.

Zakharov S., 1997, Fertility Trends in Russia and the European New Independent States: Crisis or Turning Point?, in: *Expert Group Meeting on Below-Replacement Fertility*, UN Population Division. ESA/P/WP.140, New York, 271-290.

Zakharov S. V. and E. I. Ivanova, 1996, Fertility Decline and Recent Population Changes in Russia: On the Threshold of the Second Demographic Transition, in: J. DaVanzo (ed.), *Russia's Demographic Crisis,* CA: Rand, Santa Monica, 36-82.

Zakharov S. 1999, Fertility, Nuptiality, and Family Planning in Russia: Problems and Prospects, in: G.J.Demko, G.Ioffe and Z.Zayonchkovskaya (eds.), *Population under the Duress. The Geodemography of Post-Soviet Russia,* Westview Press, Colorado-Oxford, 41-58.

Fertility preferences versus actual behaviour in Hungary

Ferenc Kamarás

1. Introduction

The behaviour pattern of people marrying young and having children early is now a thing of the past and may be gone forever. A marriage pattern called by John Hajnal "East European pattern" describing Hungarian nuptiality up to the early 1980s was first disrupted by slow changes which were then followed by a drastic decline in nuptiality. The 1990s were a decade of breakthrough as far as those changes were concerned. The marriage patterns that were long in the making have transformed in a relatively short time. By the turn of the millennium, willingness to marry has declined to such a low level that even defied the "West European" patterns. Similar trends were observable as far as people's willingness to have children was concerned. The declining trend of fertility is a phenomenon that in many countries has been observed for a long time, but its specifically Hungarian trait is the periodically returning fluctuation in childbirth patterns. The Hungarian "historical low" of fertility marking the 1990s, however, presents a rather unique situation and puts the chances of a long-term recovery into doubt.

During last 15 years most striking demographic changes affected family formation and decisions to have children. These are two life events that require a long-term simultaneous commitment of two individuals. At the moment it is not entirely clear whether we are facing a crisis of the institutions of marriage and family as well as a radical change in family structures, or just a temporary phenomenon when the demographic patterns are depressed by the tempo effects.

The study presented in this chapter, along with the description and analysis of family formation patterns undertakes to analyse two different aspects of fertility practices and behaviours. On one hand it juxtaposes period fertility and cohort fertility, pointing out the differences in the childbearing strategies and fertility cycles of today's generation of parents and their offsprings. On the other hand, it examines the contradictions between fertility preferences and actual fertility behaviours, in

particularly among the contemporary young generation. Further it attempts to highlight the underlying reasons and possible consequences of such changes of fertility patterns. It also assesses the impact of the family policies on the changes, and focuses on the manners the policies were perceived by those most affected by them.

The data used comes from the annual vital statistics, but in certain areas, such as cohort fertility data, it was processed in specific ways. The findings of a relevant, nationally representative survey, which took place at the end of 2001 under the leadership of the Demographical Research Institute of the Central Statistics Office, are also presented and used here. More than 16 000 people aged 18 to 75 were nation-wide personally interviewed in their homes on the subject of the most significant demographic life events. The survey entitled "Turning points of the life course" recorded events that changed respondents' life courses or will impact them in the future. The sample represented 0,02% of the target population.

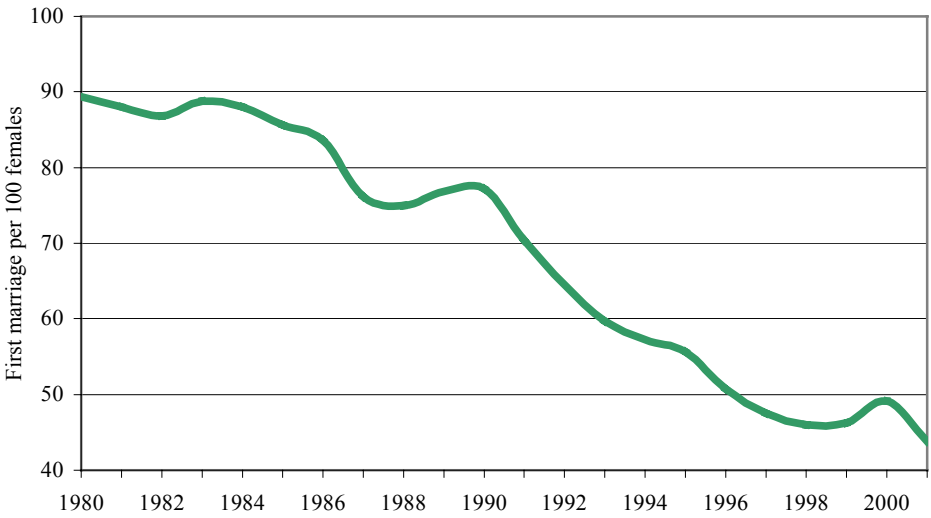
2. Postponed weddings or alternative partnerships

In demographic studies we often use indicators that extrapolate the present situation and tell us what would happen in the future if present modes of behaviour remained unchanged for at least a generation. Regarding nuptiality, this indicator is the total first marriage rate (TFMR). Given the marriage habits of the year 1990, more than three-quarters of women would have married before the age of 50. However, if we applied the marriage habits of the year 2001, only 45% of them would have married, that is, over half of them would have remained unmarried their entire lives. (Council of Europe, 2001). Has the prestige of marriage suffered such a decline in a little over ten years? We can only hope that this is not the case.

We have to be careful in applying indicators of perspective to reality, because the actual situation described by the indicators may change from year to year. The validity of the current indicators of perspective can be established in 20 to 30 years' time at the earliest; but we can also study which of the predictions made earlier were accurate. The characteristics of the East European marriage pattern can be traced in the case of females born after the Second World War who are now in their fifties. 95–96% of

this generation was married at least once in a lifetime. The first signs of a change emerged for the generation born in the 1960s and become more evident for those born in the 1970s and following years. The dynamics of change is well reflected by the proportion of women who were married by a certain age. According to this analysis, in the 1980, over half of the women until 20 years of age were married once. In 1990, we find this figure falls down to about 35% and currently it is at 10%. In other words, young people of today lag behind so much that a high rate of marriages in the future becomes doubtful.

Figure 1. Total female first marriage rate (below age 50), 1980–2001

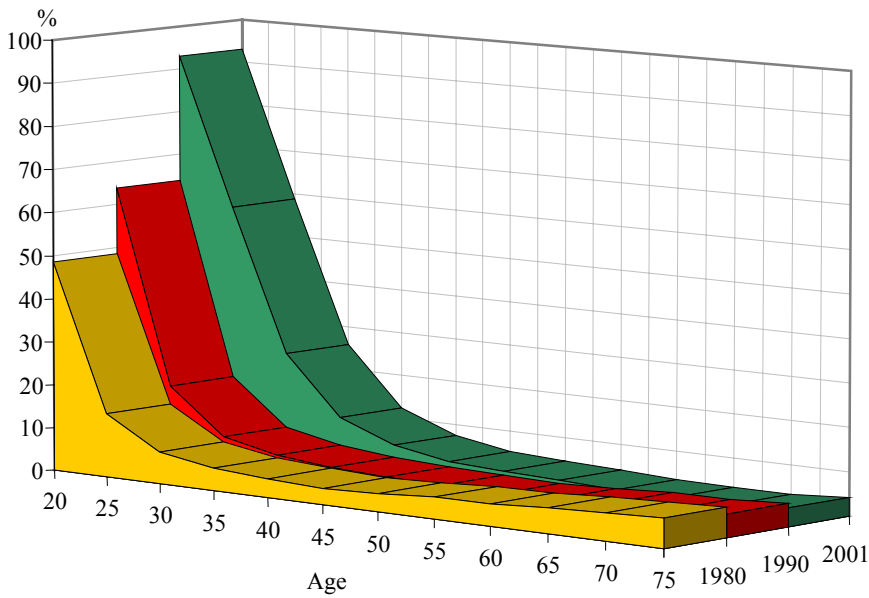


Source: Demographic Yearbooks.

The rate of those living in various forms of partnerships is higher than those living in marriage, which is attributable to the spread of cohabitation. The younger the partners are, the less likely it is that their first lasting relationship will be marriage. (KSH, 1996/1., NKI, 2002) It is unclear whether young people today regard cohabitation as an alternative to marriage or treat it as a sort of a trial marriage. There are concrete examples for both, but from the perspective of fertility it is very important to find out which of these two will become dominant in the future. According to the first approach, cohabitation replaces marriage, that is, a

common-law marriage does not necessarily turn into a legal one. The spread of such living arrangement could indicate reservations towards and lack of confidence in the institution of marriage. Further it undermines the stability of relationships and also has an impact on childbearing decisions. The most obvious sign of the spread of this attitude is the significant decline in the willingness to get married and the increasingly high ratio of young people who never marry.

Figure 2. Proportion of never married females until the given age, 1980–2001



Source: Demographic

Another telling indicator is the number of children born out of the wedlock and the dynamic growth of its ratio (in 2002 it was 31,3%). This indicates that marriage is no longer a precondition or a prerequisite to have children that it was in the 1970s and 1980s when at least 25% of all brides were pregnant, that is, marriage was used to legitimise soon-to-be-born children (KSH, 1986). Pregnancy out of wedlock no longer seems to be a pressing incentive to get married and social attitudes towards children born out of wedlock have changed significantly.

There are also arguments for seeing cohabitation as a sort of trial marriage. One of the most convincing of these is that the number of people who cohabit during their first relationship is much higher than those opting for this form of partnership later in life. One of the reasons for this is the vulnerability and fragility of cohabitative relationships, as they dissolve fast and at a high rate. On the other hand, if they last (*i.e.* the trial run was a success) they are likely to end up in marriage. This marital strategy enjoys the highest social support, since the highest number of respondents, regardless of their age, sex and marital status suggested this approach to the young people of today (Pongrácz, Spéder, 2002). So in theory, as far as support and preferences are concerned, marriage is still the most popular form of partnership and also the most widespread in actual practice. At the same time, factual data reveals that today, young people are less willing or less able to tie the knot and the traditional paradigm of getting married and having children at all costs as a primary goal of life is no longer valid.

All this brings up the question of the impact of the decline of nuptiality of women of childbearing age on childbearing and the general level of fertility. To what extent the increasing number of extra-marital births and the fertility of cohabitative relationships can compensate for the declining number of those living and born in wedlock? At the present it seems that it does not compensate at all. The mere fact that significant changes occurred in the breakdown of the female population by marital status points in the direction of a general decline in fertility. In the period between the two last censuses (1990 and 2001), 135 less children were born to every 1 000 women between the ages 15 and 49. The decline was the result of the change in marital status, namely, that the ratio of married women dropped from 64% to 52% (KSH, 2002).

The decline in the willingness to marry and the shrinking rate of those living in a wedlock have an adverse impact on the general level of fertility. We cannot, however, disregard the composition of the unmarried part of the population. It is important to note the relative ratio of the “ever married” versus the “never married” population and to see how many of them form non-marital relationships. Divorced women are rearing fewer children than married ones, but this changes if divorce is followed by another marriage or by cohabitation. Women who marry more than once rear more children than those married only once. Therefore, divorce may

have a positive impact on fertility if it is followed by another marriage. The situation is similar in the case of cohabitation, which in this particular respect have the same effect as remarriages. Divorcees, widows and cohabiting mothers rear more children than those of similar age living in their first marriage (KSH, 1999).

Table 1. Cohabiting and married women by age, marital status and the number of children

Age-groups	Cohabiting			Cohabiting with partner**	Married living with spouse**
	maiden*	divorcee*	widow*		
	The number of children per 100 women				
15–19	52	–	–	55	80
20–24	59	120	200	60	93
25–29	79	155	200	90	136
30–34	138	187	222	149	185
35–39	155	213	267	193	207
40–44	190	189	225	201	207
45–49	141	198	273	196	202
15–49	**81**	**191**	**248**	**128**	**183**

Sources: * Micro-census of 1996.

** Census of 2001.

Therefore as far as fertility is concerned it is important whether cohabitation follows up a marriage break-up or is opted for from the beginning with the partners never marrying. Data indicates that at the time the end of fertility is reached, lot less children were born to women who cohabited without marriage than to those who had ever been married. It is also a fact that cohabitation is most widespread among young people who were never married.

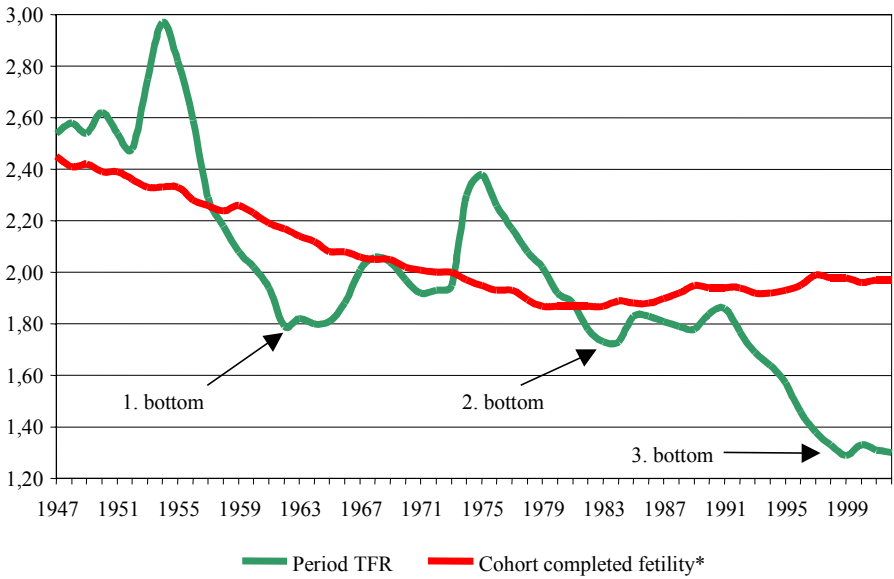
3. Late parenthood- fewer children

The history of fertility in Hungary in the past 50 years has been characterised by a declining trend as well as a cyclical nature. Highs and lows alternated, but the crests were increasingly shorter and the valleys increasingly deeper. There was always a point in the cycle at which the declining tendency came to a halt and fertility started increasing again. But the low points were found at successively deeper levels and the subsequent rise never reached the high of the previous cycle. This observation holds true even if we disregard the unusually high fertility rates of the 1950s and mid-1970s in which preventive regulations

(prohibition on abortions) played a part as did pronatal policy measures. The first low was reached in 1962 when the total fertility rate dropped to 1.79, and never grew back to the 2.5 level of the early 1950s. The second low come twenty years after the first, when 1,73 was recorded in the early 1980s. The third low came even sooner, with fertility rate hitting 1.29 at the end of the 1990s, with no serious upturn to date, total fertility rate in 2002 was recorded at 1.30.

The low points then are recurring, however the third upturn, that we should be witnessing right now, or even a faint indication of such upturn is not evident. The baby boom of the mid-1970s is partly a consequence of the high number of births in the mid-1950s. Even though a similar increase of births could not be expected to take place in the second half of the 1990s, it was reasonable to assume that a larger generation coming into childbearing age would offset the decline in fertility. But this did not happen. The numerous generation born in the mid-1970s is now getting past their 20s and still their fertility had little impact on period fertility indicators. Strategies of parenthood have changed and this can be reflected by the fertility of specific cohorts. By the age 25, 1975 generation had half as many children as they parents born in mid 1950s had at the same age. The difference is even more evident in the case of people in their early 20s. Before the age of 20 the cohort of women born in 1980 gave birth to only one-third of the number of children as compared to their mothers born in the early 1960s. The younger the generation under the scrutiny, the greater the gap between them and their parents with regards to the number of children given birth to by the age of 20 or 25.

Figure 3. Period TFR and cohort completed fertility, 1947–2001



* Sources: Fertility database and on the basis of censuses partly estimated data.

The reluctance of young people to have children has drastically changed the breakdown of under-25 women by the number of children. While by the age of 20 one-third of the generation of the early 1960s had given birth to at least one child, almost 90% of today's twenty-year-olds are childless. Almost 60% of women born in 1975 were childless when they reached the age of 25, while the ratio of the childless women born in the 1950s or 1960s was less than 30%. It is no accident that it is in this last group that the lowest ever rate of childlessness was recorded, 8-9% by the age of 40. This value almost qualifies as biological sterility. Several foreign and domestic experts point out that the current demographic behaviours indicate that the parenthood model – according to which almost everybody wants and actually has at least one child during the life course, with the most widespread family model being this with two children – is undergoing a transition in Hungary (Spéder, 2001). If the current parenthood patterns hold, the ratio of childless women at the completion of fertility (age 49) might double and reach 20% in the case of the generation born in the 1970s (Sardon, 2000).

Table 2. The proportion of women by number of children until a given age in different birth cohorts

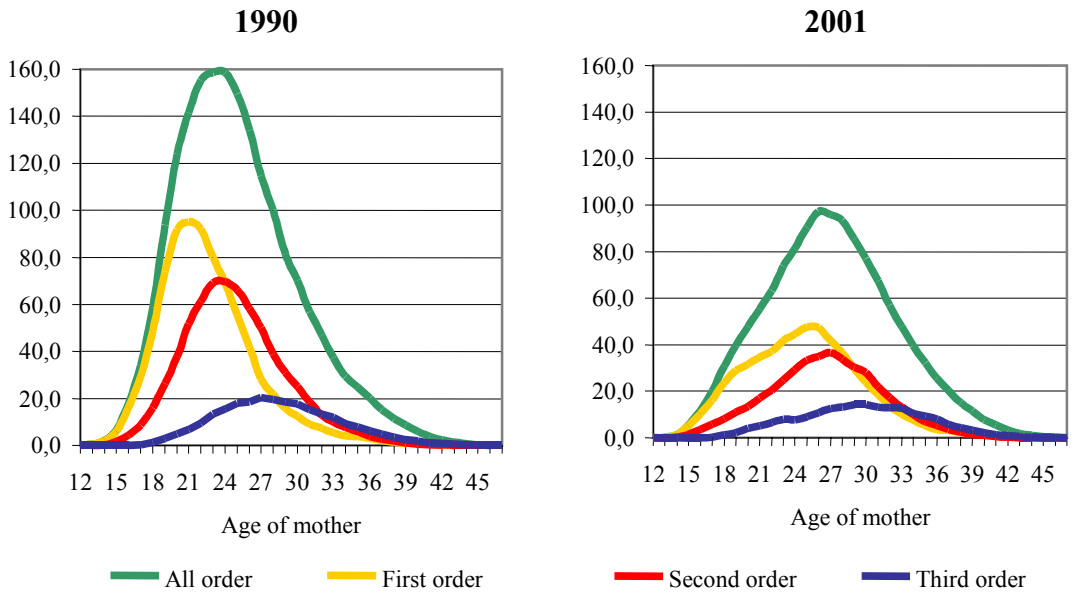
Year of birth (cohort)	Number of child(ren)					Total	Average for 1000 women
	0	1	2	3	4–X		
				Until the age of 20			
1980	88,7	8,5	2,1	0,5	0,1	100,0	147
1975	83,8	13,0	2,6	0,5	0,1	100,0	200
1970	77,6	18,2	3,6	0,5	0,1	100,0	274
1965	72,2	22,2	4,9	0,7	0,1	100,0	343
1960	66,7	25,7	6,7	0,8	0,1	100,0	420
1955	69,5	24,3	5,5	0,6	0,1	100,0	376
1950	70,8	24,7	4,0	0,5	0,1	100,0	344
				Until the age of 25			
1975	59,6	25,3	11,2	2,9	1,0	100,0	608
1970	41,2	32,2	20,7	4,5	1,3	100,0	930
1965	31,7	35,8	26,8	4,5	1,2	100,0	1 080
1960	26,7	37,2	30,0	4,8	1,4	100,0	1 175
1955	26,6	35,7	31,9	4,5	1,2	100,0	1 185
1950	26,9	37,0	29,5	5,0	1,6	100,0	1 181
1945	28,0	43,3	23,8	3,5	1,4	100,0	1 076
				Until the age of 40			
1960	9,2	20,1	48,4	15,6	6,7	100,0	1 956
1955	8,1	20,5	51,9	14,3	5,2	100,0	1 916
1950	8,3	20,2	52,1	14,3	5,1	100,0	1 920
1945	10,1	23,0	48,3	13,2	5,4	100,0	1 862
1940	10,2	27,1	44,0	12,1	6,6	100,0	1 850
1930	11,2	25,7	37,9	14,8	10,4	100,0	1 989

Source: Fertility database

For a long time, decline in fertility was brought about by the lowering childbearing age of the mothers. The most drastic fertility decline was observable in groups approaching the end of their reproductive years and there was a significant decrease in the births of children of higher order. Women now give birth at an increasingly later age and the first child is postponed, if it takes place at all. Further, the ratio of families with two children is shrinking. So, the decline of fertility goes hand-in-hand with the "ageing" of mothers.

The direction of changes is pointed out by the parity-specific fertility rates. The decreasing number of births in the past decade is mainly attributed to the decline in fertility of childless women, that is, in first births. Between 1990 and 2001, the fertility rate of childless women decreased by 35%, while that of mothers-of-one it went down by 25%.

Figure 4. Reduced age-specific fertility rates by birth order

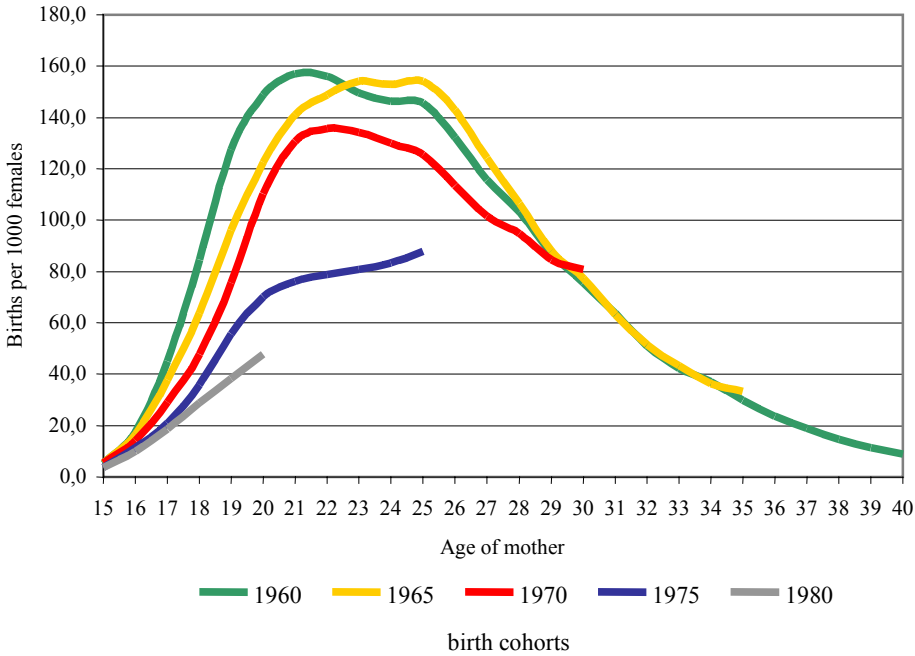


Source: Fertility database.

The fertility of women with two or more children decreased at a much lower rate. Simultaneously, the average birth-giving age was delayed significantly. Between 1990 and 2001, the modal age of women giving birth to their first child went from 21 to 25, for those having a second child it increased from 24 to 27 and for the third birth from 27 to 30 years of age.

The age-specific fertility data of cohorts reflects accurately the shifts of fertility life courses from generation to generation. The shape of the graphs indicates that later parenthood results in smaller families by the time of completed fertility. The younger the birth-giving cohort, the flatter the graph starts out. There is little likelihood of the current young generation compensating later in life as far as parenthood is concerned. Hence they are unlikely to have the same number of children as their parents did.

Figure 5. Age-specific fertility rates by some selected birth cohorts



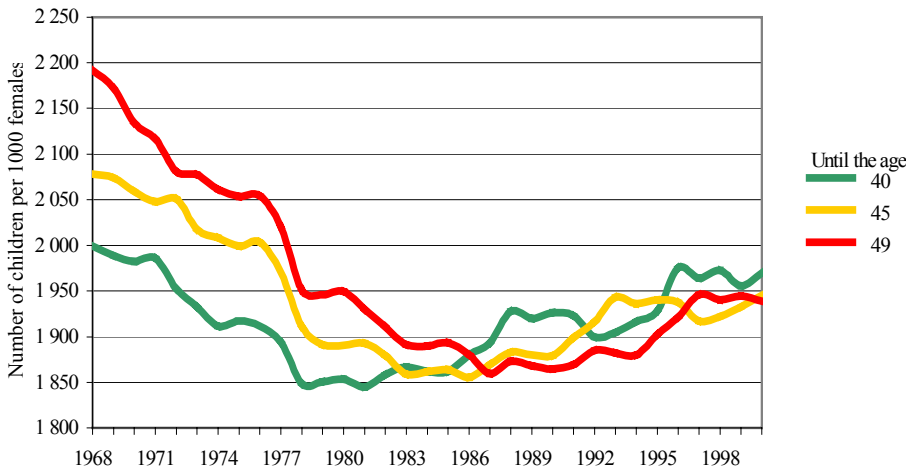
Source: Fertility database.

A comparison of period fertility and cohort-completed fertility shows an unprecedented difference between the two indicators (see Figure 3). As opposed to the roughly 1,30 figure of period fertility, the cohort-completed fertility, which reflects the situation of the past two or three decades, usually exceeds the 1.90 average for those aged 40 to 50 today. A persistingly low period fertility calls into question the hypothesis that what we are faced with is a matter of timing or only an apparent fertility decrease due to the rise of the average childbearing age, something that will be compensated for later (Philipov, 2001). The cohort completed fertility trend seems to support the hypothesis that the pronatal measures of the past decades had a real and lasting effect on fertility levels. The completed or quasi-completed fertility of generations born after 1950 usually exceeds that of those born in the 1940s. The long-term decline of completed fertility was halted in the mid-1980s and turned into a slight but lasting increase that continued until the end of the 1990s. It is mostly

likely to peak with the generation born in the early 1960s, who, in their early forties, already have more children (average of 1.97) than those born during the war by the time they reached 50 (average of 1.87).

After the turn of the millennium, the rising trend of completed fertility rates will probably halt and turn into a decline, the only question is if the rate of decrease and the level completed fertility will stabilise. This largely depends on how the structure of families is going to change and what family model will become dominant among the young people of today.

Figure 6. Average number of live born children until the given age, 1968–2000



Source: Fertility database.

4. Preferences for the number of children, voluntary or involuntary childlessness

For a long time childbearing pattern has been characterised by women marrying young and becoming mothers early. Voluntary childlessness was rare, everybody wanted at least one child and the family model with two children was dominant. Childbearing over 30 or 35 years of age was

rare and the number of children born out of wedlock was low. The first signs that this fertility pattern was about to change appeared in the early 1980s and became increasingly visible in the 1990s. There were two marked transformations of the family structures that had evolved during the past decades. Firstly, there was a significant rise in the proportion of the childless and of those who voluntarily or involuntarily ended up never having children. Secondly, the model of the two-child family was fast losing its hegemony. The signs of both phenomena can be detected in the results of the latest representative surveys (NKI, 2002). For a long time fertility in Hungary and society's view of children has been such that almost nobody wanted to complete their live without having children. And in reality the great majority of couples actually had at least one child.

This is why it is so striking that the young people of today not only have fewer children, but also plan to have fewer children. Consequently, the average envisioned family has fewer than two offspring. Young people are very consciously working towards a family model with fewer children and even if the notion of the two-child families is still strong, the first. signs of voluntary childlessness have already appeared. In the 2001 survey "Turning points of the life course" 10% of the women under 25 and 15–20% of men in the same age group indicated that they never wanted to have children. This is a surprising phenomenon and a drastic change since the last such survey, which also astonishes by the rate of increase of such intentions. The European Fertility and Family Survey conduced some ten years previously recorded only a 1% to 3% of both men and women who voluntarily did not want to have. Still the average desired number of children reached or exceeded two every time (KSH, 1996/2, UN 1999). It is debatable how serious a warning sign this drastic change of intentions should be treated as. It is also debatable what really underlies this phenomenon. Obviously, such intentions signal a change in the values associated with having children, however it must be pointed out that the social and demographic situation as well as the desires, ambitions, preferences and life strategies of young people of today cannot be compared to these of the earlier generations. In the hierarchy of priorities study, work, career and livelihood have overtaken family formation and childbearing. Much fewer people live in marriages. Matrimony and maternity are not in the forefront of young people's interests. In other words, behind the appearance of voluntary childlessness of this magnitude, we find a significant structural change arising out of

the fact that fewer young people live in lasting relationships and that these people think, live and plan differently from those living in marriages. This is well illustrated by the fact that 20% of the unmarried people under 25 say they never want children, while this figure among married people is only 2% to 3%. This shows the relationship between marriage and the decision to have children. Marriage, however, is now delayed, substituted for by cohabitative arrangements or it simply never happens.

People's preferences for the number of children in the family were addressed by three questions in the cross-section survey conducted at the end of 2001. One question addressed the number of children desired by the family (current number of children plus the number of planned children), another addressed an ideal number of children in Hungary. The third question focused on the so-called "retrospective number of children". For those of completed fertility it was worded "If you could start your life over, how many children would you like to have in total?" Questions like this receive a lot of criticisms and the reliability of responses to them or interpretations gleaned from them have been called into doubt. Plans for the number of children to have are accidental, depending largely on life circumstances and especially in the case of young people, full of uncertainties. Young unmarried couples, early in their relationships and lacking experience will provide unreliable data. Others, however, argue that it is this accidental and uncertain nature of attitudes that can be best targeted by pro-family policies. Planes for the number of children are not a lifetime plan, rather they constitute a stepwise strategy of different stages. Once the desired minimum number of children is reached, couples are very circumspect in their decision to have more children and will consider their circumstances very carefully. Pro-family measures can influence the most those couples who wish for more children but are hesitant about taking the plunge. (Ruokolainen, Notkola, 1999.)

To interpret responses given to questions addressing the ideal number of children is difficult as they are removed from everyday reality and express social norms and expectations rather than actual intentions. But this indicator is important if only as one signalling the difference between what is regarded as ideal and what is realised in one's own family. If this difference is significant, findings suggest that there is a society-wide predilection for wanting more children, but the individual member of the

society thinks he or she cannot afford it. As far as demography is concerned, the importance of the ideal number of children lies with the fact that if there is no interest in simple reproduction even on the societal level (2.1 children per woman) pronatal population policies may fail if they endeavour to ensure the fertility level necessary for simple reproduction. Right now in Hungary this seems to be the case among women under 45 and men under 50.

The reality content of the "retrospective number of children" has also been questioned, not only because it presumes a situation removed from reality, conducive to nostalgic thinking, but also because retrospective responses have no consequences. In spite of this, the retrospective number of children gives an insight into what people think they should have done differently in their parenthood decisions if they had all the experience they possess now. Another important area that this question may help illuminate, even if indirectly, is how many of the children born to the family were unplanned. If somebody would retrospectively have fewer children than actually had, it may be reasonable to suspect that there is either a problematic parent-child relation or some of the children were unplanned.

Table 3. The number of children live born, planned for and deemed ideal, by gender (%)

Children	Number of children					Total	Average for a 100
	0	1	2	3	4–X		
Women aged 45 and under							
Live born	37,6	20,1	30,2	9,1	3,0	100,0	122
Wanted in total	6,0	16,2	53,1	19,6	5,0	100,0	205
Deemed ideal	1,4	12,8	66,1	18,5	1,2	100,0	206
Men aged 50 and under							
Live born	47,1	17,4	25,5	7,4	2,6	100,0	102
Wanted in total	10,2	15,4	52,7	16,8	4,9	100,0	194
Deemed ideal	2,4	11,4	65,7	18,9	1,6	100,0	207

Source: Turning points of the life-course, 2001.

The findings suggest that there is a certain contradiction between the preferences, desires and plans regarding the number of children and actual fertility behaviour. Desires and ideas seem to be one thing, and actual practice (measured by period fertility data) another.

One hundred women under-45 years of age wished for an average of 205 children (as opposed to the 122 existing) and a hundred under-50 men wished for an average of 195 (as opposed to the 102 existing). So the gap between the wished-for and the actual number is rather significant. Even those demographic groups that consciously opted for childlessness for the time being have been forced to do this and they do not regard their choice as ideal. In all age and social groups, those who regard childlessness as ideal constitute 1% to 3% of the total and this proportion is much lower than what shows up in family plans. Similarly, fewer people regard the one-child family model ideal than plan for it. The proportion of those who regard the two-child model ideal is over 60%, which exceeds the proportion of those who actually plan to have two children. Some 11% of women 45 years old and younger said they currently have more children than they regard as ideal, this figure for women aged over 45 reached 18%. A dominant majority of them come from families with two or three children. The proportions relating to men are very similar. If a higher than the ideal number of children are born into a family, it can be taken as a conscious behaviour favouring larger families and multiple children or it can be attributed to faulty contraceptive methods used, when pregnancy was not planned for or was planned for a different time, but the parents opted for the continuation of pregnancy.

As far as the retrospective number of children is concerned, 56% of women over 45 would have the same number of children as they actually have, while 9% of them would have less and 35% more children than what they had. It seems that childless women have regretted their decisions with as many as 90% of them would prefer to have at least one child. Only 28% of the women with one child are happy with the size of their family and 71% would have at least one more child if given the opportunity to start over. Those with two children constitute a well-balanced category, since more than 75% of them would have the same number of children again. Even within this group, however, more (17%) would have at least three children than those (5%) who think even two children are too many. The majority (69%) of those with three children would have the same number again, but among those who would have a different number, more (27%) people would have fewer children. The situation is similar in the case of people with four or more children- only 43% would have fewer children if given the opportunity to start their lives over.

Table 4. The number of children live born and retrospectively wanted by gender (%)

If you could start your life over	Number of live born children					Total
	0	1	2	3	4–X	
Women aged over 45						
Same number	8,7	27,5	77,5	68,8	56,8	56,3
Fewer children	–	1,7	5,0	27,4	43,2	8,8
More children	92,3	70,8	17,5	3,8	–	34,9
Total	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**
Men aged over 50						
Same number	13,9	25,9	76,6	70,5	51,4	56,3
Fewer children	–	2,1	3,6	23,8	48,6	7,6
More children	86,1	72,0	19,8	5,7	–	36,1
Total	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

Source: Turning points of the life-course, 2001.

What message can be derived from these observations and facts? There is a lesson to be learned from the experience of the older generation for younger people still to have their first child. What needs to be pointed out first of all is the risk inherent to late parenthood. There is a time period regarded as ideal for having children, under or over which risk factors multiply. According to the findings of the latest study, women aged under 45 who are currently childless but are planning to be mothers want to have their first child at the average age of 28. (This goes up to 30 in case of women with college or university education.) No less than 38% of women under 45 are yet to have children. How many of them will involuntarily end up childless? On average women with one child plan to have another at the age of 31 on the average (33 for women with college or university education). At the time of the survey, 20% of women under 45 years of age had one child. In spite of plans to do otherwise, one can only wonder how many of their children will end up without a brother or sister?

5. The reception of family policy and its scope for action

The findings of our study (NKI 2002.) could help in directing family policy in two important areas. The first is to find and present reasons instrumental in people eschewing the prospect of (more) children even though their age or health would permit it. The other is to assess the family policy measures in effect at time of the survey and to present their

effects from the perspective of respondents, if they were considered as affecting realisation of the desired family size. Analyses in these areas are narrowed to the age group which potentially can have (more) children, that is, women aged 45 and younger.

According to the findings, over half of the women (53%) said at the time of the survey that they wanted to have no more children. They mostly came from the older generations of fertile age and from social groups that had more than the average number of children. As for the reasons for eschewing the possibility of more children, we can rank them in order of response frequency. The reason most frequently mentioned is rather too general for family policy purposes: "I only wanted this many children." This is the reason most frequently cited by mothers of one as well as mothers of four and more. This reason excludes further excuses for ceasing to have children: the plan was realised, the issue completed and over. The second most cited reason has to do with financial concerns: "I cannot afford it." This is the reason second most frequently cited by mothers of one as well as mothers of four and more. Parents of one could not afford the same level of education and financial support if they were to have another child, while for parents of three or more, another child could mean financial hardship. The third most quoted reason is a real surprise. "I think the future is uncertain" which can be interpreted in a number of ways, from the uncertainty felt about the future of the individual or the family to the doubt over the future of the entire society or the country. The reason people have this uncertainty warrant further explorations. The fourth most frequently cited reason is unambiguous though not without a subjective strain. "I think I am too old", this is easy to understand in the case of mothers of multiple children, but in the case of single-child parents, the lateness of parenthood may be to blame. The next two reasons have to do with employment and housing difficulties. Still further down the list, people also cited inadequate family backgrounds and fears of pregnancy and labour. The fact that health and relationship reasons are mentioned rarely is somewhat surprising.

The number of children differentiates this ranking only slightly. There is one exception, which we have not mentioned so far, and this is the reason people cite for not having children at all. They are not numerous, since only 11% of those not wanting (more) children are actually childless, but their attitudes and rationales deserve attention. Most frequently mentioned

is that people "want to maintain their leisure time" which is an honest admission that people want to preserve their comfortable and calm lifestyle. For the time being they do not want to have to put up with the inconveniences that come with having a child. The second most frequently cited reason – "uncertain future" – is even less readily understandable than it was in the case of respondents who were parents. It is not clear whether they are worried about their own future or the future of children they might have or perhaps both. The third reason is a warning sign about the consequences of late parenthood, which was also pointed out earlier. These people were too occupied with other matters and now think they ran out of time, it is too late to have children as they "think they are too old." While the first reason (leisure time) pertains to voluntary childlessness, the last (too old to give birth) points to involuntary childlessness. A fear of pregnancy and labour is a credible but a somewhat anachronistic reason in the case of childless women as is citing financial difficulties. The above-mentioned reasons are followed by claims of housing problems, lack of help, family issues as well as professional careers in the case of childless women.

Table 5. Reasons cited by people wanting no (more) children

Reasons (in order of citation by women already with children)	Under 45	
	women with children	childless women
	Percentage of citation	
Wanted this many children	64,6	6,2
Cannot afford it financially	43,5	19,2
Thinks the future uncertain	37,6	28,7
Thinks self too old	36,7	24,8
Would make getting employed more difficult	22,4	14,6
Insufficient housing conditions	20,8	18,6
Insufficient family background	15,9	17,8
Difficulties of pregnancy and labour	13,4	19,4
Health reasons	11,1	10,1
Difficulties in rearing children	10,1	9,3
Want to maintain leisure time	9,9	31,0
Thinks current relationship unstable	6,2	8,5
Would slow down professional advancement	6,1	16,2
Partner is against it	6,0	0,8
Influence of parents and relatives	1,0	–

Source: Turning points of the life-course, 2001.

Even though 30% of those who want no (more) children can conceive of a situation in which they would still want to have more, these at the time of

the survey taking had little to do with current family policy measures. Most of them (52%) thought current incentives paid no role in helping families have the number of children they wanted. As far as they were concerned this applied to the past, for they regard their family size as final and did want to enlarge it. At the same time, 26% of the respondents thought these incentives did play some sort of role and 16% said they had a significant role in realising their plans for their family size.

The situation is somewhat different when it comes to families and women who want to have (more) children. Compared to the previous demographic group, they are younger, more educated and have significantly fewer children. They have been putting off childbearing – a 100 of them gave birth to 50 children – and almost two-thirds of them are still childless though they intent to have children. They wanted to have 175 children in the near future. Incentive family policy can and must target this group, for their intentions be realised to the greatest possible extent. They also see the role of incentives differently than women who want no more children. They are almost equally spilt between the opinions that incentives play no part or a significant part (29% and 28%) in increasing family size, while 38% were uncertain and chose the response "maybe it has a partial role".

To return now to the question in the chapter's title regarding the possible scope of action for family policy, our findings provide a conceivable though by no means full and unquestionable response with regards to the areas where incentives may or may not help. To fit in with the narrow definition of family policy, we only took those reasons that the women in our survey thought posed an obstacle to their families as far as childbearing is concerned. This narrow definition involves the disregarding potential measures belonging to "other" policies (social, labour, housing, employment, etc.) even though all measures relevant to families and their members (directly, indirectly or in the long run) may also impact childbearing decisions.

Table 6. Possibilities of family policies in eliminating obstacles in the way of having (more) children

Reasons for wanting no (more) children	Family policy		
	can	can partially	cannot
	Assist		
Wanted this many children			X
Cannot afford it financially	X		
Thinks the future uncertain			X
Thinks self too old			X
Would make getting employed more difficult		X	
Insufficient housing conditions	X		
Insufficient family background			X
Difficulties of pregnancy and labour		X	
Health reasons			X
Difficulties in rearing children		X	
Want to preserve leisure time			X
Thinks current relationship unstable			X
Would slow down professional advancement			X
Partner is against it			X
Influence of parents and relatives			X

According to the findings, family policy has potential but relatively little room to manoeuvre in and it is confined to the traditional areas. These are the financial support for families with children, the mitigation or elimination of disadvantages arising out of having children, the improvement of housing situations or of the conditions for acquiring a suitable housing, the elimination of conflicts between the family and the workplace, between parenthood and employment. The means to render help in these areas also must be defined. Family policy has to adapt to the changing social, economic and demographic conditions. The means that proved effective in the past may not work today or if they do, their effects might be different. The variety of partner relationships must be taken into account and the radical shift in parenthood patterns and behaviours, as well as their consequences. The system of means that will be met with favourable reception and might prove effective in the long run must be devised with all this in mind.

References

Hajnal J, 1965, European Marriage Patterns in Perspective, in: D.V. Glass, D.E.C.Eversley (eds.), *Population in History*, E. Arnold, London, 101-143.

Központi Statisztikai Hivatal (KSH), 1986. Családalapítók, 1983, A házasságkötés körülményei 1983-ban összehasonlítva az 1966 és az 1974. évi helyzettel. (Marriage circumstances in 1983 compared with the situation in the years 1966 and 1975), KSH, Budapest.

KSH, 1996/1. Termékenységi adattár 1970–1994. (Fertility database), KSH, Budapest.

KSH,1996/2. Európai termékenységi és családvizsgálat Magyarországon. Az 1993. évi keresztmetszeti vizsgálat fontosabb eredményei. (European fertility and family survey in Hungary. The most important findings of the 1993 cross-section analysis), KSH, Budapest.

KSH, 1999: Mikrocenzus, 1996, Termékenységi adatok. (Micro-census, 1996. Fertility data), KSH, Budapest.

KSH, 2002. Népszámlálás 2001, 6. Területi adatok, 6.21 Összefoglaló adatok I. kötet. (The 2001 census, 6. Regional data 6.21, Summary data, volume 1.), KSH, Budapest.

Népességtudományi Kutató Intézet (NKI), 2002, Életünk Fordulópontjai, Demográfiai folyamatok és társadalmi környezet. Műhelytanulmányok 1. (Szerk. Spéder Zs.). (Turning Points of the Life Course. Demographic processes and the social setting), KSH, Budapest.

Philipov D., H. P. Kohler, 2001, "Tempo effects in the fertility decline in Eastern Europe: evidence from Bulgaria, the Czech Republic, Hungary, Poland and Russia", *European Journal of Population* 17 (1), 37-60.

Pongrácz T., Zs. Spéder, 2002. Párkapcsolatok az ezredfordulón, Életünk Fordulópontjai, Műhelytanulmányok 1. (Szerk. Spéder Zs.) (Relationships at the turn of the millenium] Budapest: NKI 13-32. old.

Council of Europe, 2001, *Recent Demographic Developments in Europe 2001*, Council of Europe Publishing, Strasbourg.

Ruokolainen A., I.L. Notkola, 1999, Third-child intention in Finland. Paper prepared for the European Population Conference 1999, The Hague, September 1999.

Sardon J.P., 2000, "The demographic situation of Europe and the developed countries overseas", *Population* (An English Selection) 12, 293–328.

Spéder Zs., 2001, A gyermekvállalás társadalomszerkezete –különös tekintettel a gyermeket vállaló anyák munkapiaci státuszára és iskolai végzettségére. (The social structure of childbearing, with special regard to the education and labour market status of childbearing mothers), Budapest (manuscript).

UN, 1999, Family and Fertility Surveys in Countries of the ECE Region. Standard Country Report, Hungary, United Nations Publication, New York and Geneva.

Another way of describing the development of fertility and what emerges from this for Europe

Felix Koschin

What is the future of Europe? Will there be just one, or will it have two parts? Or even more? Leading demographers working in Holland (*i.e.* at NIDI and at Statistics Netherlands), who in 1999 prepared a forecast of the future development of Europe (NIDI, 1999), divided it into five parts – into the north, west, south, central and east regions – and created two scenarios: uniformity and diversity. The first scenario presumes that the conditions in Europe will become more or less uniform and this means that the demographic behaviour of all the European populations will, in the end, be the same. The second scenario, on the other hand, presumes that the differences between the East and the West will remain and possibly even intensify, so that the differences in the demographic behaviour of the East European and West European populations will also intensify and the whole Europe will head for a gloomy future (the number of inhabitants will drop in the course of fifty years to almost three-quarters of the present state). In the last sentence the words West and East indicated the traditional political division: the East in this sense covers the central and east regions and the West the rest.

The diversity scenario presumes that the differences in life expectancy at birth will be five to ten years in the year 2050. This is a tremendous difference, but nevertheless the decisive factor should be the future development of fertility. Whereas the uniformity scenario presumes that in the year 2050 the total fertility rate will be 1.8, in the diversity scenario the total fertility rate in the central region stops at the value of l.3 and in the east region at only 1.1.

The authors used as their starting-point the data from 1997. Several years have passed since then and today we have new data available. Could we already say, on the basis of their analysis, whether the fertility rate will develop rather according to the uniformity scenario or the diversity scenario?

In order to be able to give such an answer we will not be helped by the period characteristics – from the data from atypical years it is obviously

difficult to judge the distant future. We would need cohort characteristics which are not subject to momentary special circumstances (and we may undoubtedly consider the nineties to have been exceptional) because their influence is compensated in the course of life (at least in part). There is, however, one difficulty with cohort measures – they are known only at the moment when they are already in the past, when they are already less interesting. For some cohort to reach at least two thirds of its final fertility takes 10 to 15 years.

It is, however, possible to define a cohort in a different way to the usual one. The usual cohorts are generation cohorts, cohorts born in one and the same year. But when we define a cohort by the moment of the first birth, then we need only around five years to acquire two thirds of those born second in order; analogically we can then define a cohort by the moment of the second birth, the third birth, etc. The measures which describe the reproduction behaviour of such cohorts are entitled parity progression ratios.

The parity progression ratio signifies the probability that a woman who has already given birth to n children will (at some time) bear another (n + 1)-th child. Instead of "borne a child" we could also write "borne a living child". Such a probability will naturally be slightly different. Whether we count all births or only live births depends, of course, on what it is we wish to characterise. In the case of the Czech population, however, it hardly signifies because the number of still births is so low that it has a negligible influence on the resulting values. And in the case of the Czech population we cannot in any case make a choice – the statistics do not ascertain how many live births a woman has undergone, but only how many children she has already borne.

In the preceding considerations we have completely ignored abortions. These undoubtedly also influence the parity progression ratio and in addition their omission probably makes these ratios more difficult to compare on an international level – abortion is defined in a slightly different manner in each country, there is no definition which we can consider to be an internationally recognised definition.

The same applies to the parity progression ratio as to other cohort measures – for us to be able to determine them we must wait until the

completion of the period of fertility of the entire cohort. This problem can be avoided quite simply as has been indicated: instead of the above-mentioned ratios we can count the incomplete parity progression ratio, for instance during a period of five years. We then take it that the remaining period will not bring any basic changes, which would disrupt or reverse our conclusions. This is perhaps even justified faith, because we know that changes in fertility in the later phases of the lifecycle have always been rather negligible.

In order for us to calculate the (incomplete) cohort parity progression ratio we need to organise the data on births which are ascertained in the collection of demographic data in a different way. To each child born we must add all his younger siblings (on the mother's side). To be more precise, we do not need to add this information to every child born, but to the groups of those born in the course of a certain interval of time. Because the Czech statistics ascertain the date of birth of the previous child (until recently unfortunately only the month and year), we can easily reconstruct for those born in a certain month a set of their younger siblings. We can therefore study the behaviour of the cohort of mothers whose first child was born, for instance, in July 1993; we shall be particularly interested in how long it was before these mothers bore their second child. An arrangement, which permits us to answer such a question, is in the following scheme:

Month and year of birth of the 1st child	Month and year of birth of the 2nd child								
	I. 1991	II. 1991	III. 1991	IV. 1991	V. 1991	VI. 1991	VII. 1991	VIII. 1991	…
I. 1991									
II. 1991	×								
III. 1991	×	×							
IV. 1991	×	×	×						
V. 1991	×	×	×	×					
VI. 1991	×	×	×	×	×				
VII. 1991	×	×	×	×	×	×			
…	×	×	×	×	×	×	×	…	

Perhaps it may seem unnecessary to include the first few columns, but we must take into consideration that there are also the births of twins and we cannot even exclude apparently impossible variations – for instance in 1997 a mother's third child was born in the third month after the birth of

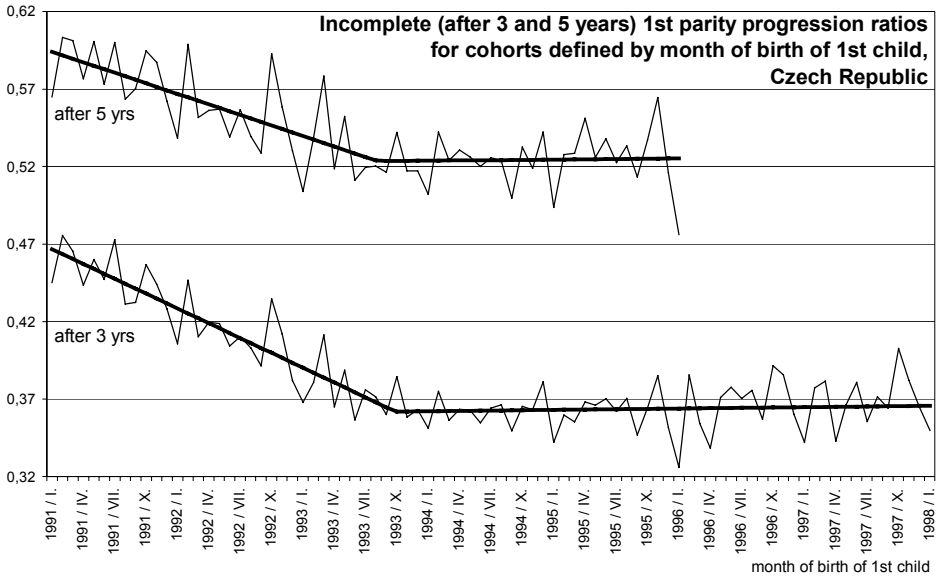
the second child (it was the second of twins)! The problem of twins (or multiple births in general) merits at least a note. Should they be counted as two children or as one birth? From the point of view of the estimate of the parity progression ratio we should logically count them as two children. If, however, we want to use these indices to characterise the procreative behaviour of the population, then we should probably count just one birth, because the birth of twins is not the result of different procreative behaviour, twins are not "wanted" in the sense that they have been planned. With such an approach, however, we would also have to exclude the other "unwanted" children and this is, of course, impossible. The only rational procedure is, then, to count the birth of twins as the births of two successive children with a zero interval between the births (apart from truly rare exceptions – see above).

Today we can complete the given table with the data for eleven years. This does not, of course, mean that we have the data for eleven years for a sufficient number of cohorts – for a period of this length we have the data only for a single cohort. For us to be able, then, to follow the changes in the behaviour of cohorts we must restrict ourselves to a shorter period. A reasonable compromise might seem to be five years, because in this way we acquire the data for 60 cohorts which have already realised around ⅔ of their fertility of the second order (in those with two children it is, however, only around 50 % of the fertility of the third order and in those with 3 children around 60 % of the fertility of the fourth order). Restriction to a mere three years, however, turned out to be interesting, in other words the data for 84 cohorts which have realised around ⅓ of their fertility of the second order (for the third or fourth order it is also around ⅓).

Why is the restriction to three years interesting? Because there has been a clear change in the behaviour of the cohorts defined by the month of birth of the first child. Whereas in the cohorts which had their first child in the years 1991 to 1993 there was a gradual decline in the (incomplete) parity progression ratio, in later cohorts this probability did not virtually changed. This change in the behaviour of cohorts is, at the same time, considerably striking, as is documented by the following graph (Figure 1). (From the graph it is clear there is a certain instability of the estimates of the parity progression ratio because the estimates are based on a relatively

small number of cases – it is in the order of thousands; nevertheless the tendency is clear.)

Figure 1

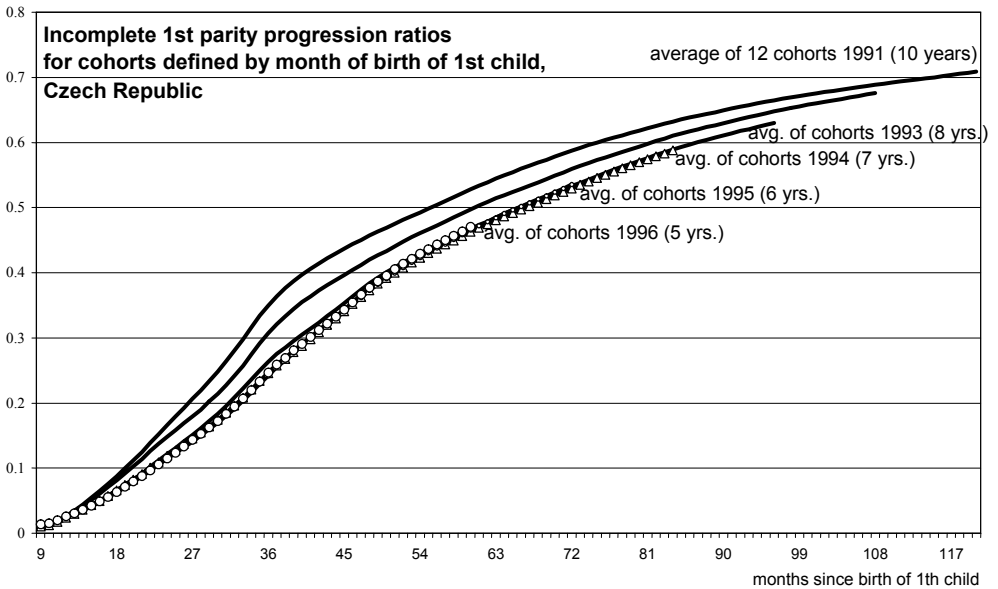


Why did the behaviour of new cohorts in the last quarter of 1993 change? Was the period from 1991 to 1993 a period of transition to a lower level? This was a very short period. The limit presented by the year 1991 is, however, only artificial, determined by the fact that we have no older data. This transition mentioned could have started far earlier – with preservation of the trend it was probably more than ten years, in other words from the end of the 70's. This would mean that already from the end of the 70's the parity progression ratio was dropping.

That, however, is the past. What is fundamental is that the decline has clearly stopped and the values have stabilised. What values will be reached, however, by the parity progression ratio in these cohorts? We could only estimate this from the graphs of gradual accumulation for selected cohorts. But the data for the individual cohorts is burdened by considerable variability, so that the best thing to do will be to bring together the data for twenty cohorts from one calendar year. In Figure 2 there are the averages for the cohorts from the years 1991 to 1997.

It appears that the cohorts from 1991 will achieve the value of 0.75, possibly as much as 0.8. The following two groups of cohorts from the years 1992 and 1993 do indeed show values which are slightly lower, but they obviously draw close to the cohorts of 1991 – whereas four years after the birth of the child the difference was 0.04, after nine, or eight years it is only 0.01. Clearly the birth of a further child is being postponed until later, but not definitely shelved. It can, then, reasonably be presumed that the final values will not differ much – these cohorts will also evidently reach a value of around 0.75. Compensation, but this time complete and far faster (with regard to the cohorts of 1993), is something that we can observe in the cohorts of the years 1994 to 1996, so that in their case, too, the assumption that they will achieve values of around 0.75 is in place.

Figure 2



How do the values given agree with the values of the period indices? Not at all. The period indices show something quite different. The parity progression ratio increased in the first half of the nineties, as is shown by Table 1.

Table 1. First parity progression ratio calculated from period fertilities, Czech Republic 1990 to 1999

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
A_1	0.80	0.75	0.78	0.84	0.86	0.92	0.90	0.87	0.85	0.81

Year	$N^{(I.)}$	$N^{(II.)}$	$N^{(II.)}/ N^{(I.)}$
1991	1 000	333	0.33
1992	1 000	333	0.33
1993	750	333	0.44
1994	500	250	0.50

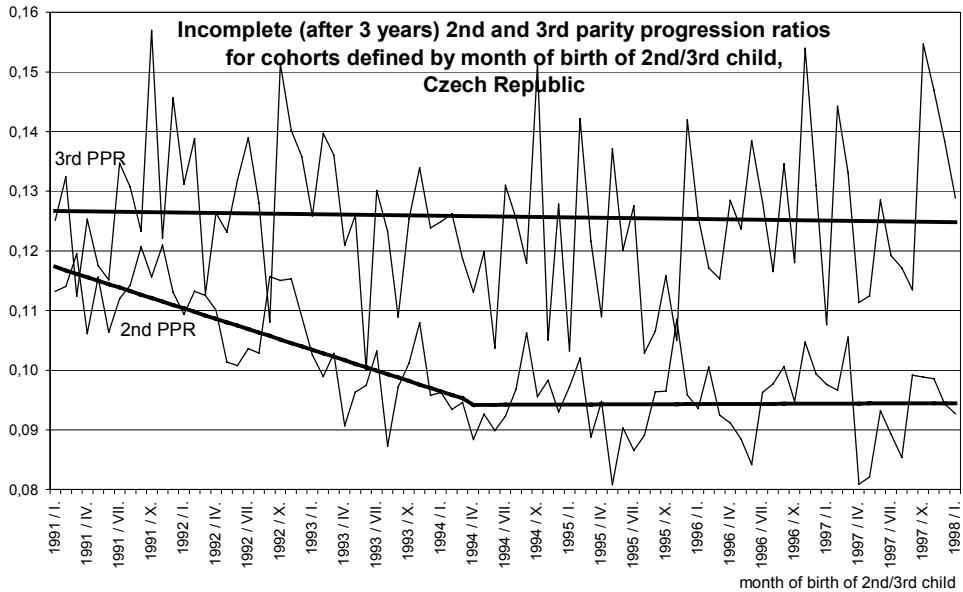
How is this possible? Let us imagine a population in which there are 1,000 firstborn children born regularly every year, but in 1993 there were only 750 of them born and in 1994 only 500. Let us presume that in this population on average every third firstborn has a sibling born within a year while the others remain only children. This means that up to the year 1993 there were 333 second children born, but in 1994 there were only 250. Although, then, the first parity progression ratio has not altered (it remained equal to ⅓), the relationship of the number of second-born and firstborn children rose in 1993 to 333/750 = 0.44 and in the year 1994 to 250/500 = 0.5.

A situation similar to the one described above occurred in the Czech population in the first half of the nineties – the fertility of the first order dropped very quickly so that there were less and less first children. And because the parity progression ratios changed far more slowly, suddenly there were relatively more children of the second order. When, then, we estimate the parity progression ratios from period data, we acquire incorrect (or rather nonsensical) information. This is only confirmation of the fact that for the description of the structure of rapidly changing attributes (in this case fertility) period measures are unsuitable and often also misleading. Judging future development from such data is, however, dangerous.

So far we have spoken only of the first parity progression ratio. Let us now take a look also at the higher orders. We restrict ourselves to the second and third orders because there are so few born in a higher order

that it would be impossible to reach relatively reliable conclusions (actually this is clear from the ambivalence of the data for the third children in Figure 3).

Figure 3

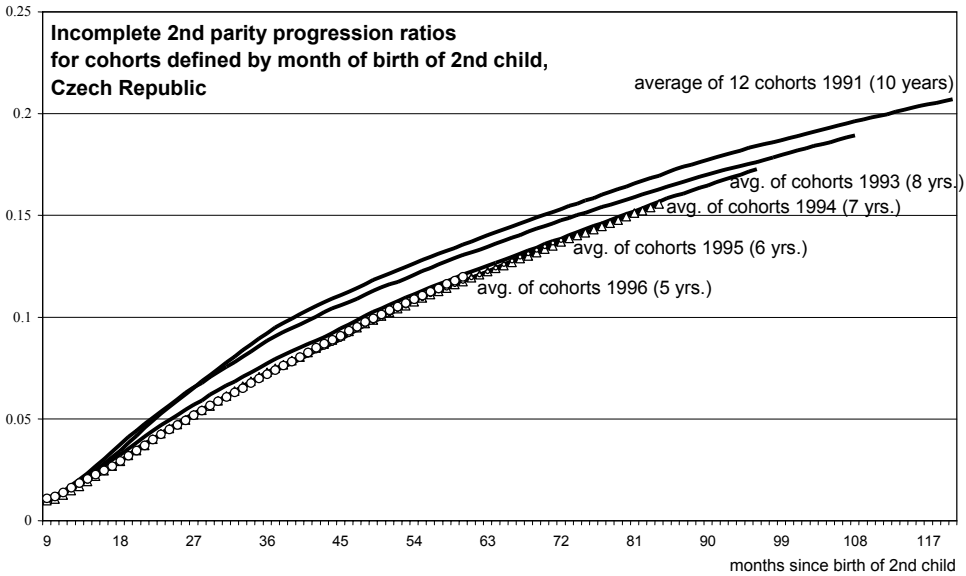


Second and third parity progression ratios offer a picture similar to that of the first parity progression ratio, except that in the case of the third parity progression ratio there is no clear break, it is more a matter of long-term stabilisation (the fact that the trend is slightly downwards means nothing – if we left out 1991 we would, on the contrary, have a slightly rising trend). In the diagram the parity progression ratios are clearly incomplete after a mere three years, but the picture after five years is identical, only the values are, of course, higher.

For the second parity progression ratio we can also try to estimate its values from the graph of the gradual accumulations for the cohorts (averages from 12 cohorts) from the individual years (Figure 4). The graph is similar to the graph for the first parity progression ratio, only the curve for 1992 differs slightly – it does not draw close to the curve from 1992, on the contrary it draws away from it. In more detailed analysis, however, we ascertain that it is not the curve for 1992 which is

cohorts from the first half of 1991 (the average for the cohorts from the second half of 1991 is practically identical to the behaviour of the cohorts from 1992). If we ignore, then, the curve for 1991, we may again state that the individual cohorts compensate for any possible loss and in the end they evidently all reach roughly the same values of the second parity progression ratio. From the graph we may judge that it might be approximately 0.25.

Figure 4



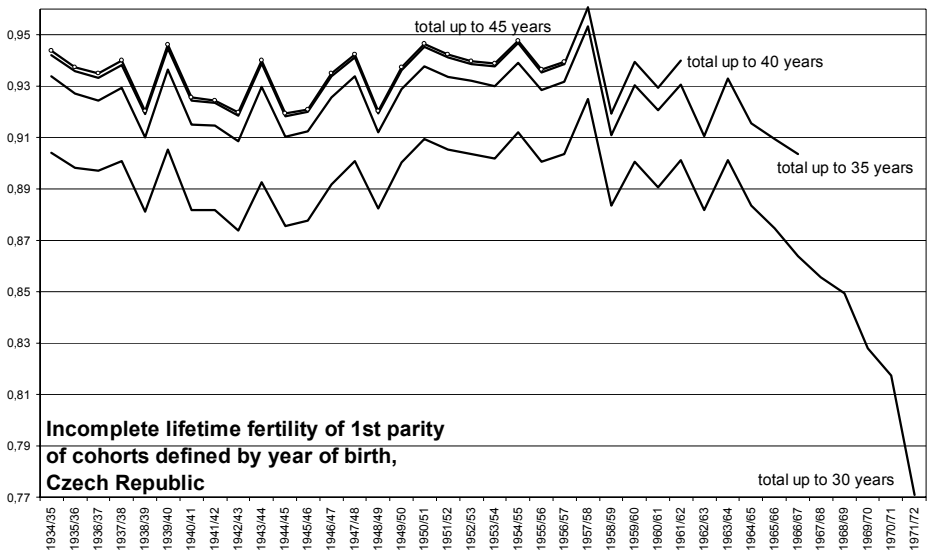
What, then, does the ascertained stabilisation of the first, second and third parity progression ratio mean? What conclusions can we make from the hypothesis that it concerns the reaching of a lower level, which will continue in the future? So far, hardly any. We would need to know also how the fertility of the first parity behaves, because the parity progression ratios are relative measures and their ability to tell us anything depends on the knowledge of this fertility.

The "0 parity" progression ratio is the probability that the woman will have at least one child and we can therefore estimate for her a lifetime fertility of first parity. In this case the cohorts are defined by the period of birth of the woman, which are, then, generations in the usual sense of the

birth of the woman, which are, then, generations in the usual sense of the word. This period could again theoretically be the month, but we are not able to reconstruct such data because for the assessment of lifetime fertility 10, 5 or even 3 years are no longer sufficient for us as they were in the cohorts defined by the month of birth of the first child – for at least slightly relevant data we need at least a period of 15 years (from 15 to 30 years of age of a woman); this is because the fertility career, which we could with a slight lack of precision place in a 10-year period, is begun by each woman at a different age.

The only thing that can be done, then, is to keep to the annual period, which means generations defined by their year of birth. Even this is not quite precise, because data on births is published by the Czech Statistical Office not for generations but for the period of one year, which means that they concern two generations defined by the year of birth. This is why the generations are marked as a two-year period in Figure 5.

Figure 5



It is clear that the lifetime fertility of the first parity generations, which began their fertility career after the war practically, did not change for 30 years. Women who were around the age of 25 years at the beginning of

the 1990s still achieve values over 0.9, whereas the younger generations have clearly changed their procreative behaviour and the last generation included in the graph (today aged 30 years) will clearly achieve a value of only around 0.85. And there is nothing to indicate that this decline should stop quickly. If we are to be optimists we can expect (or rather prophesy), that the drop in the lifetime fertility of first parity will stop at a value of about 0.8.

Now that we have estimates of the main parity progression ratios (we did not devote attention to estimates for the fourth and other parities, but these play only a small role, as their changes influence the second decimal place only), we can estimate the future lifetime fertility. In Table 2 the individual more or less probable variations are expressed in figures.

Table 2. Lifetime fertility of Czech women with various presumptions

Parity progression ratios				Lifetime fertility
a_0	a_1	a_2	a_3, a_4, ...	
0.80	0.75	0.25	0.25	1.60
0.80	0.80	0.25	0.25	1.65
0.85	0.80	0.22	0.24	1.73
0.85	0.80	0.25	0.25	1.76
0.85	0.82	0.25	0.27	1.79
0.75	0.75	0.22	0.25	1.48

If we pass over the last variant, which is at the lower limit of the estimate, but rather beneath it, then we find that the lifetime fertility rate of our women will be somewhere in the range of 1.6 to 1.8, in other words within the limits of the lifetime fertility rate in the present populations of the western half of Europe.

If the lifetime fertility rate of those in their thirties today achieve such values, then the total fertility should rise to these values in the course of around 10 years, it means far more rapidly than anticipated by the majority of the forecasts. And it also means that the diversity scenario, at least in the case of the Czech Republic, will clearly not be fulfilled. This is also indicated by the development of the mortality rate. The life expectancy at birth of Czech men and women today exceeds the values, which were anticipated even by the uniformity scenario.

The preceding analysis concerned only the Czech Republic, so that drawing conclusions from this for the whole of Europe might be deceptive. On the other hand we know from history that the development of demographic behaviour is roughly the same in all populations and differs only in the timing. And because the countries of the central region are not so strikingly different in social and economic conditions (it was said that the Czech Republic at the beginning of the 1990s had advantageous starting conditions, but we have clearly already managed to waste this advantage), it may be presumed that in these countries the development of demographic behaviour will have similar tendencies.

The question remains of how this will be in the east region. The cross-section indicators so far show a very high mortality rate and very low fertility. A few paragraphs back, however, it could be seen how cross-section indicators can be misleading. If, however, the situation in this region really were different, this would mean a new division of Europe – the border would be shifted further to the east and for the most part would correspond to the future border of the European Union. This is not an optimistic prospect and it should be pointed out to those responsible for this world. The diversity scenario might be implemented in a somewhat different form, but for Europe as a whole this would bring only difficulties.

Acknowledgments

I would like to express my thanks to Czech Statistical Office and especially to Mr. Miroslav Šimek for preparing the special and not at all simple reorganisation of primary data.

Reference

NIDI, 1999, Europe: One Continent, Different Worlds: Population Scenarios for the 21st Century. Dordrecht, Boston, London: Kluwer Academic Publishers.

PART II LIVING ARRANGEMENTS AND CHANGING STRUCTURES

Mutual relationships between education and women's entry into a first union: the case of Central and Eastern Europe

Francesco C. Billari and Dimiter Philipov

1. Introduction

The impact of education on women's union formation has for a long time been studied making use of economic and sociological theories of marriage - see above all Becker (1991) and Oppenheimer (1988)[1]. Empirical studies that use micro-level data have repeatedly shown that finishing formal education triggers union formation. On the other hand, mixed evidence has been found on the impact of educational attainment on union formation. For instance, in an earlier paper Hoem (1986) showed that educational enrolment was more important than educational level for Sweden. Blossfeld and Huinink (1991), within a general theoretical framework, showed that the same result was true for Germany (the impact of educational level on the transition rate to first union was not statistically significant).

The inherent problem of endogeneity, *i.e.* the fact that part of the impact of education on union formation can be due to spurious dependence, and that estimation procedures that do not take this into account can thus be biased, has however been addressed less frequently. Surprisingly, endogeneity seems to be of relatively limited interest among demographers and sociologists, while economists and economic demographers are seriously concerned about this issue. In an earlier paper, Boulier and Rosenzweig (1984), within the New Home Economic framework, explicitly pointed to the potential endogenous determinants of schooling and marriage and showed that endogeneity was present using data from the Philippines. In particular, they argued that human capital investments are partially guided by a woman's marriage market potential. Lillard *et al.* (1994) also deal with the potential endogeneity of fertility,

[1] A recent review of the literature can be found in Coppola (2003), Chapter I.

marital and educational experiences (see also Upchurch *et al.,* 2001). Sander (1992) illustrates the endogeneity of education in marital status. In addition, some studies have shown that forming a family while being enrolled in education rises the risks of terminating education or in general of attaining lower educational levels (in particular, see Alexander and Reilly, 1981; Astone and Upchurch, 1994; Henz, 1999).

It is useful, in our view, to assume that educational careers and union formation are interrelated processes, characterised by both mutual influence - that is events in one process trigger events in the other process - and common influencing factors - which are usually not observed especially in retrospective surveys. If we adopt this point of view, it is of crucial importance both to assess the presence of endogeneity and to hypothesise its possible origins. The importance of subjective dimensions (value orientations, norms, and attitudes) may lie at the heart of it, but as discussed in the economics literature, also personal attractiveness and ability may play a role.

Almost all papers dealing with the relationships between education and union formation so far have dealt with either Western countries or developing countries. The literature has so far ignored Central and Eastern European (CEE) countries. These countries formerly constituted the Communist block and they exhibited a surprising stability of aggregate-level behaviour with very low monetary returns to education and with remarkably high labour force participation of women. The need to test general theories can make use of the specific peculiarities of CEE countries, also because of the changes (mostly in returns to education) that have been triggered by the transition.

In this paper, we see the length of education and the timing of first unions as parallel and potentially interdependent processes, potentially affected by time-constant joint factors. We use data from the Family and Fertility Surveys (FFS) carried out during the 1990s. We apply a system of hazard equations with correlated unobserved heterogeneity as outlined *i.e.* by Lillard (1993). Our results indicate that the length of education is in general more important than the level of education for the timing of first union and that entering a union raises the probability of ending education. We frame our findings within current theoretical approaches. The paper is structured as follows. In Section 2 we outline the background of the

study, focusing on theoretical ideas as well as on existing results on the relationships between educational enrolment and attainment and union formation. In Section 3 we discuss the specific situation of Central and Eastern Europe. Section 4 introduces the data we use as well as methods of analysis. Results are presented and discussed in Section 5.

2. Background

In this Section we discuss the impact of the educational career on the timing of first union formation and vice-versa, possible sources of endogeneity, which cause spurious dependence during the estimation of mutual impacts.

2.1 Educational career and first union formation

A classical theoretical approach we refer to is the New Home Economics' pioneered by Becker (1991 and earlier citations therein)[2]. Becker hypothesises that women who have attained higher educational levels are economically more independent of men in a society where a traditional division of labour prevails in the household. The impact of higher education comes through the accumulation of human capital. Higher educated women do not feel the pressure of the economic advantages of marriage and are more likely to postpone marriage than lower educated women. In addition, the opportunity costs of time spent for the family increase with human capital, independently of whether the family is formed through a marriage or a non-marital union.

The new home economics approach emphasises educational attainment. An alternative approach emphasises the importance of educational enrolment, *i.e.* time spent as a student rather than on the achieved level of education. Hoem (1986) finds that in Sweden the length of education is more important for the entry (transition rate) into first union than the level of education. Goldscheider and Waite (1986) show that educational enrolment matters more for women than for men. Blossfeld and Huinink (1991) find the same results in a broader framework based on sequencing life-course norms (Hogan, 1978; Marini, 1984). Blossfeld and Huinink suggest that "…participation in the education system takes time and affects women's ability to marry…When a woman is attending school,

[2] See also the review by Weiss (1997).

university…she is economically highly dependent on her parents. Further, there exist normative expectations in society that young people who attend school are "not at risk" of entering marriage…". Therefore, educational enrolment is not just a crude proxy for human capital. It has a direct effect on the life course in so far as during the period of study people center time and efforts on studying and not on starting family life. Further theoretical arguments together with empirical analyses of the impact of school enrolment on young adults' union formation are presented by Thornton *et al.* (1995), who show that human capital accumulation matters also for the choice of marital versus non-marital first union, and by Liefbroer and Corijn (1998).

Oppenheimer (1988) concentrates on the relationship between timing of marriage and starting first stable occupation. She discusses assortative mating in the light of the job-search theory. The higher the uncertainty in the matching process, the more inclined is a person to postpone marriage until substantive life course events contribute to a decrease in the uncertainty of the future relationship. During a period of educational enrolment uncertainty is large because it is unclear how the individual's human capital can rank on the labour market. Uncertainty in a person's possibilities on the labour market decreases once his/her educational enrolment is completed. A person with a higher educational level is preferred to others with lower levels and therefore is expected to end his/her personal search mating process quicker. Although Oppenheimer's theory has been mostly used to explain men's behaviour, her ideas are also useful when focusing on women.

To sum up, approaches *à la* Becker or Oppenheimer underline significance of the level of education as a determinant of the timing of entry into first unions. The sequencing norm approach theorised by Blossfeld-Huinink finds the end of education more important than the level of education: the longer the education, the more delayed the union.

Lesthaeghe and Moors (1995) provide a different perspective in their study of the living arrangements in several European countries. They emphasise the significance of value orientations in shaping people's lives. Persons with more "modern" value orientations are more likely to postpone marriage and to prefer non-marital unions to marriage. So are persons with higher levels of education, since their value systems are

more modern. In general, we may use the perspective based on value orientations by thinking that part of the observed impact of educational enrolment in postponing union formation is due to dependence from unobserved value orientations. Janssen and Kalmijn (2002) show that individuals who are career-oriented tend to postpone union formation as well, while family-oriented individuals opt for educational careers that are deemed compatible with family life.

If value orientations matter, past estimates by Hoem or by Blossfeld and Huinink of the impact of educational enrolment on the transition to first union may be biased due to dependence on unobserved and heterogeneously distributed value orientations. The same spurious dependence may be observed if the propensity to obey the sequencing norm outlined by Blossfeld and Huinink varies within a population.

2.2 Union formation during educational enrolment and its impact

The theoretical considerations briefly discussed above are not elaborated towards the explanation of the inverse relationship, namely the effect of entry into a union on the level or length of education. Oppenheimer (1988, 583) notes that "… ″premature" commitment to a marriage may require just such dropout [from college] behaviour". The existence of this relationship within the realm of each theoretical approach can rest, for example, on the following consideration. Under conditions of traditional division of labour in the family a woman is expected to end her education after a marriage because she needs to take up with the household work. Where an equal distribution of household labour prevails, both partners will face high opportunity costs for the time spent for household labour. It could then be more effective for the household production unit to reverse to the traditional labour division.

Therefore, a longer education or higher-level education induces postponement of entry into first union and, inversely, early entry into union triggers an earlier end of educational enrolment. This mutual relationship is due to the conflicting roles of full-time student and family carer (especially for women). This conflict is placed in the complex social and economic environment of uncertain expectations about future occupational and family career. Both processes are linked at the macro

level too, in that the highest proportions of educational enrolment and entry into first union are observed at very close ages.

It can be argued that there are other reasons for the existence of mutual relationships. For example, consider a case where a person is experiencing difficulties while studying at a high educational level. His/her abilities could be insufficient for this respective level. In this case, for an individual it is rational to search for a change in the life course based on an expected dropout of school (university). Inversely, the better one is doing with the process of study, the more likely the study will be continued to higher levels and therefore entry into union is more likely to be postponed. Thus, personal ability as a student can be a reason for the interrelationship between timing of end of education and entry into first union.

The latter example illustrates the necessity to consider personal characteristics that may have a significant impact on the decision to sequence the two events of interest here. Oppenheimer (1988, 565) notes "… the high degree of uncertainty about the important attributes that people attempt to match". Uncertainty in the decision-making process of rational actors plays a key role in her theoretical framework. The same is true for the new home economics approach, the latter being based on utility theory.

Beside uncertainty, we face the problem of unobserved and even unobservable individual characteristics. In our example above the two processes linked through "ability" were considered. It is unlikely to expect observations of ability in demographic surveys before the end of education (the level of education could be a proxy for ability but in our context this proxy is of no use). Therefore we have to consider this as a part of unobserved individual heterogeneity.

A substantial part of the literature has been concentrated on adolescent pregnancies and their impact on schooling. For instance, Upchurch and McCarthy (1990) found no effect of first births on the timing to high school dropout and to high school completion, without accounting for the potential endogeneity problem. Their study, as well as some of the following studies, have however focused mostly on adolescent pregnancy. Another stream of research deals with the disruptive impact of marriage

on young women's education in developing countries (Singh and Samara, 1996).

As far as the impact of union formation on education is concerned, seminal studies are the ones by Davis and Bumpass (1976) and Alexander and Reilly (1981) focusing on the consequences of early marriage on educational attainment: in particular early marriage induces dropping out of school. This impact is stronger for women than it is for men. Later studies like the one of Astone and Upchurch (1994) have found that women who form a family while still being enrolled in high school have an elevated risk of leaving school without earning a degree. Lillard *et al.* (1994, see also Upchurch *et al.*, 2001) studied simultaneously, among other events, the impact of union formation on educational careers (not limiting themselves to high school completion) and the impact of educational careers on union formation. They find that "women who became pregnant in their "current" schooling decision were much less likely to go on to the next grade level" (p. 42), and the same finding holds true at the college level.

3. The peculiarities of Central and Eastern European countries

The general theoretical considerations outlined in the previous section refer to societies with functioning market economies. The bulk of the literature also refers to these societies. The theoretical approaches have been discussed much less as far as CEE countries are considered. Indeed, these countries had planned economies till 1989, and the 1990-s witnessed a transition towards market economies. Labour markets and educational systems in these countries were different - in many aspects - from the ones in the Western societies.

Consider first the situation before the start of the societal transition. During the socialist regime education at any level was free and therefore accessible to everyone. Higher education was planned in that the number of students was fixed by the state planning organs. This number was rapidly increasing over time, as a part of the overall tendency of increase in education. The gender distribution of the students was also planned around 50% for each group. Unemployment was considered to be non-existent. Even frictional unemployment was disregarded. It was usual, therefore, that young people were able to find work immediately or soon

after the completion of education. Payment of labour was uniform for diverse categories of labour, although the level of education was an important indicator for the level of payment. Given the lack of possibilities for market initiatives, higher education was therefore an important prerequisite to get a higher income even in pre-transition CEE. The mean age at first marriage for women was lower than 23 years all over the region and did not change for decades (Hajnal, 1965; see also Philipov, 2002) for a detailed descriptive study of demographic changes in the CEE countries). In general, people started their family lives early. Diverse explanations have been argued for this early start and one of them is that uncertainty about the future life was low. The totalitarian regime did not tolerate deviant behaviour thus contributing to the preservation of norms, for example those related to life cycle events. Traditional division of labour in the family gave way only very slowly to the uniform distribution.

During the transition period the situation changed considerably. The labour market widened and developed quickly. Unemployment rose to unprecedented levels. Paid education emerged and planned education collapsed. New universities and other high schools came into being. Uniformity in the payment of labour disappeared, impoverishment and enrichment rose. Entry into marriage was postponed for later years in life and marriage gave way to non-marital unions. All these changes are represented by tendencies whose development is continuing. It is clear today that the transition process is taking longer than it was previously expected. Sowa (1999) discusses the transition of the educational system and indicates that it needs more time than the economy itself, although for many countries the accession to the European Union will unavoidably imply a quicker convergence to the West for instance as far as educational institutions are concerned.

Let us now consider the above description from the point of view of the theoretical approaches discussed in Section 2, focusing on the socialist period.

The right of labour and the access to higher educational level contributed to an increase in female autonomy as well as to rising opportunity costs of time spent for family occupations (although child-care provision varied across CEE countries). Hence, according to the new home economics, the

union formation of highly educated women should be (at least) postponed. At the macro-level, one would expect that the rising share of people achieving higher education would imply a postponement in the mean age at first marriage or first entry into a union. Macro-level demographic data do not support the rise of such trends.

A young adult living in a socialist state before 1989 had less uncertainty about the future life course as compared to a young adult living in the West. For example, the process of search on the labour market was "facilitated" by the lack of unemployment and the uniformity of labour earnings. Therefore, an individual could construct plausible expectations for an approximate level of earnings and for work in general. Hence the theory of timing of marriage suggested by Oppenheimer becomes less relevant because of the lower uncertainty. If asymmetric causality holds, lower level of uncertainty would imply earlier entry into marriage and perhaps inversion of life events, such as the completion of education and entry into a union. It remains unclear though whether this logical inversion of the theoretical framework is itself theoretically justifiable.

Let us now consider the impact of the length of education, rather than the level of education. Preservation of social norms should make one expect that this approach would be well applicable. The low level of uncertainty facilitates earlier entry into a union, and this is in parallel with traditional norms observed to the east of Hajnal's line (Hajnal, 1961).

Thus while the theoretical approaches discussed above seem applicable, none seems explicitly preferable when referring to CEE countries.

Finally, let us consider the impact of ability on education. As stated above its measurement by the level of achieved education is too crude and anyway not useful in our context. In CEE countries this measurement is even cruder. In general, costs of education were low, for example due to stipends and diverse social benefits guaranteed to students. The attractiveness of education therefore stimulated people to take the chance to complete a higher level without incurring large costs. Therefore, it could be expected that dropouts due to the economic reasons were secondary with respect to dropouts due to the abilities.

The interpretation of theoretical approaches during the transition period could be a mixture of those referring to a socialist market and a free market economy. The precise character of this mixture requires an in-depth research that is outside the scope of this report. It is necessary to note that the effect of the transition is well outlined among younger cohorts whose behaviour is significantly different from that of older cohorts.

The theoretical approaches are relevant to the study of life course events such as ending and completion of education and entry into first union and generally family formation if the CEE societies are considered. They do not provide a straightforward answer as to the ordering of the events: should ending or completion of education precede first entry into a union or the dependence would be only a weak one. This calls for a specific modelling approach discussed in the next section.

4. Data and methods

4.1 Data: Family and Fertility Surveys

We use the data from the series of Family and Fertility Surveys (FFS) that was carried out mainly in the 1990s in the co-operation with the Population Activities Unit of the Economic Commission for Europe of the United Nations. In particular, we use the data of the so-called "standard recode files", that were available to us at the time of preparation of this paper, and we focus on Central and Eastern European countries (CEE). The surveys asked for timing of life course events and they allow to build event histories for education and union. We use the data for Poland, Hungary, the Czech Republic, Lithuania, Latvia, Estonia and Slovenia. In Table 1 we report the timing of FFS surveys in the countries we analyse.

Table 1. Dates of the FFS surveys in Central and Eastern Europe

	Date of the survey
Czech Republic	1997
Hungary	1993 (men), 1992-93 (women)
Latvia	1995
Lithuania	1994-95
Poland	1991
Slovenia	1994-95

4.2 Methods: estimation of a simultaneous hazard model

We focus on what is known in the literature as parallel and potentially interdependent trajectories in the life courses. There has been a considerable debate in the related literature as to whether one needs to address such trajectories simultaneously (sometimes this has been referred to as the "system" approach) or whether it is enough to model the processes separately by adequately conditioning on relevant aspects of the past history of each trajectory (Blossfeld and Rohwer, 1995 and later). In this paper we follow the approach outlined by Lillard (1993) and we model the two trajectories as potentially affected by correlated unobserved heterogeneity. This heterogeneity may incorporate the effect of ability or of values and norms that remain unchanged during the part of the life course considered here, *i.e.* till the end of education and entry into first union, whichever comes later. Values and norms do not remain unchanged during this period of time. The FFS data contain information on values at the time of survey and not at the time when the events took place. This information is insufficient and cannot be used, hence we are not able to assess the impact of value orientations. We therefore model the time to the end of education and the time to the first union using a system of hazard equations.

$$\log h_U(t) = \alpha'_0 + A_U(t) + [\alpha'_1 E_L(t) + \alpha'_2 E_E(t)] + \alpha'_3 Tr(t) + \varepsilon$$

(1)

$$\log h_E(t) = \beta'_0 + A_E(t) + [\beta'_1 U(t)] + \beta'_2 Tr(t) + \beta'_3 C_T(t) + \eta$$

where:
- $h_U(t)$ and $h_E(t)$ denote correspondingly the hazard of the duration till the entry into first union (starting at the age of 15) and the hazard of the duration to the end of education (starting at age 10);
- $A_U(t)$ and $A_E(t)$ denote age, variables represented by a linear spline with knots every two years and starting at the age of 15 for the union and at the age of 10 for the end of education;
- Tr(t) is a dummy variable denoting the time at transition for our data (the year 1989);
- $C_T(t)$ is a variable denoting cohort. We distinguish three cohorts: born before 1960, born between 1960 and 1969 and born after 1969. The first one is the base.

- $E_L(t)$, $E_E(t)$ and $U(t)$ are time-varying covariates denoting level of education, end of education and first-union formation. Three levels of education are considered, namely unfinished secondary, secondary, and higher than secondary. (By secondary education it is meant the one that requires about 10-12 years in school). First unions refer to either marriage or non-marital cohabitation. In the CEE countries cohabitation was rare until the beginning of the 1990s. The level of education is introduced to the model using dummy variables that consider the impact of the second level with respect to the first, and of the third level with respect to the second.
- ε and η are normally distributed unobserved characteristics of the individuals with variance equal to one and correlation ρ (which has to be estimated). We fix the variance to one because events are not repeatable, and the variance of the unobserved heterogeneity component cannot be identified[3]:

$$\begin{pmatrix} \varepsilon \\ \eta \end{pmatrix} = N\left(\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 1 & \rho \\ \rho & 1 \end{pmatrix}\right)$$

The model is estimated by full maximum likelihood, using the aML package (Lillard and Panis, 2000).

5. Results and discussion

Table 2 gives the results of the models we estimated (coefficients regarding age are omitted to concentrate our attention on the parameters of main interest). Let us first focus on the equation concerning first union formation. There are some differences in the country effects, but the direction is similar across all CEE countries. The effect of educational enrolment is statistically significant for all countries (with parameter estimates ranging from 1.02 in Estonia to 1.56 in Lithuania). In terms of (proportional) hazards, that amounts to a level after the end of education that is from almost three to more than four times the level before the end of education. When we consider the impact of the level of education, the difference between university and high school level (level 3 vs. level 2) is

[3] We have carried out sensitivity analyses on this assumption in other studies (Baizan *et al.,* 2003).

not statistically significant in most of the countries (with the exception of Latvia and Lithuania). The difference between the high school level and lower levels (level 2 vs. level 1) is however significant in all countries, with the sole exception of Estonia (where, in fact, the level of education seems to play no role at all).

Table 2. Results of simultaneous hazard models, women.

	Poland	**Lithuania**	**Latvia**	**Estonia**	**Hungary**	**Czech R.**	**Slovenia**
	1991	**1994/5**	**1995**	**1994**	**1992/3**	**1997**	**1994/5**
Transition rate to first union							
Educational level							
Level 2 vs. level 1	**-0.50**	**-0.23**	**-0.21**	0.05	**-0.33**	**-0.32**	**-0.21**
Level 3 vs. level 2	0.01	**-0.66**	**-0.34**	-0.30	-0.04	-0.36	-0.02
Educational enrolment							
No longer enrolled	**1.51**	**1.56**	**1.27**	**1.02**	**1.49**	**1.38**	**1.12**
Period indicator							
After the transition	0.01	**0.29**	**0.17**	**0.21**	**-0.31**	-0.02	**-0.20**
Transition rate to the end of education							
Union status							
In union	**0.16**	**0.58**	**0.31**	**0.36**	**-0.23**	**0.45**	-0.07
Period indicator							
After the transition	**0.58**	**0.43**	**0.38**	**0.38**	**0.62**	-0.07	0.15
Cohort indicator (re: Older cohort)							
Middle cohort	**-0.30**	0.11	**0.25**	**0.18**	0.03	-0.03	**-0.20**
Younger cohort	**-0.85**	0.17	**0.32**	**0.35**	**-0.24**	**0.43**	**-0.77**
ρ	**-0.16**	**-0.45**	**-0.19**	**-0.22**	**-0.24**	**-0.24**	0.08

Note: in the models, age dependence is controlled for using piecewise-Gompertz splines. Boldface indicates p-values lower than 0.05.

The delay in the formation of first unions after the fall of Communism is significant in Hungary and Slovenia only, while Baltic republics (Estonia, Latvia and Lithuania) exhibit on the contrary a quicker transition to first union. Given the short time span after the transition in our data, we did not get significant results on the different impact of educational careers after the transition.

To sum up on the transition to first union, the results we obtain show that, even after controlling for endogeneity, both the completion and the level of education have a statistically significant impact on the rate of entry into

first union in all countries. This impact is as expected from our theoretical framework, both when thinking about sequencing norms (for education enrolment) and – only partially which seems justified given the CEE context – human capital theory (for education level).

Let us now consider the equation concerning the end of education. Entering a union triggers the end of education, as has already been observed for the U.S., with the exception of Hungary (where the impact is surprisingly the opposite) and Slovenia. The competing nature of the two roles is confirmed also when dealing with education as dependent process. For many countries (exceptions are the Czech Republic and Slovenia), the first years after the fall of communism implied a quicker exit from the educational system. Cohort trends are also very heterogeneous, showing that only in Hungary, Poland and Slovenia the permanence of women in education has increased over cohorts.

The negative correlation between unobserved factors affecting both processes is consistently found in every country, and it is consistent with the findings of Lillard *et al.* (1994) and Upchurch *et al.* (2001) on U.S. data. This might reflect the importance of ability in both searching for a partner and attaining higher education. Further analyses, however, are needed to investigate on this issue.

In this paper we studied the interrelationship between educational enrolment and entry into first union (marital or non-marital) for women residing in countries in Central and Eastern Europe, mostly focusing on the pre-transition period. For this purpose, we used a system of two hazard equations that jointly consider the processes of interest. In addition we included the effect of unobserved heterogeneity. Our results indicate that the entry into first unions is much more linked to end of education than to the achieved level of education. Unobserved characteristics of the individuals are inversely correlated between the two equations.

Acknowledgements

Past versions of this paper have been presented at the 2002 Annual Meeting of the Population Association of America, Atlanta, Georgia and at the Workshop on Union Formation in Interdependent Life Courses at the Max Planck Institute for Demographic Research, Rostock. The

authors wish to thank all participants for comments and the Advisory Group of the FFS programme of comparative research for its permission, granted under identification number 75, to use the FFS data on which this study is based. This paper has been written almost completely while the two authors were both affiliated with the Max Planck Institute for Demographic Research (Billari as Head of the Independent Research Group on the Demography of Early Adulthood and Philipov as Senior Research Scientist in the Laboratory for the Analysis of Demographic Data). Of course, views expressed in this paper are attributable to the authors and do not necessarily reflect those of the institutions they belong to and the Max Planck Institute for Demographic Research.

References

Alexander K.L. and T.W. Reilly, 1981, "Estimating the Effects of Marriage Timing on Educational Attainment: Some Procedural Issues and Substantive Clarifications", *American Journal of Sociology* 87, 143-156.

Astone N.M. and D. M. Upchurch, 1994, "Forming a family, leaving school early, and earning a GED - A racial and cohort comparison", *Journal of Marriage and the Family* 56, 759-771.

Baizán P., A. Aassve and F. C. Billari, 2003, "Cohabitation, marriage and first birth: the interrelationship of family formation events in Spain", *European Journal of Population* 2.

Becker G.S, 1991, *A Treatise on the Family. Enlarged Edition*. Cambridge, MA: Harvard University Press.

Blossfeld H.P. and G. Rohwer, 1995, *Techniques of Event History Modeling*, Mahwah, NJ: Lawrence Erlbaum Associates.

Blossfeld H.P. and J. Huinink, 1991, "Human capital investments or norms of role transition? How women's schooling and career affect the process of family formation", *American Journal of Sociology* 97, 143-168.

Boulier B.L. and M.R. Rosenzweig, 1984, "Schooling, Search and Spouse Selection: Testing Economic Theories of Marriage and Household Behavior", *Journal of Political Economy* 92, 712-732.

Coppola L., 2003, *Education, Employment and Union Formation as Endogenous Processes in Italy and Spain*. Unpublished Ph. D. Dissertation, Rome: Department of Demographic Sciences, University of Rome "La Sapienza".

Davis J.N. and L.L. Bumpass, 1976, "The Continuation of Education after Marriage among Women in the United States: 1970", *Demography* 13, 161-174

Goldscheider F.K. and L.J. Waite, 1986, "Sex differences in the entry into marriage", *American Journal of Sociology* 92, 91-109.

Hajnal J., 1965, European Marriage Patterns on Perspective, in: J. Hajnal, D. V. Glass and D. E. C. Eversley (eds.), *Population in History: Essays in Historical Demography*, 101-143.

Henz U., 1999, "The Impact of Family Formation on Higher Education in Sweden", Stockholm Research Reports in Demography 135, Stockholm University.

Hoem J.M., 1986, "The impact of education on modern family-union initiation", *European Journal of Population* 2, 113-133.

Hogan D. P., 1978, "The variable order of events in the life course", *American Sociological Review* 43, 573-86.

Jansen M. and M. Kalmijn, 2002, Investment in Family Life: the Impact of Value Orientations on Patterns of Consumption, Production and Reproduction in Married and Cohabiting Couples, in: R. Lesthaeghe (ed.), *Meaning and Choice: Value orientations and Lifecourse Decisions*, Den Haag: NIDI CBGS Publications, 129-169.

Lesthaeghe R. and G. Moors, 1995, Living Arrangements and Parenthood: Do Values Matter?, in: R. de Moor (ed.), *Values in Western Societies*, Tilburg: Tilburg University Press.

Liefbroer A.C. and M. Corijn, 1998, "Who, What, Where, and When? Specifying the Impact of Educational Attainment and Labour Force Participation on Family Formation", *European Journal of Population* 15, 45-75.

Lillard L.A., 1993, "Simultaneous equations for hazards: Marriage duration and fertility timing", *Journal of Econometrics* 56, 189-217.

Lillard L.A. and C.W.A. Panis, 2000, *aML Multilevel Multiprocess Statistical Software, Release 1.0*, Los Angeles, California: EconWare.

Lillard L.A., C.W.A. Panis and D. M. Upchurch, 1994, Interdependencies over the Life Course: Women's Fertility, Marital, and Educational Experiences. RAND Labor and Population Program, Working Paper Series 94-17, Santa Monica, CA.

Marini M.M., 1984, "Age and sequencing norms in the transition to adulthood", *Social Forces* 63, 229-244.

Oppenheimer V.K., 1988, "A theory of marriage timing", *American Journal of Sociology* 94, 563-591.

Philipov D., 2002, *Demographic consequences of the transition in countries of Central and Eastern Europe*, Unpublished Manuscript.

Sander W., 1992, "Unobserved variables and marital status", *Journal of Population Economics* 5, 217-228.

Singh S. and R. Samara, 1996, "Early marriage among women in developing countries", *International Family Planning Perspectives* 22, 148-157 & 175.

Sowa K., 1999, "Higher education institutions in the process of social transformation (The Case of Poland)", *European Education* 31, 63-71.

Thornton A., W.G. Axinn and J. D. Teachman, 1995, "The influence of school enrolment and accumulation on cohabitation and marriage in early adulthood", *American Sociological Review* 60, 762-774.

Upchurch D.M. and J. McCarthy, 1990, "The timing of a first birth and high school completion", *American Sociological Review* 55, 224-234.

Upchurch D.M., L.A. Lillard and C.W.A. Panis, 2001, The Impact of Non marital Childbearing on Subsequent Marital Formation and Dissolution, in: L. Wu and B. Wolfe (eds.), *Out of Wedlock: Causes and Consequences of Non-marital Fertility*, New York: Russell Sage Foundation, 344-380.

Weiss Y., 1997, Transformation and Dissolution of Families: Why Marry? Who Marries Whom? and What Happens upon Divorce, in: *Handbook of Population and Family Economics* 1a, 81-120

Gendering family formation. First marriage and first birth in Hungary and Poland

Livia Sz. Oláh and Ewa Frątczak

1. Background

With the growing prevalence of the dual-earner family model and women's increasing economic independence in industrialised societies, couple's relationships have been placed on new grounds as compared to the male-breadwinner context of the past. The more equal share of the economic provision of the family between women and men has, however, not been accompanied by their more equal share of domestic responsibilities, except perhaps for Scandinavia. How women and men cope with these conditions in their decisions and behaviour to enter a partnership and have children is an issue of primary importance to enhance our understanding of the new trends of family formation in Europe.

In this paper we study first marriage formation and first birth in first marriage in Hungary and Poland from the mid-1960s to the early 1990s by focusing on the complex relationship between public policies, labour market and family behaviour, influencing and influenced by changes in gender relations. We focus on first marriage given the pattern of early and almost universal marriage as a distinct feature of the Central-Eastern European demographic regime. Non-marital cohabitation as first partnership has remained rare in Poland, but less so in Hungary, at least since the mid-1980s. The age of brides in their first marriage has varied around 21-22 years and that of bridegrooms around 24-25 years in Hungary up to the mid-1990s (Csernák, 1996), whereas in Poland the mean age at first marriage has been around 23 years for women and 26 years for men (Holzer and Kowalska, 1997). The age of sexual début was below that of marriage, while out-of-wedlock childbearing was not socially approved in either society until the late 1980s. Contraceptive practices of young unmarried couples have been, however, quite different in the two countries. In Poland, contraceptive use before the first birth has been less prevalent than in Hungary. Young couples mostly relied on traditional methods like periodic abstinence and *coitus interruptus*, while the pill and other modern contraceptives were frequently used by Hungarian youths. (See also Table 1 and 3 in the Appendix.) Abortion has been less sensitive topic in

Hungary since the late 1950s and it has been a socially accepted, even though not approved, option of family size limitation, but less so in Poland even before its severe limitation in the early 1990s (Kuciarska-Ciesielska, 1993; Kamarás, 1999). Women had their first child in their early- to mid-twenties in both countries, while men became fathers in their mid- to late-twenties. Permanent childlessness has remained at a low level in both countries, but the total fertility rate of Poland has greatly exceeded that of Hungary and below-replacement fertility has been experienced there only since the late 1980s. The two-child family has been the most common in Hungary, but in Poland the proportion of families with three children has nearly equalled those with two children.

In the state-socialist period (*i.e.* before 1990) gender equality defined as equal labour-force participation of women and men has been an important principle of public policy making in Central-Eastern Europe. As a consequence of the generally low level of wages and limited opportunities for part-time work, the full-time working dual-earner family model was already established in the region in the 1950s and1960s, while domestic tasks (including childrearing) remained women's domain. The proportion of women who chose to become full-time housewives after marriage or birth was rather small and social benefits (even family allowance and access to public childcare) were linked to labour-force attachment. Family formation was constrained by a severe housing shortage in both Hungary and Poland and newly-weds often had to wait several years before having a dwelling of their own,[1] in the meantime living with the parents of the husband or the wife (Ratajczak, 1993; Kamarás, 1999).

Public policies regarding care for children have primarily been addressed to mothers, but policy-makers followed different strategies in the two countries, except for the first few months after birth when fully paid maternity leave has been provided. In Hungary, mothers had the right to a

[1] There have been substantial differences regarding homeownership in urban areas between these countries. In Poland, the majority of dwellings was owned and rented out by municipalities and by state enterprises (in the latter case they rented out to their employees), and only a small proportion was privately owned. In Hungary, quasi-market solutions in housing provision such as housing co-operatives (where a dwelling, or the right to live there, was bought by individuals or families) have played an increasingly important role since the late 1960s besides rented municipal housing. In the countryside, private housing dominated.

leave of absence from employment up to the third birthday of the child from the late 1960s. Job-guarantee and a flat-rate benefit were attached to this leave. In 1982 even fathers became eligible, but only after the first birthday of the child. In 1985 another child-care leave program was introduced covered by an income-related benefit of 75% of previous earnings. The benefit was provided until the first birthday of a child. The eligibility period has been extended by half a year in 1986, when fathers also became eligible, and to the child's second birthday in 1987 (Klinger, 1991). Subsidised public childcare, run by municipalities and large companies, has been provided mainly for children aged three years and above (Adamik, 1991). In Poland, public childcare provision including children below the age of three was an important policy issue, while the state support for the home care of young children was considered to be essential and remained relatively limited. After the end of the maternity leave, employed mothers could take an unpaid child-care leave with the job guarantee up to the first birthday of a child up to 1972, thereafter to the third birthday of a child. In 1981, mothers on child-care leave became eligible to a flat-rate benefit and later on also fathers became eligible (Holzer, 1991). The proportion of fathers taking child-care leave was extremely low in both countries and not only because of men's usually higher earnings, which would contribute to the increase of the economic loss for a family as compared to the mother using the leave. Thus, despite high female employment rates for several decades and a relatively high level of gender equality in the public sphere, family-level gender relations have remained rather traditional and even reinforced by public policies in Hungary and Poland, similarly to other Central-Eastern European countries.

2. Theoretical model

In our analysis we rely on a theoretical framework based on a combination of economic and ideational perspectives suggesting that gender relations affect family behaviour, as follows.

As argued in New-Home Economics focusing on the American and Western European context, women's increasing economic independence, which is a consequence of women's increasing educational attainment and labour-force participation, has reduced the gain from marriage based on the interdependence of the traditional gender division of labour in the family (Becker, 1981). Female labour-force participation is seen also as

the reason for declining fertility in this model since it increases the relative cost of children (via women's foregone earnings in the period they stay at home or work reduced hours in order to take care of children).

In contrast to this economic reasoning emphasising the negative impact of overlapping gender roles on family behaviour, feminist scholars have shown that women's employment can actually increase, rather than reduce the benefits both for a family unit and for its individual members. The family becomes less vulnerable even if one member of a couple would be unable to provide his/her particular contribution. Oppenheimer (1994) has pointed out that women's economic independence can even encourage earlier marriage since it would take longer time for young men as single earners to be able to support a family, especially when their labour-market situation is less advantageous and career opportunities are scarcer than in the past. Also, both men and women being economically active have opportunities to meet a great number of individuals with similar interests and the extended social networks can reduce the time it takes to locate a compatible marriage partner. Bernhardt (1993) and Joshi (1998) have discussed the eventually positive effect of flexible gender roles on fertility. They have also emphasised the role of public policies in facilitating the combination of employment and parenthood for both women and men, reducing the opportunity cost of childbearing. Thus, the dual-earner family model, which has been dominant in Hungary and Poland for several decades, is not necessarily accompanied by reduced propensity of family formation either for marriage or childbearing, economic theories notwithstanding.

From another angle, but also implicitly pointing to the importance of gender relations, ideational changes, such as growing individualism and other value shifts, have been stressed as contributing to the emergence of new family patterns (Lesthaeghe, 1983). Marriage has lost its primacy among partnerships and childbearing has become more optional and less of an imperative for individuals' lives as modern and more efficient contraceptives have facilitated detachment of their sexual behaviours from marriage (van de Kaa, 1994). Nevertheless, marriage has remained the main context of childbearing even in societies where non-marital cohabitation widespread and extramarital fertility is high. This makes marriage formation and childbearing in marriage still highly relevant.

Our main hypotheses for this analysis are the following: (i) Women's increased economic independence does not necessarily reduce the propensity to marry or to have the first child if public policies facilitate the combination of employment and family responsibilities. (ii) Because of changes in gender relations at both the societal level and within the family individual values and attitudes are likely to become increasingly influential for family decisions and behaviour.

3. Data and method

Our empirical analysis is based on data extracted from the Hungarian Family and Fertility Survey of 1992/93, conducted by Statistics Hungary, and from the Polish Family and Fertility Survey of 1991, conducted by the Institute of Statistics and Demography, Warsaw School of Economics (SGH) and the Central Statistical Office, Poland. Both surveys are a part of the European Family and Fertility Surveys Program, organised by the Population Activities Unit of the United Nations Economic Commissions for Europe, which facilitates data comparability. The surveys contain among others complete union, education and work histories of 5487 individuals for Hungary and 8544 individuals for Poland. Also childbearing histories have been recorded, except for Polish men. Both women and men were interviewed in both countries. 87% of the women and 77% of the men of the original target sample were interviewed successfully in Hungary, whereas response rate was above 90% in Poland.

The Hungarian sample was nationally representative for the female population at the age of 18-41 years and the male population at the age of 20-44 years. The sample was selected partly through one-stage proportional sampling for the capital and the largest cities and partly through two-stage stratified sampling for the rest of the country. In the first stage for the latter, sampling areas were stratified according to the number of inhabitants and municipalities were randomly selected from each stratum. The final sample was drawn at random, given sex and age constraints, using the National Population Register as the sampling frame for each stratum. Women and men were independently selected (Kamarás, 1999).

The Polish sample consisted of 4313 households and 8544 individuals living in selected dwelling units. The sample was selected in two stages. First, representative districts were selected, then dwelling units in these districts

were drawn (Frątczak *et al.,* 1996; Holzer and Kowalska, 1997). Two separate instruments were used in the survey: a household questionnaire, which supplied information on the family structure and household characteristics, and individual questionnaires covering all members of a household aged 18-49. If one person of a couple was older than 49 years, he/she was interviewed, too.

The analysis is based on a piecewise-constant proportional hazards model. Exposure is measured in months, starting at the age of 17 of the respondent in the first step and continuing until entering first marriage or until censoring at the start of a non-marital union at the age of 35 or at the interview, whichever event comes first. We have partitioned this range into the following intervals: 17-18, 19-20, 21, 22, 23, 24, 25, 26, 27-29, and 30 years and older. We proceed as if the intention to enter first marriage were constant over each of these pre-selected time intervals, but let it vary between intervals. Respondents with incomplete union records, those entering a co-residential union in the same month or before they become 17 years old, as well as those born before 1950[2] were excluded. A total of 5161 individuals (3334 women and 1827 men) were included in the Hungarian working sample and 6414 individuals (3226 women and 3188 men) in the Polish one. About 70% of women in both countries, 54% of the Hungarian male sample and 62% of the Polish male sample entered first marriage during the period of observation.

In the second step of the analysis we focused on women only, as data on fertility were not available for the Polish male sample. Thus, women who entered first marriage after their 17th birthday but before the age of 35, whose spouse had no children from a previous partnership and who themselves had no pre-marital birth were selected for the analysis. We started the observation at the time the respondent entered first marriage and continued until the first child was born or until censoring at nine month after the dissolution of first marriage or after the death of the first spouse, at 15 years in the marriage or at the interview, whichever event comes first. The period of observation has been divided into the following intervals: 1-7, 8-18, 19-24, 25-36, 37-48, 49-60, 61-120 and 121-180 months. Our

[2] We wished to make the two national samples as comparable as possible. Since about one quarter of the Polish sample was born before 1950, but only 2% of the Hungarian sample, these respondents have been excluded from the analysis for both countries.

working sample included 2413 respondents for Hungary and 2311 respondents for Poland. In both countries nearly 90% had their first child during the period of observation.

Our computations are based on exposures in half-month units. We proceed as if the interview and all recorded demographic and other events happened in the middle of a calendar month, while changes in period variables occur at the beginning of a calendar month. The Windows-based software "RocaNova", developed at Statistics Sweden, is used to fit the model. The results, produced as maximum-likelihood estimates of the effect parameters of the model, are presented in the form of relative risk. For each country, the samples are analysed separately. In the analysis on first marriage, the female and male samples are also analysed separately in order to detect possible gender differences in the effects of women's and men's characteristics at first marriage formation.

4. Variables

Our main variables of interest are educational attainment, employment status and calendar period, all time-varying covariates. The period variable is defined in consideration of changes in housing availability in the analysis of first marriage and changes in the parental-leave program in the analysis of first birth (see Section 1, as well as Table 2 and 4 in the Appendix). In addition, we include in the model some attitude variables, such as respondent's opinion about marriage and non-marital birth in the analysis on first marriage, and opinion on abortion in the analysis on first birth. These are fixed factors, measured at the interview and may therefore be somewhat problematic in the case that the respondents adjusted their attitudes to their previous behaviour in a kind of "post-hoc rationalisation". Thus we shall be cautious in our interpretation of the results.

We expect both educational attainment and labour-force attachment to greatly affect women's and men's family behaviour. The first marriage rate is likely to increase at higher educational level for men given their higher earnings capacity (Goldscheider and Waite, 1986; Huinink, 1995), but we are uncertain about the impact of education on women. Previous research has shown that highly educated women have a higher propensity to marry than other women in Scandinavia (Blom, 1994; Bracher and Santow, 1998) and the US (Oppenheimer *et al.,* 1995), but the opposite

was true for Italy (Pinelli and De Rose, 1995), which is a more traditional society, especially regarding gender relations. Higher education has been also found to be associated with lower first-birth rates among women, even though this effect has diminished in the 1980s and 1990s (Rindfuss and St. John, 1983; Etzler, 1987; Kravdal, 1994; Rindfuss *et al.,* 1996). While women's employment can reduce first-birth intensity in certain contexts (Castro Martín, 1992; Wu and MacNeill, 2002), we do not expect this to be true for Hungary and Poland given the long history of the dual-earner model in these countries, accompanied by policy measures that facilitate the combination of employment and family responsibilities for women. Men's family responsibilities have been restricted to being a good provider, thereby reinforcing their labour-market role. Attending school is expected to reduce the intensity of both first marriage and first birth in the line with earlier findings (Goldscheider and Waite, 1986; Blossfeld and Jaenichen 1992; Blom, 1994; Santow and Bracher, 1994, 2001; Bracher and Santow, 1998).

Public policies can also influence family behaviour. The propensity to marry is probably lower in times of serious scarcity in adequate housing than otherwise (Sardon, 1993), while changes in the parental leave program can affect childbearing plans and behaviour (Hoem, 1993). Also the importance of individual attitudes may have increased over time, as alternative family forms have become more and more prevalent. Thus young adults with more traditional attitudes will be more likely to enter marriage as a first co-residential union and have a higher first-birth intensity than those with more liberal attitudes.

Age at first sexual intercourse and birth control practices can also affect marriage behaviour and childbearing. Those who had an early sexual début and who did not use any contraceptives then probably have higher-marriage intensity than other individuals, as unplanned pregnancy and subsequent marriage are likely to be more frequent in this group. They are also expected to have a higher first-birth intensity than others. As such information is not frequently available when analysing family behaviour, and especially little is known on their effects in the Central-Eastern European context, including them in the analytical model can provide us with important insights regarding the mechanisms of family formation in the region. In the analysis of first marriage we also use the information on premarital pregnancy and premarital birth, except for the Polish male

sample where questions on fertility were not asked. In line with earlier research we expect to find increased marriage intensity at pregnancy and decreased marriage intensity at birth.

We use a step-by-step approach for the model fitting. First we include only individual characteristics such as cohort, religiosity, childhood family background and number of siblings. Then we add to the model factors on sexual behaviour (*i.e.* age at first sex and birth control at first sex; plus premarital pregnancy and premarital birth in first marriage analysis). Such step-by-step introduction of factors into the model reflects the sequence in which they appear in the respondents' life. This, in turn, determines their causal proximity to the current life situation of the respondents. This procedure also allows us to exclude those factors that do not have a significant direct impact on first marriage formation and first birth, respectively. In the last step only the important control variables are kept in the model, when we add our main explanatory variables.

In the following we present our final models for both countries.

5. Findings and discussion

5.1. Fist marriage

Hungary

As we see in Table 1A, the own birth cohort variable is an important determinant of first-marriage intensity for both women and men in Hungary. The intensity of entering first marriage as one's first co-residential relationship decreases over cohorts, possibly due to growing acceptance of alternative family forms such as non-marital cohabitation. Interestingly, the number of siblings matters very little for women's marriage behaviour. In contrast, men with at least three siblings have more than 20% higher intensity in entering first marriage than other men, probably because they are more family-oriented.

Table 1A. Relative risks of entering first marriage for Hungarian women and men. Final model

	women	**men**
Cohort:	*(p = 0.062)*	*(p = 0.001)*
1950 - 1954	1	1
1955 - 1964	1.04	0.80***
1965 - 1969	0.91	0.62***
1970 - 1974	0.76**	0.42***
Number of siblings:	*(p = 0.906)*	*(p = 0.010)*
none	0.97	0.88
one or two	1	1
three or more	1.00	1.24**
Age and birthcontrol at first sex:	*(p = 0.000)*	*(p = 0.000)*
< 18 years (no distinction by birth control)	1.32***	1.17
18 years, used birth control	0.84**	0.96
18 years, no birth control	1	1
20-21 years (no distinction by birth control)	0.57***	0.81
22 + years (no distinction by birth control)	0.30	0.55***
same age as first union entry	2.19	2.91***
no information	0.24***	0.74**
Premarital pregnancy:	*(p = 0.000)*	*(p = 0.000)*
no	1	1
yes	2.07***	2.01***
Premarital birth:	*(p = 0.000)*	*(p = 0.082)*
no	1	1
yes	0.30***	0.68*
Current educational attainment:	*(p = 0.000)*	*(p = 0.003)*
primary school	1	1
lower-secondary education	1.14***	1.30***
upper-secondary education	0.97	1.21*
tertiary education	1.65***	1.71***
Current employment status:	*(p = 0.000)*	*(p = 0.000)*
full-time employed (including irregular time employment)	1	1
part-time employed (including long part time and short part time)	0.80**	1.39
student	0.34***	0.49***
other non-employed	0.93	0.67**

Table 1A. Relative risks of entering first marriage for Hungarian women and men. Final model, continued

Variables	women	men
Attitude to marriage:	*(p = 0.001)*	*(p = 0.000)*
marriage is important	1	1
marriage is not important	0.81***	0.51***
other	0.80**	0.61***
Attitude to non-marital birth:	*(p = 0.887)*	*(p = 0.946)*
opposing	1	1
supportive	1.00	1.03
other	1.04	1.00
Current calendar period (housing availability)[#]:	*(p = 0.773)*	*(p = 0.006)*
slowly decreasing scarcity	0.93	0.39***
great increase in newly-built dwellings	1	1
decreasing availability of new dwellings	0.97	0.96
Age of respondent (time variable):	*(p = 0.000)*	*(p = 0.000)*
17 - 18 years	0.44***	0.09***
19 - 20 years	0.80**	0.38***
21 years	0.97	0.73***
22 years	1.08	0.84
23 years	1	1
24 - 25 years	0.84	1.19
26 years	0.60***	1.25
27 - 29 years	0.55***	0.75**
30 - 34 years	0.47***	0.46***
	[11.554]	**[6.644]**
Log likelihood	**-12985.0**	**-6132.8**
no. of independent parameters	**34**	**34**
Null model log likelihood:	**-13844.1**	**-6627.5**

*** significant at the 1%-level, ** at 5%, * at 10%.

Note: For each variable, risks and their significance are given relative to the reference level, indicated by 1 (no decimals). The p-value of the entire factor is given in the row containing the variable name. Absolute risk (per 1000 person-half-months) for age 23 years of the respondent is given in the last row of the time factor in boldface letter.

[#] We distinguish between the following periods: 1967 – June 1971, July 1971 – June 1987 and July 1987 – 1993.

Sexual behaviour (age and birth control at first sexual intercourse) is also an important determinant of marriage intensity. Here we have a group who reported having sex for the first time at the same age as they entered their first co-residential relationship (which was not necessarily a mar-

riage). This group is clearly problematic if we wish to interpret a possible causal relationship between sexual behaviour and marriage intensity as some of them may have had their sexual début in the marriage itself. Therefore we do not discuss their result .[3] For both women and men we find that those who had their first sexual relationship below the age of 18 have high intensity in entering first marriage. Being sexually active for a longer time is likely to increase the risk of pregnancy and thus also marriage for this group, given that births were supposed to take place in marriages. Women who were 18 years old at their first sexual experience, but used some kind of contraceptives, have somewhat lower marriage intensity than those who had their first sexual intercourse at the same age but did not use any methods of birth control. Unplanned pregnancy is less likely to occur in the former group, which can account for their lower intensity of entering first marriage. Marriage intensity drops greatly for women who were at least 20 years old and for men who were 22 years old or older when they had sexual intercourse for the first time and it does not matter whether they used contraceptives or not. This might be a selection effect. Individuals in this group might be less attractive (or less healthy), thus they had their sexual début at higher age and might therefore have difficulties also in attracting a marriage partner. Premarital pregnancy and premarital birth influence marriage behaviour, as expected. Pregnancy doubles the intensity of entering first marriage among both women and men, while a birth reduces the intensity greatly.

Educational attainment, labour-force attachment and attitude to marriage have a significant impact on both women's and men's marriage behaviour in Hungary. Housing availability (*i.e.* current period) is also important but only for men, while attitude to non-marital birth does not matter at all. For both women and men we see that marriage intensity increases over educational levels, except for upper-secondary education. The very high marriage intensity of highly educated women may be linked to their higher earnings as compared to other groups, just as for men, that makes them attractive in the marriage market. Thus our findings disprove Becker's hypothesis that women's increasing education would reduce their propensity to enter marriage. As expected, employment status shows that students are much less likely to enter first marriage among both women and

[3] Those who had a premarital birth or a premarital pregnancy are not included in this group as they clearly had their sexual début before entering first marriage.

men than other groups. Also, part-time-working women and other non-employed (including unemployed) men are less likely than full-time workers to attract a marriage partner. In fact, full-time employment does not reduce women's marriage intensity in contrast to Becker's argument but in line with Oppenheimer's ideas. For the attitude variables we find that those women and men who claim that marriage is important have significantly higher marriage intensity than others, as expected. Attitude to non-marital birth has, on the other hand, no influence on the marriage behaviour of either women or men. Housing availability seems to matter for men, as marriage intensity is much lower in the male sample in the period of scarcity than later. We find hardly any impact for this factor on the female sample.

Our time variable, age of respondent, shows that the intensity of entering first marriage increases for women up to the age of 22-23 and thereafter decreases. In their late twenties their propensity to enter first marriage is about half of that for women in their early twenties. For men, first-marriage intensity increases up to the age of 26, but declines sharply thereafter. At the age of 30 and above women and men have very similar (low) intensity of entering first marriage.

Poland

Own birth cohort is important also for Polish women's and men's marriage behaviour as seen in Table 1B. In contrast to the Hungarian results however, marriage intensity is much higher for those born in the early 1970s than for earlier cohorts in Poland. Unlike Hungary, in Poland number of siblings influences women's marriage behaviour. The pattern is similar for women and men. Having at least three siblings increases the intensity of entering first marriage.

Age and birth control at first sexual intercourse affect both women's and men's marriage behaviour significantly, similarly to the results for Hungary. Women who were younger than 18 at their first sexual experience have the highest intensity of entering first marriage, independently of the use of contraceptives. Surprisingly, the equivalent group among men has lower marriage intensity if they did not use any birth control methods than if they used one. Women's marriage intensity declines greatly for those

having had sexual experience for the first time at the age of 20 or later. Men have reduced marriage intensity if they had their first sexual experience at the age of 22 or later. As in Hungary, the lower marriage intensity of these older groups may be a selection effect. Having no data on children for Polish men, we have included premarital pregnancy and premarital birth only into the model for women. Similarly to the Hungarian findings, both factors are important for marriage behaviour in Poland. Pregnancy increases the intensity of entering first marriage, while a birth reduces it.

As in Hungary, educational attainment, employment status as well as attitude to marriage, are important for both women's and men's marriage behaviour, while housing availability seems to affect men only. However, attitude to non-marital birth also seems to influence the marriage behaviour of both women and men, which was not the case in Hungary. We see for educational attainment that those with the least education have the lowest marriage intensity among both women and men in Poland. For men, the intensity of entering first marriage increases over educational levels. For women, those with lower-secondary education have the highest intensity, and there is very little difference between the marriage intensities of women with upper-secondary education and those with tertiary education. Thus higher education does not seem to reduce women's marriage intensity, in contrast to Becker's argument, but does not increase it either in Poland, unlike in Hungary. The findings for employment status are similar to those for Hungary, with students having the lowest intensity of entering first marriage among both women and men. Also, part-time employed women and other non-employed (including unemployed) men have lower marriage propensity than full-time workers. Thus full-time work does not seem to reduce women's marriage intensity in Poland either, in line with Oppenheimer's argument but in contrast to Becker's thesis. As for attitude to marriage, those who do not consider marriage as important have lower marriage intensity than women and men who believe in marriage. Women who have a more positive attitude to non-marital birth have lower propensity to enter first marriage than more traditional women. For men, we find no difference for those opposing it and those who find it acceptable. As in Hungary, in period of scarcity regarding housing availability men had lower marriage intensity than in later periods, while we see no effect for women.

Table 1B. Relative risks of entering first marriage for Polish women and men. Final model

Variables	women	men
Cohort:	*(p = 0.001)*	*(p = 0.000)*
1950 - 1954	1	1
1955 - 1964	1.01	0.84**
1965 - 1969	1.03	1.03
1970 – 1971	1.59***	1.54**
Number of siblings:	*(p = 0.007)*	*(p = 0.123)*
< two	1	1
two	1.19*	1.11
three or more	1.28***	1.18*
Age and birthcontrol at first sex:	*(p = 0.000)*	*(p = 0.000)*
< 18 years, used birth control	1.73***	1.14
< 18 years, no birth control	1.72***	0.60***
18 - 19 years (no distinction by birth control)	1	1
20-21 years (no distinction by birth control)	0.65***	0.96
22 + years (no distinction by birth control)	0.29***	0.66***
same age as first union entry	1.05	1.53***
no information	0.09***	0.14**
Premarital pregnancy:	*(p = 0.000)*	
no	1	n.a.
yes	1.69***	n.a.
Premarital birth:	*(p = 0.000)*	
no	1	n.a.
yes	0.36***	n.a.
Current educational attainment:	*(p = 0.000)*	*(p = 0.000)*
primary school	1	1
lower-secondary education	1.42***	1.31***
upper-secondary education	1.23***	1.53***
tertiary education	1.29**	1.92***
Current employment status:	*(p = 0.000)*	*(p = 0.000)*
full-time employed (including irregular time employment)	1	1
part-time employed (including long part time and short part time)	0.73**	0.82
student	0.42***	0.38***
other non-employed	1.10	0.63***
Attitude to marriage:	*(p = 0.000)*	*(p = 0.000)*
marriage is important	1	1
marriage is not important	0.74***	0.69***
other	0.77***	0.68***

Table 1B. Relative risks of entering first marriage for Polish women and men. Final model, continued

Variables	women	men
Attitude to non-marital birth:	*(p = 0.042)*	*(p = 0.039)*
opposing	1	1
supportive	0.83**	0.98
other	0.96	0.80*
Current calendar period (housing availability)[#]:	*(p = 0.679)*	*(p = 0.002)*
slowly decreasing scarcity	0.98	0.65***
great increase in newly-built dwellings	1	1
decreasing availability of new dwellings	1.06	1.03
Age of respondent (time variable):	*(p = 0.000)*	*(p = 0.000)*
women: 17 - 18 years; men: 17 – 20 years	0.22***	0.14***
19 - 20 years	0.50***	
21 - 22 years	0.83**	0.62***
23 years	1	1
24 - 25 years	1.06	1.00
26 years	0.89	0.95
27 - 29 years	0.73***	0.93
30 - 34 years	0.38***	0.43***
	[18.032]	**[9.387]**
Log likelihood	**-13554.8**	**-12021.7**
no. of independent parameters	**33**	**30**
Null model log likelihood:	**-14786.6**	**-13186.2**

*** significant at the 1%-level, ** at 5%, * at 10%.

Note: For each variable, risks and their significance are given relative to the reference level, indicated by 1 (no decimals). The p-value of the entire factor is given in the row containing the variable name. Absolute risk (per 1000 person-half-months) for age 23 years of the respondent is given in the last row of the time factor in boldface letter.

[#] We distinguish between the following periods: 1967 – June 1973, July 1973 – June 1980 and July 1980 – 1991.

The time variable shows a somewhat different profile than for Hungary, at least for women. For both women and men marriage intensity increases up to age 25 in Poland, thereafter decreasing. After age 30, the intensity of entering first marriage becomes less than half of that for those in their mid-twenties for both sexes.

5.2 First birth

As childbearing histories have not been recorded for men in Poland, we have studied first-birth intensity of entering first marriage for women only in both countries.

Table 2 shows that own birth cohort and number of siblings are important factors influencing first childbearing in both Hungary and Poland. The intensity of first birth is much higher for women born in the early 1970s than for earlier cohorts in both countries. The increase of first-birth intensity appears already for those born in the 1960s in Poland, but not in Hungary. Women with at least three siblings have about 20% higher intensity of having the first child than others in both countries, as they are probably more family-oriented than those who grew up in smaller families.

Factors reflecting sexual behaviour also affect the intensity of first birth. As for the age at the first sexual intercourse we find that Hungarian women who had their first sexual relationship below the age of 18 have the highest childbearing intensity in first marriage, while those who were at least 20 years old have the lowest intensity at their sexual début (10% lower than those who were 18-19 years old at their first sexual experience). Among Polish women, we find this lower intensity (10% lower than the reference category) for those having their first sexual intercourse at the age of 22 or later. We explain these findings by the longer period of being exposed to pregnancy of those women who had an early sexual debut. Moreover, the results may indicate that Hungarian youths become sexually active generally at younger age than young people in Poland. Birth control at first sex seems to be important for Hungarian women's childbearing behaviour, but less so for Polish women who are probably less likely to use contraceptives until the first birth than are young women in Hungary (Kuciarska-Ciesielska, 1993; Kamarás, 1999). Hungarian women who used modern methods or coitus interruptus (withdrawal) have 20% lower intensity of having the first child than those who did not use

Table 2. Relative risks of first birth in first marriage for women in Hungary and Poland. Final model

	Hungary	**Poland**
Cohort:	*(p = 0.022)*	*(p = 0.000)*
1950 - 1959	1	1
1960 - 1969	1.01	1.30***
1970 – 1974 (Poland: 1970-71)	1.42***	1.45***
Number of siblings:	*(p = 0.003)*	*(p = 0.000)*
< three	1	1
three or more	1.19***	1.23***
Age at first sex:	*(p = 0.000)*	*(p = 0.051)*
< 18 years	1.17***	1.12
18 - 19 years	1	1
20-21 years	0.90*	1.03
22 + years	0.96	0.90*
Birth control at first sex:	*(p = 0.000)*	*(p = 0.094)*
non-use	1	1
withdrawal	0.81***	1.06
rhythm	0.94	0.93
chemical measures	0.86	
modern	0.79***	0.79*
Current educational attainment:	*(p = 0.000)*	*(p = 0.000)*
primary school	1	1
lower-secondary education	1.09	0.93
upper-secondary education	0.87**	0.83***
tertiary education	0.85*	0.63***
Current employment status:	*(p = 0.075)*	*(p = 0.000)*
full-time employed (including irregular time employed)	1	1
part-time employed (including long part-time and short part-time)	1.09	1.21
Unemployed	0.40	1.20
Housewife	0.92	1.38**
Student	0.80*	0.65***
other non-employed	1.26**	1.12*

Table 2. Relative risks of first birth in first marriage for women in Hungary and Poland. Final model, continued

	Hungary	**Poland**
Attitude to abortion:	*(p = 0.240)*	*(p = 0.465)*
Restrictive	1	1
allowing for unmarried women	1.13	1.02
Liberal	1.04	1.00
Other	1.13	1.18
Current calendar period (changes in the child-care leave program):	*(p = 0.073)*	*(p = 0.073)*
Hungary: 1967 – 1982; Poland: 1967 – 1972	1.18**	0.88
Hungary: 1983 – 1985; Poland: 1973 – 1981	1	1
Hungary: 1986 – 1993; Poland: 1982 – 1991	1.02	0.88*
First marriage duration in months (time variable):	*(p = 0.000)*	*(p = 0.000)*
1 – 7 months	0.57***	0.81**
8 – 18 months	1.10	1.62***
19 – 24 months	1	1
25 – 36 months	0.82**	0.79**
37 – 48 months	0.65***	0.51***
49 – 60 months	0.53***	0.40***
61 – 120 months (for Poland: 61 – 180 months)	0.36***	0.13***
121 – 180 months	0.05***	
	[23.812]	**[27.004]**
Log likelihood	**-10309.2**	**-9309.9**
no. of independent parameters	**31**	**29**
Null model log likelihood:	**-10528.5**	**-9747.3**

*** significant at the 1%-level, ** at 5%, * at 10%.

Note: For each variable, risks and their significance are given relative to the reference level, indicated by 1 (no decimals). The p-value of the entire factor is given in the row containing the variable name. Absolute risk (per 1000 person-half-months) for 19-24 months in first marriage is given in the last row of the time factor in boldface letter.

any contraceptive at their sexual début. The findings are similar for Polish women who used modern birth control methods. However, these groups represent different proportions of women in the two countries. While about 40% of Hungarian women belong to this group, it includes only 3% of Polish women in their first marriage.

Education and employment status also influence first-birth intensity in both countries, but attitude to abortion has no impact. The parental-leave program has proved to be important at the 10% level only. As for educational attainment first-birth intensity is highest at lower educational levels, unlike for first marriage. Tertiary education reduces Hungarian women's first-birth intensity by 15%, compared to women with the least education. For Polish women, the reduction is larger, about 35%. We can only speculate about whether this difference can be explained by better possibilities for women in Hungary to combine childbearing and career than in Poland.

Employment status is somewhat less important for Hungarian women's childbearing intensity than it is for Polish women. We find for Poland that housewives have the highest first-birth intensity, about 40% higher than full-time workers. Interestingly, there is no similar finding for Hungary. In fact, housewives in Hungary have slightly lower propensity to have the first child than full-time workers, possibly because only those with labour-market experience before childbearing have been eligible for the child-care allowance (*i.e.* the parental leave benefit). Students have lower birth-intensity than full-time workers in both countries. Their intensity is 35% lower in Poland and 20% lower in Hungary than that of full-time employed. This may reflect differences in the parental leave programs of the two countries and in the ways of how students are included in it.

We find relatively limited impact of the parental leave program (current period) on first-birth intensity. In Hungary, first-birth intensity was highest in the period when childcare-leave (up to the child's third birthday) was introduced, but decreased thereafter, as the flat-rate benefit covered a diminishing proportion of foregone earnings. Not even the introduction of income-related parental benefit in the mid-1980s raised the intensity of first childbearing. In Poland, we see a slight rise in first-birth intensity when the unpaid child-raising leave was extended to the third birthday of a child. A means-tested benefit was introduced in the early 1980s, but it has not hindered the slight drop of first-birth intensity in the following years.

Our time variable (duration of first marriage in months) shows that first-birth intensity is highest in the period of 8-18 months in first marriage (it shows up especially strongly in Poland) and decreases thereafter. After

four years in marriage, the intensity of having the first child is about half of that for two years in the marriage. After ten years in marriage, we find extremely low levels of first-birth intensity in both countries. Thus first birth seems to occur early in first marriage in both Hungary and Poland. Those who wait longer are likely to forego parenthood altogether, at least in their first marriage. The sharp decline in childbearing intensity may reflect the specificity of demographic regime of the region, namely marriage at relatively young ages and childbearing limited to ages up to the late 1920s.

6. Concluding remarks

In this paper we have studied first marriage formation and first birth in first marriage in Hungary and Poland, where marriage is still the dominant form of couple-relationship, entered into at relatively young ages, and where childbearing has been restricted to marriage, at least before the 1990s. In these countries, the traditional demographic regime has been accompanied by a policy regime that has encouraged women's and men's equal labour-force participation and provided means for young people to control their fertility if they wished. We have focused on the period of state-socialism and the first years of transition to a market economy, as the data have not covered the mid- and late 1990s, the time of radical changes in demographic trends in Central-Eastern Europe.

Focusing on the impact of education and employment on the first steps of family formation in the socialist and early transition period, we have found that female employment, which is the key to women's increasing economic independence, does not reduce the propensity to marry or to have a first child in the dual-earner family context, when the combination of employment and family tasks are facilitated by policy measures such as the parental leave program and public childcare. Higher education however, seems to reduce women's first-birth intensity but not their intensity of entering first marriage. This may reflect the lack of changes in family-level gender relations, as domestic tasks have remained women's duties beside their usually full-time employment, without much help from their men. Since career and childbearing have been more difficult to combine for women, the more highly educated who were more likely to have a career-type job have more often decided to remain childless than less educated women. As expected, individual attitudes have also become impor-

tant for marriage behaviour given the increasing acceptance of alternative family forms in Hungary and Poland.

We have found very little difference in the effects of various factors on women's and men's marriage behaviour. Housing availability has, however, proved to be important for men in both countries, while it had no effect on women's marriage intensity. Also, higher education has greatly increased men's marriage propensity in Poland but not that of women, while in Hungary it has increased both women's and men's marriage intensity. Perhaps highly educated women were considered as somewhat less attractive marriage partners given Poland's Catholic and thus somewhat more traditional value-system, whereas their higher earnings capacity and other skills have been more highly valued in liberal Hungary.

All in all, our findings suggest that both societal and familial gender relations influence family behaviour. Gender equality at the societal level can indeed facilitate family formation with policies supporting the combination of employment and family life. Yet, without a more equal division of family responsibilities between women and men in the family, childbearing may increasingly become a choice that not everyone can afford to make, given constraints of the time and energy.

Acknowledgements

We are indebted to Gerda Neyer and Ursula Henz for much valuable advice on this paper. We thank Statistics Hungary and the Institute of Statistics and Demography, Warsaw School of Economics for providing access to their Family Surveys. The MaxPlanck Institute for Demographic Research, Rostock, Germany provided hospitality and support for Livia Oláh in July and August 2001 and for Ewa Frątczak in August 2001. Financial support for this research for Livia Oláh from the Humanistic and Social Science Research Foundation (Grant F0931/1999) in Sweden, and for Ewa Frątczak from Research Project No. 03/S/0063/00 "Modelling of Demographic Events using Event History Analyses", Warsaw School of Economics (SGH) are gratefully acknowledged. We also thank, for financial support for our participation at the XVth World Congress of Sociology, Brisbane, Australia, July 7-13, 2002, the Institute for Future Studies, Sweden for Livia Oláh, and from Warsaw School of Economics, Poland

for Ewa Frątczak. We have benefited from the comments of participants at the session "Gender and Demography".

References

Adamik, M., 1991, Hungary – Supporting Parenting and Child Rearing: Policy Innovation in Eastern Europe, in: S.B. Kamerman and A.J. Kahn (eds.), *Child Care, Parental Leave and the Under 3s: Policy Innovation in Europe*, Auburn House, Paris, 115-144.

Becker G.S., 1981, *A Treatise on the Family,* Cambridge: Harvard University Press.

Bernhardt E.M., 1993, "Fertility and employment", *European Sociological Review* 9, 25-42.

Blom S., 1994, "Marriage and cohabitation in a changing society: Experience of Norwegian men and women born in 1945 and 1960", *European Journal of Population* 10, 143-173.

Blossfeld H-P. and U.Jaenichen, 1992, "Educational expansion and changes in women's entry into marriage and motherhood in the Federal Republic of Germany", *Journal of Marriage and the Family* 54, 302-315.

Bracher M. and G. Santow, 1998, "Economic independence and union formation in Sweden", *Population Studies* 52, 275-294.

Castro Martín T., 1992, "Delayed childbearing in contemporary Spain: Trends and differentials" *European Journal of Population* 8, 275-294.

Csernák, M., 1996, Marriage and Divorce in Hungary: Demographic Aspects of Changes, in: P.P. Tóth and E. Valkovics (eds.), *Demography of Contemporary Hungarian Society*, Columbia University Press, New York, 37-54.

Etzler C., 1987, "Första barnet. En demografisk studie av barnafödande bland svenska kvinnor födda 1936-60", *Stockholm Research Reports in Demography* 44, Stockholm: Stockholm University.

Frątczak E., I. Kowalska, G. Rohwer, S. Drobnic and H-P. Blossfeld, 1996, *Polish Family and Fertility Survey. A User's Guide***.** University of Bremen and Warsaw School of Economics – SGH, Warsaw and Bremen.

Goldscheider F.K. and L.J. Waite**,** 1986, "Sex differences in the entry into marriage", *American Journal of Sociology* 92, 91-109.

Hoem, J., 1993, "Public policy as the fuel of fertility: Effects of a policy reform on the pace of childbearing in Sweden in the 1980s", *Acta Sociologica* 36, 19-31.

Holzer J.Z., 1991, Poland, in: J.-L. Rallu and A. Blum (eds.), *European Population I. Country Analysis*, John Libbey, Paris, 177-190.

Holzer J.Z. and I. Kowalska, 1997, Fertility and Family Surveys in Countries of the ECE Region. Standard Country Report – Poland, New York and Geneva: United Nations.

Huinink J., 1995, Education, Work and Family Patterns of Men: The case of West Germany, in: H.-P. Blossfeld (ed.), *The New Role of Women: Family Formation in Modern Societies,* Westview Press, Boulder, San Francisco, 247-262.

Joshi H., 1998, "The opportunity costs of childbearing: More than mothers' business", *Journal of Population Economics* 11, 161-183.

Kamarás F., 1999, *Fertility and Family Surveys in Countries of the ECE Region. Standard Country Report. Hungary,* New York and Geneva: United Nations.

Klinger, A., 1991, Hungary, in: J.-L. Rallu and A. Blum (eds.), *European Population I. Country Analysis*, John Libbey, Paris, 209-223.

Kravdal Ö., 1994, "The importance of economic activity, economic potential and economic resources for the timing of first births in Norway", *Population Studies* 48, 249-267.

Kuciarska-Ciesielska M., 1993, "Birth control and its determinants", *Polish Population Review* 3, 221-240.

Lesthaeghe R., 1983, "A century of demographic and cultural change in Western Europe: An exploration of underlying dimensions", *Population and Development Review* 9, 411-435.

Oppenheimer V.K., 1994, "Women's rising employment and the future of the family in industrial societies", *Population and Development Review* 20, 293-342.

Oppenheimer V.K., H.-P. Blossfeld and A. Wackerow, 1995, United States of America, in: H.-P. Blossfeld (ed.), *The New Role of Women: Family Formation in Modern Societies,* Westview Press, Boulder, San Francisco, 150-173.

Pinelli A. and A. De Rose, 1995, Italy, in: H.-P. Blossfeld (ed.), *The New Role of Women: Family Formation in Modern Societies,* Westview Press Boulder, San Francisco, 174-190.

Ratajczak, B., 1993, "The housing situation of families in Poland in the light of the national census 1988 results", *Polish Population Review* 3, 241-253.

Rindfuss R.R. and C. St. John, 1983, "Social determinants of age at first birth", *Journal of Marriage and the Family* 45, 553-565.

Rindfuss R.R., S.P. Morgan and K. Offutt, 1996, "Education and the changing age pattern of American fertility: 1963-1989", *Demography* 33, 277-290.

Santow G. and M. Bracher**,** 2001, "Deferment of the first birth and fluctuating fertility in Sweden", *European Journal of Population* 17, 343-363.

Santow G. and M. Bracher, 1994, "Change and continuity in the formation of first marital unions in Australia", *Population Studies* 48, 475-496.

Sardon J.-P., 1993, "Women's first marriage rates in Europe. Elements for a typology", *Population: An English Selection* 5, 119-152.

Van de Kaa D.J., 1994, The Second Demographic Transition Revisited: Theories and Expectations, in: G.C.N. Beets, J.C. van den Brekel, R.L. Cliquet, G.Dooghe and J.de Jong Gierveld (eds.), *Population and Family in the Low Countries 1993: Late Fertility and Other Current Issues,* NIDI, CBGS, Swets & Zeitlinger, Amsterdam, 81-126.

Wu Z. and L. MacNeill, 2002, "Education, work and childbearing after age 30", *Journal of Comparative Family Studies* 33, 191-213.

Appendix

Table 1. Distributions of Hungarian and Polish respondents at the various levels of fixed covariates (in %). First marriage

Covariates	Hungary		Poland	
	Women	Men	Women	Men
Cohort:				
1950 – 1954	17.4	21.1	24.0	22.6
1955 – 1959	24.4	22.1	22.9	23.8
1960 – 1964	19.6	18.4	18.8	20.1
1965 – 1969	20.6	20.2	18.2	18.1
1970 – 1974	18.0	18.2	16.1	15.4
Religious activity level:				
active	14.6	9.4	84.7	77.9
not active	85.4	90.6	15.3	22.1
Number of siblings:				
no sibling	14.4	17.1	0.5	0.9
one sibling	46.8	47.9	7.2	7.6
two siblings	20.6	19.3	29.2	28.4
three or more siblings	18.2	15.7	63.1	63.1
parents divorced	11.4	8.8	3.1	3.0
parent died	-	-	5.3	5.2
other non-intact family	5.6	3.9	2.5	2.6
Age at first sex:				
below 16 years	2.6	10.1	0.5	1.4
16 – 17 years	23.6	30.7	7.3	9.4
18 years	18.2	16.5	12.1	10.9
19 years	8.4	7.8	12.2	11.1
20 years	7.2	8.8	12.6	12.7
21 years	3.4	2.2	8.7	8.5
22 + years	4.2	4.7	19.1	20.0
same age at first sex as first union formation	23.8	3.5	9.1	4.9
no information	8.6	15.7	18.4	21.1
Birth-control at first sex:				
withdrawal	6.4	7.1	25.6	27.5
rhythm	1.7	0.7	7.5	13.8
condom	7.2	14.8	0.4	0.7
chemical measures (for men including IUD)	0.5	0.8	0.6	0.4
IUD	0.3	-	1.4	0.3
pill	24.9	20.6	-	-
non-use	28.5	46.3	-	-
same age at first sex as first union formation	23.8	3.5	9.1	4.9
no information	6.7	6.2	55.4	52.4

Table 1. Distributions of Hungarian and Polish respondents at the various levels of fixed covariates (in %). First marriage

Covariates	Hungary		Poland	
	Women	**Men**	**Women**	**Men**
Age and birth-control at first sex:				
<18 years, traditional methods	3.0	3.3	3.6	6.8
<18 years, modern methods	11.8	15.9	0.3	0.2
<18 years, non-use	11.4	21.6	3.9	3.8
18–19 years, traditional methods	3.5	2.9	10.9	12.4
18–19 years, modern methods	13.4	10.8	0.8	0.5
18–19 years, non-use	9.7	10.6	12.6	9.0
20–21 years, traditional methods	1.1	0.8	9.2	11.3
20–21 years, modern methods	4.9	5.0	0.8	0.3
20-21 years, non-use	4.6	5.1	11.2	9.7
22+ years, traditional methods	0.4	0.4	8.8	10.2
same age at first sex as first union formation	23.8	3.5	9.1	4.9
no information	8.6	15.7	18.4	21.0
Premarital pregnancy:				
no	81.7	85.1	76.0	n.a.
yes	18.3	14.9	24.0	n.a.
Premarital birth:				
no	96.8	97.5	96.7	n.a.
yes	3.2	2.5	3.3	n.a.
Marriage attitude:				
marriage is important	80.6	78.2	79.5	72.8
marriage is not important	12.3	15.3	6.6	8.9
other	7.1	6.5	13.9	18.3
Non marital-birth attitude:				
opposing	14.5	17.3	4.5	5.4
supportive	76.9	74.3	86.3	78.9
other	8.6	8.4	9.2	15.7
Total no. of respondent	**3334**	**1827**	**3226**	**3188**

Source: own calculations

Table 2. Exposure time in person-half-months at the various levels of time-varying covariates and of the time variable for Hungarian and Polish respondents (in %). First marriage.

Variables	Hungary		Poland	
	Women	Men	Women	Men
Current educational attainment:				
primary school	37.0	26.8	36.0	29.3
lower-secondary school	19.5	40.9	24.1	48.2
upper-secondary school	38.7	28.2	37.0	20.4
tertiary education	4.8	4.1	2.9	2.1
Current employment status:				
full-time employed	63.1	73.1	58.0	67.7
part-time employed	3.7	1.1	1.2	1.1
student	27.6	19.2	38.6	23.7
other non-employed	5.6	6.6	2.2	7.5
Current calendar period (housing availability)[#]:				
slowly decreasing scarcity	3.8	5.3	16.2	13.0
great increase in newly-built dwellings	69.8	65.8	32.7	31.7
decreasing availability of new dwellings	26.4	28.9	51.1	55.3
Age of respondent (time variable):				
17 – 18 years	42.1	28.0	36.0	26.9
19 – 20 years	27.3	25.4	26.7	23.9
21 years	8.4	10.3	9.2	10.2
22years	5.8	8.4	7.0	8.7
23 years	4.1	6.7	5.2	7.0
24 years	3.0	5.1	3.8	5.4
25 years	2.2	3.8	2.8	4.2
26 years	1.6	2.8	2.1	3.2
27 – 29 years	3.2	5.3	3.9	6.0
30 – 34 years	2.3	4.2	3.3	4.5
Total exposure time	**344942**	**308220**	**409586**	**561938**

Source: own calculations

[#] We distinguish between the following periods: 1967 – June 1971, July 1971 – June 1987 and July 1987 – 1993 for Hungary; and 1967- June 1973, July 1973 – June 1980 and July 1980 – 1991 for Poland.

Table 3. Distributions of Hungarian and Polish women at the various levels of fixed covariates (in %). First birth in first marriage

	Hungary	**Poland**
Cohort:		
1950 – 1954	21.2	29.0
1955 – 1959	29.3	27.1
1960 – 1964	22.0	22.5
1965 – 1969	20.2	16.5
1970 – 1973	7.3	4.9
Religious activity level:		
active	14.4	85.0
not active	85.6	15.0
Number of siblings:		
no sibling	14.5	0.3
one sibling	45.4	6.0
two siblings	21.4	28.0
three or more siblings	18.7	65.7
Childhood family:		
intact family	83.9	89.5
parents divorced	10.6	2.6
parent died	n.a.	5.5
other non-intact family	5.5	2.4
Age at first sex:		
below 18 years	32.0	8.4
18 -19 years	41.2	32.0
20 - 21 years	19.1	29.1
22+ years (incl. no information)	7.7	30.5
Birth-control at first sex:		
non-use (incl. no information)	48.2	54.9
withdrawal	8.0	32.1
rhythm	2.2	10.2
chemical measures	1.1	
modern (condom, pill)	40.5	2.8
Attitude to abortion:		
restrictive	12.2	34.5
allowing for unmarried	10.8	1.2
liberal	48.1	59.7
other	28.9	4.6
Total number of respondents	**2413**	**2311**

Source: own calculations

Table 4. Distributions of Hungarian and Polish women at the various levels over exposure time for time-varying covariates (in %). First birth in first marriage

	Hungary	**Poland**
Current calendar period (changes in the child-care leave program):		
H: 1967-82; P: 1967-72	48.5	5.7
H: 1983-85; P: 1973-81	15.6	41.1
H: 1986-93; P: 1982-91	35.9	53.2
Current educational attainment:		
primary school	23.2	12.4
lower-secondary school	21.9	30.3
upper-secondary school	43.1	46.7
tertiary education	11.8	10.6
Current employment status:		
full-time employed	87.5	79.7
part-time employed (long and short part-time)	4.5	1.3
unemployed	0.2	0.7
housewife	0.7	2.3
student	3.7	4.5
other non-employed	3.4	11.5
First marriage duration in months (time factor):		
1 – 7 months	32.9	37.4
8 – 18 months	27.1	24.0
19 – 24 months	8.9	6.3
25 – 36 months	11.2	8.2
37 – 48 months	6.3	5.2
49 – 60 months	4.0	3.8
61 – 120 months	7.5	10.7
121 – 180 months	2.1	4.4
Total exposure time:	**108438**	**84772**

Source: own calculations

Changing living arrangements in Hungary and the Netherlands: Older adults in one- and two-person households, 1990-2001[1]

Jenny de Jong Gierveld

1. Introduction

Burch and Matthews (1987) emphasised the impact on household composition and the well-being of household members of changes in attitude that took place during the second half of the 20th century. They suggested that households now tended to be less willing to accommodate non-nuclear family members such as parents and that, in addition, many potential household members, such as older parents, might conclude, after weighing all the positive and negative outcomes (costs) of sharing a household, and sensing that their place within it might not be a favourable one, that entering their adult children's household would require too great sacrifice. This same period also saw the emergence of methodological developments in the field of household research and projections: Ermisch and Overton (1985) and Ermisch (1988) sought to refine the methodological underpinnings of household projections by distinguishing so-called 'minimal household units' (MHUs) as the smallest divisible familial elements within a household. An MHU could, for example, be a married couple without children, a married couple with dependent children, a single mother with dependent children, a single father with dependent children, or an adult living alone. Verdon (1998), building on the work of Burch, Ermisch, and Overton, developed a series of basic postulates about these minimal household units, which he reconceptualised as 'minimal residential units' (MRUs), constituting the 'residential atoms' from which all residential groups are built. Verdon's basic premise is that: "Any adult who is normally constituted psychologically will want to run his or her everyday life; hence adulthood spells a desire for everyday economic and domestic autonomy – on the understanding that adulthood is also culturally defined and difficult to demarcate, and that autonomy is a matter of degree" (Verdon, 1998, 67).

[1] I would like to thank my colleagues at the Hungarian Statistical Office (Zsolt Spéder and Zoltán Szücs), and Statistics Netherlands (Carel Harmsen) for their support in providing data for this chapter.

This gives rise to the following central atomistic axioms, which apply within the broad cultural context of most European populations: all MRUs seek residential autonomy and shun cohabitation with other MRUs, and: all cohabitation of MRUs is problematic and has to be accounted for (Verdon, 1998, 67). One of the universal hindrances to residential autonomy cited by Verdon is physical impairment in combination with ageing. According to the aforementioned axioms and taking into account the life-course characteristics of middle-aged and older adults, one would expect that, after children left parental home, older adults would continue to live as a couple without children in a two-person household, or, in the event of widowhood or divorce, as a person living alone in a one-person household.

In this chapter I examine the following research questions based on Verdon's axioms (1998): (1) to what extent do older adults seek residential autonomy by living in one- or two-person households, and (2) has the proportion of older adults living in one- and two-person households increased in recent years? I chose Hungary as an example of the countries in Central and Eastern Europe and compared it with the Netherlands, which here represents the Western European region. I compared population data from 2001 to data that date back to the 1990s. This study is a follow-up to my earlier research, which was based on 1990/1991 census data, and which was made available in the 'Dynamics of Ageing' programme organised by the Population Activities Unit of the UN ECE in Geneva (de Jong Gierveld, de Valk and Blommesteijn, 2001).

2. Background

Household composition and living arrangements are crucially important determinants of well-being in later life. Sharing a household with a partner provides older adults with scope for intimacy and daily support on a reciprocal basis. Partners can enjoy the proximity, long-term commitment and similarity in interests and values that underlie this type of support (Dykstra, 1990). Older adults who live in one-person households, on the other hand, have to rely on network members outside the household when they need help. The oldest olds are the group least likely to emphasise adult children's obligations towards their parents; they do not wish to become a burden to the younger generation (Logan and Spitze, 1995).

The size and composition of the households of older adults, and changes within those households, are affected by a complex set of determinants, including such universal demographic events as: changes in the older adults' partner status (widowhood or divorce), changes in the children's partner status (leaving the parental home to form a household with a partner, or returning to the parental home after union dissolution), a decline in the health of one of the partners, resulting in hospitalisation/ institutionalisation or in the co-residence of older adults and (married) children. The second demographic transition is an interesting framework within which to investigate the changes in demographic attitudes and behaviour that came about after 1965 (Lesthaeghe, 1995; van de Kaa, 1987). Key factors within this framework were the changes to prevailing norms and values that came about at this time. Increases in the participation of boys and girls in the educational system and the participation of women (with or without children) in the labour market went hand in hand with an emphasis on gender equity and a denial of historically embedded principles of authority (Liefbroer, 1999). These changes were linked to processes such as secularisation and individualisation, which broadened the opportunities for individuals to decide for themselves how they wished to organise their lives. Standard biographies, which entail a fixed ordering of life events (leaving the parental home to marry, followed by childbirth, mother taking care of children and home, being married until the death of one of the partners and continuing life as a widow or widower, living alone or co-residing with one of the children) have – to a certain extent - been replaced by choice biographies. Choice biographies are about the dominance of personal preferences about one's life and lifestyle over traditional, standard life courses. This trend, which began in the early 1950s and had gained on importance following by the end of the 1960s, still persists. A typical feature of choice biographies is the growing diversity in terms of living arrangements and combinations of realised life options. The individual range of options in terms of living arrangements, for example, increases as those options become socially acceptable. An indicator of older people having an individualistic lifestyle is when they live independently for as long as possible in a one-person household after widowhood (or divorce), instead of co-residing with their (married) children, and conforming to a lifestyle more in keeping with traditional patterns of family life. This is where the framework of the second demographic transition coincides with Verdon's central axioms (1998):

that older adults prefer to achieve residential autonomy by living in one- or two-person households.

According to Verdon, when describing households made up of more than one MRU, it is necessary to define power configurations between coresiding MRUs. Verdon illustrates the power configurations between coresiding MRUs by describing the economic and/or domestic subordination of the married son and his wife to the coresiding parents (given that the parents form the MRU to whom the house belongs). Verdon maintains that all cohabitation of MRUs is the result of either coercion (such as the manipulation of inheritances) or the presence of obstacles (*e.g.* obstacles related to ageing or a deterioration of health) or both, and that it is intrinsically a conflicting situation. The power configurations include such rules as a set of (family) values and a cultural code that are needed to guarantee the continuation of the configurations and practices. It is only via the process of increasing individualisation that the coresidence of older adults and their adult children becomes a negative option and a more exceptional occurrence within society, and that older adults (as well as adult children) are able to opt for and achieve residential autonomy. "The residential separation of the ageing parents and the married heir meant that both parties simultaneously gained from the deal: each could achieve residential autonomy and reduce the level of antagonism with the other" (Verdon, 1998, 146).

This chapter, as stated earlier, examines one of Verdon's central axioms that an increasing proportion of older adults (both couples and individuals) are seeking residential autonomy, or, to put it another way, that an increasing proportion of older adult households consist of a single MRU.

I also explore the effects of the process of continuing individualisation by differentiating between married and unmarried couples of older adults sharing a two-person household. One would expect unmarried cohabitation - given that it is an element of choice biographies and of personal preferences - to be more prominent among younger birth cohorts than among older birth cohorts, and consequently to be more prominent among young old adults than among the older olds.

I examined the situation in 2001 and compared it to the situation in the 1990s for two different countries: Hungary and the Netherlands. When investigating the research questions, I explicitly and implicitly took into account differences in obstacles to residential autonomy, the first being the differences in age suggested by Verdon. I also added the obstacle of any non-optimal socio-economic situations in the two countries, particularly income and pension levels and housing shortages. One also has to take into account that countries and regions within Europe differ in terms of the extent to which traditional familial values have been replaced by more individualistic and atomistic ones, and consequently differ in terms of the acceptance of residential autonomy as a highly valued preference. Both the socio-economic differences and the differences in dominant value patterns affect differences between countries in terms of the pace at which residential autonomy is achievable.

The data for Hungary came from the Hungarian Statistical Office, and comprise data from the 2001 and 1990 censuses. Data for the Netherlands were provided by Statistics Netherlands, and came from registered household data for the years 2001 and 1995. I would like to thank the staff of both Statistical Offices for their support in providing these data and thereby making this research project possible.

3. Results

One- and two-person households taken together

Figures 1 and 2 show the total number of one- and two-person households consisting of adults aged 50 and over in Hungary and the Netherlands respectively. The figures combine the following types of living arrangements: older adults living in a one-person household and older adults living as a couple (without children or others in the household). 'Couples' includes both married couples and consensual unions. Other types of two-person households, such as those consisting of an older parent and a dependent child, or two brothers or two sisters, are not considered in this research project. The figures group older men and women into five-year age categories, and present data for both 2001 and 1990 (Hungary) or 2001 and 1995 (the Netherlands).

Figure 1. One-person and two-person (married & unmarried couple) households, in percentages of the population of women and men by age categories. Hungary, 1990-2001

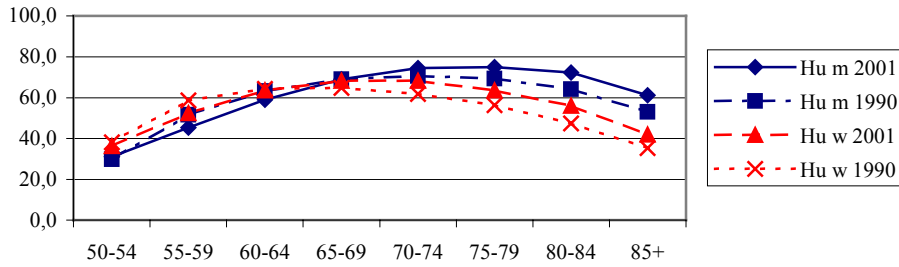
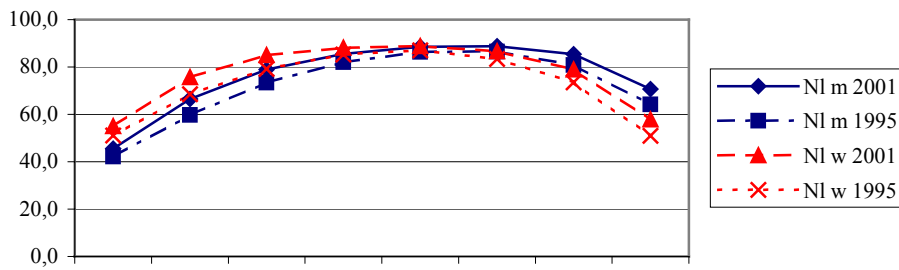


Figure 2. One-person and two-person (married and unmarried couple) households, in percentages of the population of women and men by age categories. Netherlands, 1995-2001



Figures 1 and 2 show globally comparative outcomes: an increase by age in the percentages of one- and two-person households was apparent among young-old adults, followed by an age trajectory of stabilisation, and in later years, a decrease in the percentages of older adults living in small residential units. The top scores in this respect were concentrated among those aged 65 to 74 years in Hungary: roughly 75 percent of older men (in 2001) and roughly 68 percent of their female peers (in 2001). The same pattern was apparent in the Netherlands, albeit with significantly higher top percentages: roughly 88-89 percent of men and roughly 86-87

percent of women. The data therefore show that, in both countries in 2001, the overwhelming majority of older adults were living independently in small residential units consisting of one or two persons. Men in the highest age brackets scored higher percentages than women, and in the lower age brackets, a higher proportion of women lived in small residential units; this illustrates the demographic behavioural differences between men and women, which I will discuss in further detail later in this chapter.

A marked increase in the percentage of older adults living in one- and two- person households was apparent in the recent years in the 65 and over age category in the Hungarian population, and in the 50 and over age category in the Netherlands. The process of individualisation appears to continue, with increasing numbers of older adults exercising a preference to live independently for as long as possible. Even after the age of 80, and despite the fact that living in one or two-person households is decreasing after the age of 80, nowadays more than half of the older adults in the highest age brackets continue to live independently in small residential units in both the Netherlands and Hungary. The data fit within the framework of the second demographic transition and support Verdon's central axioms.

To obtain a more in-depth understanding of the processes underlying these developments, the data have to be broken down into their basic components. I will begin by presenting the data for men and women in one-person households, followed by married couples and then unmarried couples in two-person households.

One-person households

As Figures 3 and 4 show, one-person households are highly skewed and are dominated by the highest age categories in both countries. Roughly 8 to 12 percent of men and women aged 50 in Hungary and the Netherlands lived alone in one-person households. Only about one in ten men and women around the age of 50 lived alone, whether as never-married adults or after widowhood or divorce. The proportion of older adults living alone increased after the age of 50, mainly among the women and much more slowly among the men; women being confronted with widowhood at an earlier age than men in both countries and women being less prone to

repartnering than men. Differences between the two countries were particularly apparent in terms of the percentages of older women living alone after the age of 80. In Hungary nowadays, the highest percentage of women aged between 80 and 84 years living alone is about 46 percent; in the Netherlands the figure is about 58 percent.

Figure 3. One-person households, in percentages of the population of women and men by age categories.
Hungary, 1990-2001

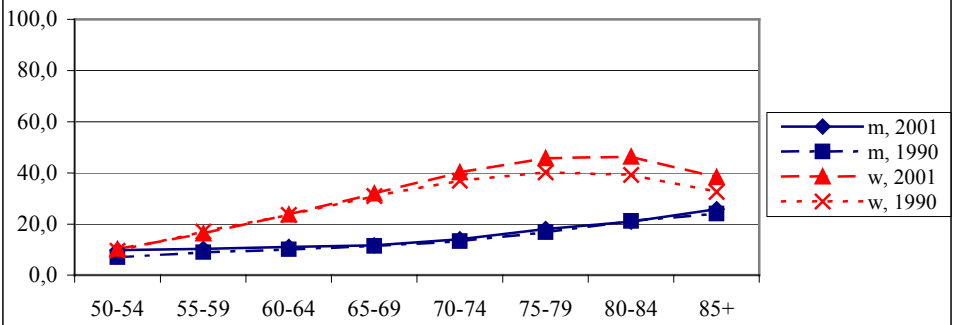
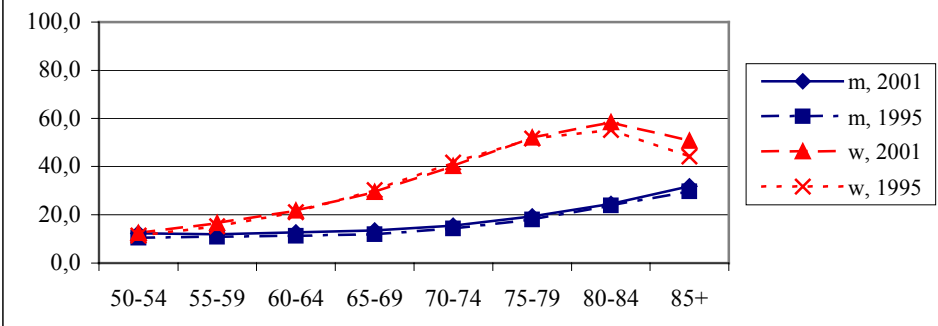


Figure 4. One-person households, in percentages of the population of women and men by age categories.
Netherlands, 1995-2001



Various factors could account for this difference between the two countries. It could perhaps be the differences in income and pension levels that prevent a not inconsiderable proportion of older widows in Hungary

from living independently. Perhaps the shortages in the housing market that force older and younger generations to share households, or perhaps the two countries are simply at different stages in terms of the social acceptability of individualistic values as regards older and younger adults' preferences about living independently instead of cohabiting with younger or older generations, with Hungary being in a less advantageous position than the Netherlands.

There has been a noticeable increase in one-person households in recent years, but only among the oldest age categories and predominantly among women, in both countries. The recent decrease in the sex differential in life expectancy in the Netherlands, and the related increase in the proportion of widowers, resulted in only a marginal shift in the percentage of older men living in one-person households. The trends in the proportion of older men in one-person households in Hungary are difficult to interpret.

One possible explanation for these phenomena is that older women prefer to continue living independently. Widows in more individualised countries might be reluctant to give up the freedom and independence they enjoyed once they have come to terms with their bereavement (Lopata, 1996; Pyke, 1994). After widowhood or divorce, one has to weigh up the pros and cons of starting a household with a new partner versus living alone. Women in particular are more inclined to refrain from repartnering and to continue living alone (de Jong Gierveld, 2002). Women without partners are also better prepared and equipped to manage a household independently than men without partners are. In general, men appear to adapt less easily to the loss of their partners (Lee, Willets and Seccombe, 1998). Marrying a new partner may be an attractive option for older men (Dykstra, 1990) who feel deprived of the attentive activities previously carried out for them by their former wives and which they took for granted (Mason, 1996).

Two-person households of married couples

Of the total of one- and two-person households of older adults, the married couples' two-person households formed the majority in both the countries I investigated, in particular as far as older men were concerned. The men were more inclined to be in a married couples' household up

until the oldest-old age categories than the women were, which is consistent with age-related patterns of becoming a widow or widower.

Figure 5. Two-person households (married couples without children in household), in percentages of the population of women and men by age categories. Hungary, 1990-2001

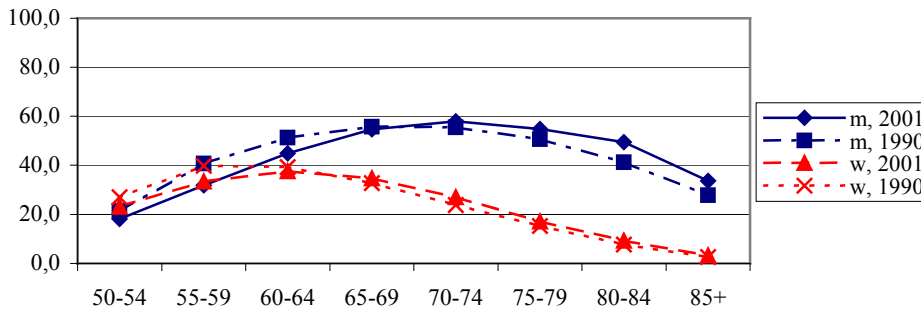
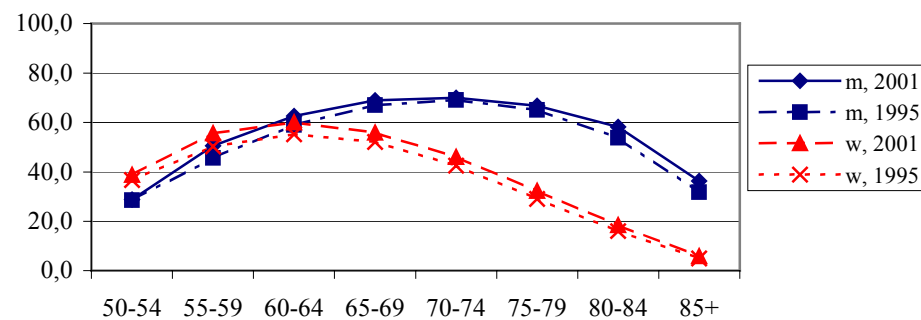


Figure 6. Two-person households (married couples without children in household), in percentages of the population of women and men by age categories. Netherlands, 1995-2001



There was one well-known exception: in middle and young-old ages, women were more inclined to be in a two-person household than men. The latter is related to the children's patterns of leaving the parental home: when children leave parental home, their fathers are more likely to be some years older than mothers. As a result, fathers tend to be involved

in households with children up to a relatively older age, and to enter a two-person household at a somewhat later phase.

Between 1995 and 2001, the proportion of older married adults in two-person households increased in all age categories for both men and women in the Netherlands, and to that extent, married couples could be characterised as 'ageing together as a couple' (Myers, 1986).

Developments in Hungary since 1990 differed from those in the Netherlands. Among the Hungarian young-old adults, or to be more precise, among those younger than 65, the proportion of two-person households in 2001 was lower than in 1990 for both men and women. This development contrasted with expectations. One possible explanation might be the fact that the children's postponement of leaving home began later in Hungary than it did in Western Europe, around 1992 compared to around 1970. The effects of the postponement of leaving home are no longer visible in the Netherlands, but can be considered an important new phenomenon in Hungary.

Two-person households of unmarried couples

Changes in demographic attitudes that began in the second half of the twentieth century primarily affected younger adults (including the baby boom generations). Forming consensual unions and postponing marriage were well-known behavioural outcomes of the changing systems of attitudes, norms and values. The forerunners of the baby boom generations are now entering the 50 and over age group, and are accounting for more consensual unions than was the case among older generations. An increase in the proportion of older adults involved in consensual unions can therefore be seen for both men and women in Hungary and in the Netherlands, when the situation in 2001 is compared with the situation in 1990 or 1995 respectively, albeit only among the young-old cohorts.

An interesting switch in the proportion of older adults in consensual unions by age categories is apparent for the Netherlands: the proportion of older adults aged 65 and over in consensual unions decreased between 1995 and 2001, and although the percentages of those in consensual unions remain generally low, it might still be interesting to connect this

Figure 7. Two-person households (unmarried couples without children in household), in percentages of the population of women and men by age categories. Hungary, 1990-2001

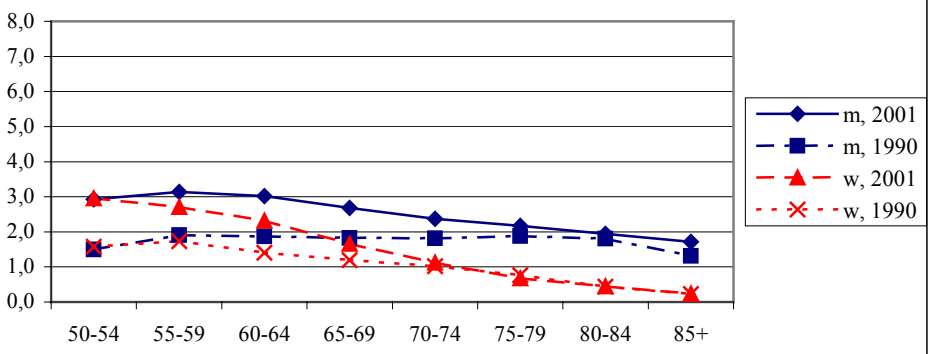
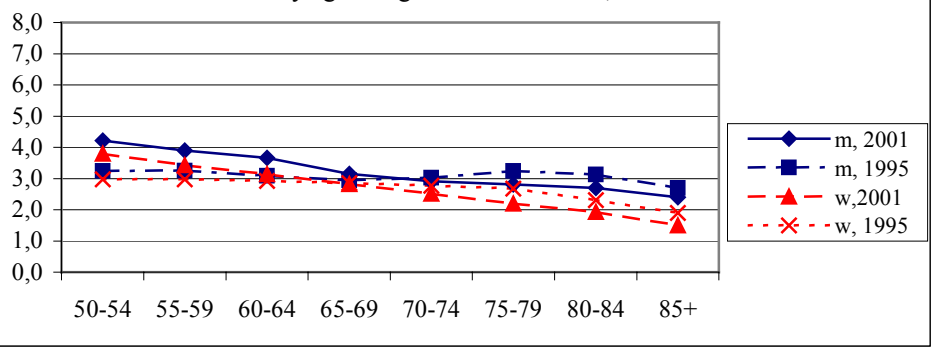


Figure 8. Two-person households (unmarried couples without children in household), in percentages of the population of women and men by age categories. Netherlands, 1995-2001



development to an increase in so-called Living-Apart-Together or LAT-relationships among the oldest old. LAT-relationships are partner relationships where men and women continue to live in their one-person households, but intermittently share households, *e.g.* at weekends. Those involved in LAT-relationships are registered as living alone, and as such are not recognisable in census or registration data. It is only via large-scale surveys in several European countries such as Sweden, Germany, the Netherlands and Great Britain that these phenomena have been ascertained (Davidson, 2002; de Jong Gierveld, 2002; Karlsson and Borell, 2002; Stevens, 2002).

4. Discussion

Although all European countries share basic societal characteristics, many of their socio-economic and cultural features vary, and demographic indicators will therefore vary between countries. The framework of the second demographic transition provides a solid basis from which to compare and interpret diverse living arrangements as well as differences in the timing and pace of involvement in new demographic trends. A classification of European countries was constructed on the basis of this framework, and on the available country-level demographic indicators (United Nations, 2002). Up until 1990, Hungary as a country in the Eastern European region was characterised by early marriages, and marriage was virtually universal in that region. Complex households consisting of three generations of direct relatives and/or others were also popular in that region (United Nations, 2002, 13-17). In contrast, in the Netherlands as a country in the Western European region, a not inconsiderable proportion of the population never married, and those who did marry lived in nuclear households. The increase in age at first marriage began much earlier in the Netherlands than in Hungary, around 1970 and 1990 respectively. Aspects of these country-level differentiations in family and household structures are still apparent in the data presented in this chapter.

In Hungary, the proportion of one- and two-person households consisting of adults aged 50 and over still lags behind the proportion of one- and two-person households in the Netherlands; households consisting of more than one SRU are still widespread in Hungary. But the data show that in 2001, the overwhelming majority of older adults lived independently in small residential units of one or two persons, in both countries. And between 1990 and 2001 (or 1995 and 2001 in the case of the Netherlands) there was also a significant increase in the proportion of older adults living in small households - those aged 65 and over in Hungary and 50 and over in the Netherlands. The process of individualisation appears to be continuing, with increasing numbers of older adults exercising a preference to live independently. The data fit within the framework of the second demographic transition and support Verdon's central axioms, despite the economic hardships that Hungary experienced between 1990 and 2001.

As mentioned before, the only recorded increase in the proportion of one- and two-person households of older adults in Hungary was among those aged 65 and over; among those aged 50 to 65, there was a decrease. This phenomenon would seem to be directly related to changes in the timing of first marriage and leaving home of young adults in Hungary. The timing of leaving home for young adults more or less stabilised in the Netherlands in the 1990s, but the postponement of leaving home (and the postponement of marriage among young adults) began only recently in Hungary. This postponement process is clearly evident in a delay in the formation of two-person households among young-olds in Hungary.

This study highlighted several parallel trends in the living arrangements of older adults in both countries. As mentioned before, the proportion of older adults in one- and two-person households increased in both countries in the 1990s, but some of the underlying developments also proved to be more or less parallel. The ongoing process of ageing together as a couple (Myers, 1986) was evident in the data for married couples' two-person households, which increased significantly for older adults in both countries in recent years. Individualisation and the scope for choice biographies became socially acceptable and widespread, with young adults being the first to subscribe to it, but the first signs of these developments can nowadays also be seen among the young-old adults (aged between 50 and 65 or 70 years) in terms of the growing proportion of unmarried couples who are forming two-person households. Although the percentages are still fairly modest, the plurality of partnership patterns seems to be an emerging phenomenon among older adults as well.

References

Burch T.K. and B.J. Matthews, 1987, "Household formation in developed societies", *Population and Development Review* 13 (3), 495-511.

Davidson K., 2002, "Gender differences in new partnership choices and constraints for older widows and widowers", *Ageing International* 27 (4), 43-60.

Dykstra P. A., 1990, *Next of Non-kin. The Importance of Primary Relationships for Older Adults' Well-being.* Amsterdam/Lisse, Swets & Zeitlinger.

Ermisch J.F., 1988, An Economic Perspective on Household Modeling, in: N.Keilman, A.Kuijsten and A.Vossen, *Modelling Household Formation and Dissolution*, Oxford, Clarendon Press, 23-40.

Ermisch J.F. and E.Overton, 1985, "Minimal household units: a new approach to the analysis of household formation", *Population Studies* 39, 33-54.

Jong Gierveld J. de, H. de Valk and M. Blommesteijn, 2001, 'Living Arrangements of Older Persons and Family Support in More Developed Countries", *Population Bulletin of the United Nations, Special Issue Nos.* 42/43*,* 193-217.

Jong Gierveld J. de, 2002, "The dilemma of repartnering: considerations of older men and women entering new intimate relationships in later life", *Aging International* 27 (4), 61-78.

Karlsson S.G. and K. Borell, 2002, "Intimacy and autonomy, gender and ageing", *Ageing International* 27 (4), 11-27.

Lee G.R., M.C.Willets and K.Seccombe, 1998, "Widowhood and depression; gender differences", *Research on Ageing* 20 (5), 611-630.

Lesthaeghe R., 1995, The Second Demographic Transition in Western Countries: an interpretation, in: A. Mason and A.-M. Jensen (eds.), *Gender and Family Change in Industrialized Countries* Oxford: Clarendon Press, 17-62.

Liefbroer A.C., 1999, From Youth to Adulthood: Understanding Changing Patterns of Family Formation from a Life Course Perspective, in: L.J.G. van Wissen and P.A. Dykstra (eds.), *Population Issues, an Interdisciplinary Focus,* New York/Dordrecht: Kluwer Academic/Plenum Publishers, 53-85.

Logan J.R. and G.D.Spitze, 1995, "Self-interest and altruism in inter-generational relations", *Demography* 32 (3), 353-364.

Lopata H. Z., 1996, *Current Widowhood; Myths and Realities*, Thousand Oaks, London: Sage Publications.

Mason J., 1996, Gender, Care and Sensibility in Family and Kin Relationships, in: J. Holland and L. Akins (eds.), *Sex, Sensibility and the Gendered Body* London: Macmillan, 15-36.

Myers G.C., 1986, Cross-national patterns and trends in marital status among the elderly, in: M.Loriaux, D.Remy and E.Vilquin (eds.), *Populations agées et révolution grise. Chaire Quételet 1986,* Louvain-la-Neuve, Institut de Démographie, 469-481.

Pyke K.D., 1994, "Women's employment as a gift or burden? Marital power across marriage, divorce, and remarriage", *Gender & Society* 8 (1), 73-91.

Stevens N., 2002, "Re-engaging: new partnerships in late-life widowhood", *Ageing International* 27 (4), 27-42.

United Nations, 2002, *Partnership and Reproductive Behaviour in Low-Fertility Countries,* New York: United Nations, Population Division.

Van de Kaa D.J., 1987, "Europe's Second Demographic Transition", Population Bulletin 42 (1), 1-47.

Verdon M., 1998, *Rethinking Households; an Atomistic Perspective on European Living Arrangements,* London: Routledge.

Measuring population perspectives in Europe

László Hablicsek

1. Introduction

Since the beginning of the 1990s very significant changes in the demographic situation of the countries in transition have taken place. The dramatic fall in period fertility level led to a very low yearly number of births, while the ageing of population has meant that the number of deaths to remain, irrespective of the mortality improvement in a number of countries. Thus, natural increase has turned into a decrease and, because of insufficient net migration, population growth into a decline. This process was unforeseen in most of the countries.

At the same time, in the countries of Western part of Europe, the European economic area, the population increase continued, despite the lasting low fertility period and advanced stage of ageing, because increasing life expectancy and positive net migration counterbalanced their influence.

Consequently, even population perspectives had got through a robust change in the last decade. European population scenarios started to show a significant long-range future population growth in the EAA countries, decline in a number of other countries of Europe. In the EPC99 European Population Scenarios 1995–2050 both variants resulted in a population size of EAA countries and rest of Europe higher and lower than those in 2000, respectively.

One of the reasons that these changes were unexpected is that the classical approach of population reproduction was used to judge future prospects. Indicators with fertility 'dominance', *e.g.* net reproduction rate, were discussed and compared, while in modern populations the other two components of population growth, mortality and migration, have a significant role in maintaining the population size. Therefore other indicators for long-term population replacement should be developed and used.

This paper deals with one interesting indicator for population reproduction/replacement, what we call life potential ratio. The concept of this ratio and potential growth rate that can be computed on the basis of it, is that direct impact of fertility and migration is disregarded, and only mortality and age structure are taken into consideration. In this way, more stable elements of population change are in focus, and more uncertain components remain in the background. One can suppose that such indicators are suitable for noting population perspectives in our circumstances in Europe.

2. The concept of the life potential ratio

In the classical approach, population reproduction/replacement is characterised by the net reproduction rate (NRR) and intrinsic growth rate, being strongly related to NRR. Both indicators were introduced in studying the stable populations. According to the stable population theory a closed population with unchanged fertility and mortality characteristics (age-specific rates) converges to a population with unchanged age structure and constant rate of population growth.

NRR depends on fertility and mortality at younger ages of women. The well-known equation in continuous approach is as follows:

(1) $$NRR = \int_{\alpha}^{\beta} l(x)m(x)dx$$

where $l(x)$ is the survival function of the life table with the initial $l(0) = 1$ value, $m(x)$ is the fertility rate of women at age x, α and β are the lower and upper limits of the reproductive age of women.

One can ask for other indicators of population reproduction/replacement taking into consideration components of population change more completely. The population momentum factor

(2) $$MF = b \cdot e_0^0,$$

where b is the birth rate of the population and e_0^{υ} is the life expectancy of new-borns, mirrors beside the level of fertility the effect of mortality improvement of all ages. If the intrinsic growth rate r is 0, the population is stationary, and then and only then does the MF equal 1. The signs of $MF-1$ and r are the same in a stable population. It means that MF is a suitable indicator for population replacement.

In modern circumstances, however, the fourth component of population growth, *i.e.* the age structure plays also a significant role. One can ask for such indicators mirroring the effect of age-structure. One of them, the life potential ratio, needs special attention.

Let S^B be the number of years the population already survived and S^F the number of years expected to survive, *i.e.*

$$S^B = \int_0^{\omega} xP(x)dx \text{ and } S^F = \int_0^{\omega} e_x^0 P(x)dx \,. \tag{3}$$

where $P(x)$ is the population and e_x^{υ} is the life expectancy at age x. Divided by the population size

$$a_P = \int_0^{\omega} x \cdot c(x)dx \text{ and } e_P = \int_0^{\omega} e_x^0 \cdot c(x)dx \tag{4}$$

are the average age and the central life expectancy of the population.
There is a core relationship between average age and central life expectancy:

$$e_P = r \cdot Cov_P(x, e_x^{\upsilon}) + a_P \,, \tag{5}$$

where $Cov_P(x, e_x^0) = \int_0^{\omega} x e_x^0 c(x)dx$, the covariance between age and life expectancy weighted by the age-structure of population, and r is the growth rate of the stable population.[1] Consequently, central life expectancy is greater, equal to or smaller than the average age of the

[1] The proof of (5) can be found in the Appendix.

stable population if and only if the intrinsic growth rate is greater, equal to or smaller than 0.

Let us call the ratio of central life expectancy and average age life potential ratio, denoted by

(6) $$LP = \frac{e_P}{a_P}.$$

It is clear from (5) that *LP* equals 1 if and only if the intrinsic growth rate *r* is 0. The signs of *LP*–1 and *r* are the same. It means that *LP* is also a suitable indicator for population replacement. Of course, *potential rate of growth* can be estimated from (5), and differs from other growth rates based on the concept of *NRR* or *MF* in real, non-stable populations.

Computing life potential ratio and potential rate of growth in the non-continuous case, we can use the following equations:

(7)
$$a_P = \frac{1}{P}\sum_{x=0}^{100} \bar{x}P(x)$$
$$e_P = \frac{1}{P}\sum_{x=0}^{100} \bar{e}_x P(x)$$
$$Cov_P(\bar{x},\bar{e}_x) = \frac{1}{P}\sum_{x=0}^{100} \bar{x}\cdot\bar{e}_x \cdot P(x)$$
$$r = \frac{e_P - a_P}{Cov_P(\bar{x},\bar{e}_x)}$$

where $\bar{x} \approx x + 0{,}5$, $\bar{e}_x \approx \frac{e_x^0 + e_{x+1}^0}{2}$.

Life potential ratio and potential rate of growth meet the requirements for a modern reproduction/replacement indicator as discussed in Introduction.

3. Life potential in Europe around 2000

For this study a first estimation was carried out for the year 2000. Population at single ages (highest age group is 99+) and life expectancies at these ages were used. The estimations consist of the group of European

countries for what EPC99 scenarios[2] were prepared. Table 1 shows the list of countries selected. The European Demographic Observatory provided the data by sex.[3] In two cases (Portugal and Ukraine) the population figures projected by EPC99 scenarios were used with a little correction (eliminating negative numbers). For life expectations proportional estimation was carried out using Slovenia's data in the case of Portugal and those of Russia for Ukraine.[4] For life expectations of both sexes a sex ratio of birth was taken from the EPC99 Uniform scenarios.

Table 1 at the end of the paper shows the basic indicators introduced: average age, central life expectancy, life potential ratio, covariance and potential rate of growth. Four other columns are added: population size in 2000, estimated population size for 2020 applying potential rate of growth, population size in 2020 projected in the EPC99 scenarios, and relative difference between estimated and projected figures.

Four maps are presented. Map 1 shows a well-known picture of different stages of ageing in Europe. In general, the population on Eastern part of the continent is somewhat younger than that of the Western part. The oldest populations in Europe are in Germany, Greece, Italy and Sweden with average ages over 42 years. On the other hand average age is below 36 years in Iceland, Ireland, Moldova and Slovakia.

Map 2 presents the central life expectancy, *i.e.* the average life expectation of the 'average' member of the population. It gives a totally different picture to Map 1. Central life expectancy is the lowest in Bulgaria, Russia and Ukraine. The 'average' member of the population can expect the longest further life in France, Iceland, Ireland, Norway and Switzerland, over 42 years. Then 12 countries, among others Poland, Spain, the United Kingdom and Sweden, belong to the second group of countries showing high central life expectation, between 40 and 42 years.

---

[2] Browser for Database. EPC99 European Population Scenarios 1996-2020. Version 1.1. written by Corina Huisman and Evert van Imhof. NIDI 1999.

[3] Let me express my acknowledgment here to Jean-Paul Sardon, Director of ODE for his great help and co-operation.

[4] If the sequence $(e_x^A)_0^\omega$ is known for population *A*, and e_0^B is the life expectancy at birth for population *B*, then one can estimate $e_{x+1}^B = e_x^B \frac{e_{x+1}^A}{e_x^A}$.

Life potential ratio, *i.e.* the ratio of the expected and already survived years of the 'average' member of the population, gives a new order of countries again. The highest life potential ratio is in France, Iceland, Ireland, Moldova, Norway, Poland and Slovakia, where expected years are over the survived by more than 10 per cent. This ratio is lower than 0.95 in Estonia, Hungary, Latvia, Russia and Ukraine. Life potential ratio is below 1.0 also in Belarus, Germany and Italy.

Map 4 summarises the findings of this study. Potential growth rate estimated using Equation (13) is over zero or close to zero in the majority of the countries (in 25 of 33 involved). Nine countries are on the top of the list having potential growth rate over 0.3 per cent: France, Iceland, Ireland, Moldova, Netherlands, Norway, Poland and Slovakia. On contrary, 8 countries show potential growth rate below –0.1 per cent, among others Italy, Hungary, and Russia. Map 4 gives the impression that Eastern Europe has very low growth potential in general.

4. Estimating future population size

One can assume that potential growth rate mirrors the average rate of growth in the long run, and one can ask how the population size would develop in the future using this assumption. Year 2020 was chosen as medium term from a demographic point of view. The population size of the countries assuming constant rate of growth was estimated and compared to the projected size of the populations in EPC99 scenarios. The last three columns of Table 1 show the results.

It is a real surprise how close the estimated numbers are to the projected ones. The total population of the countries involved is now 706 million and will be 721 million according to the EPC99 Uniform scenarios. The estimated size using potential rate of growth is 707 million; the difference is less than 2%.

Looking at the countries separately, one can ascertain that in the majority of countries (25 of 33) the difference between estimated and projected figures is less than 5 per cent, which can be accepted as a moderate error for a 20-year period.

Looking at the direction of population change over the period between 2000 and 2020, one can point out that in the majority of countries potential growth rate and projected change of population size have the same sign. The exceptions are the Czech Republic, Lithuania, Romania and Slovenia, where potential growth rate is positive, but there is a projected population decline. On the contrary, Germany and Italy have negative potential rate of growth, but their population size is projected still higher in 2020 than it was in 2000.

5. Summary

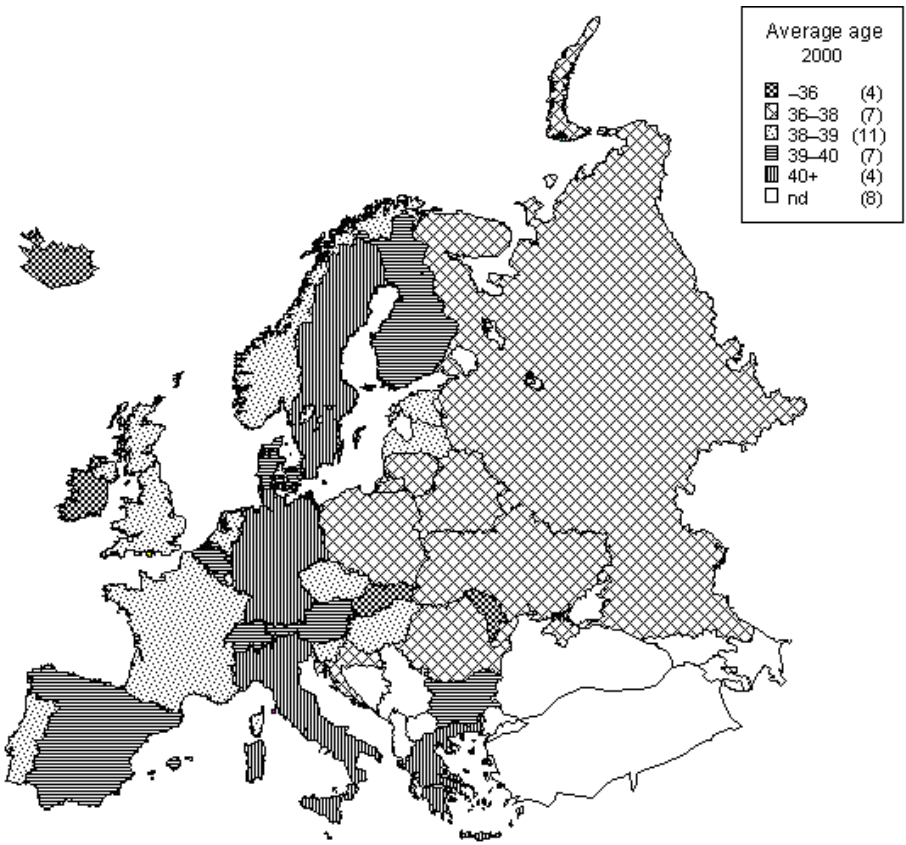
Demographic changes in the last decade had unexpected implications for the future population size in Europe, especially in the CEE countries. One of the reasons that these changes were unexpected is that the classical approach to population reproduction with fertility 'dominance' was used to judge future perspectives.

The concept of the life potential ratio and the potential growth rate, employed in the paper, allows for disregarding direct impact of fertility and migration and taking into account mortality and age structure only. Life potential ratio compares the average expected life duration called central life expectancy and average age of population. It is a basic relationship between central life expectancy and average age in a stable population, from which potential growth rate can be computed.

Indicators for 2000 are calculated and presented for a number of European countries. Also the population size in 2020 is estimated and compared with the projected figures. One can point out from the analyses that life potential ratio and potential growth rate seem to be adequate indicators of population reproduction/replacement in modern European populations.

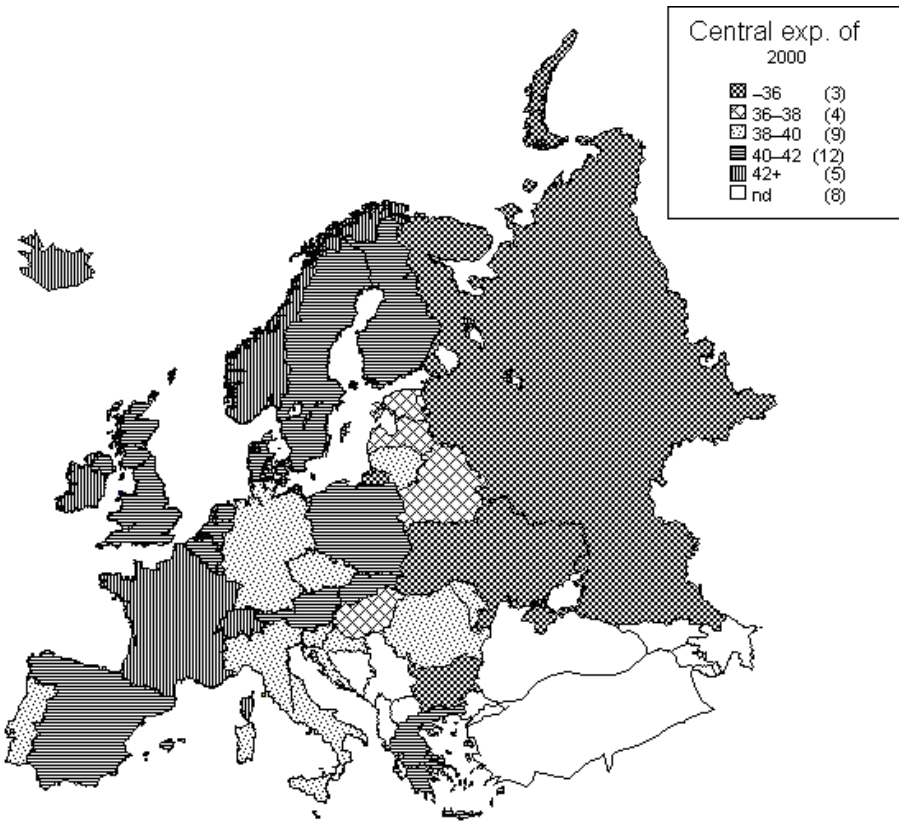
Map 1

Average age in Europe, 2000 (years of age)



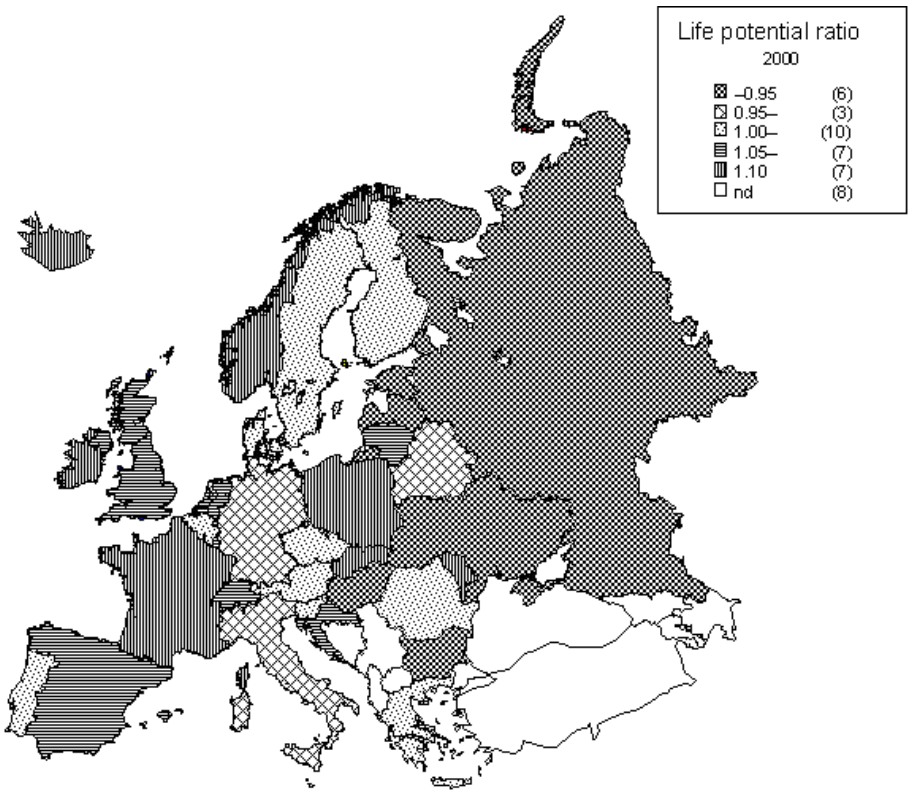
Map 2

Central life expectancy in Europe, 2000 (years of life)



Map 3

Life potential ratio in Europe, 2000



Map 4

Potential rate of growth in Europe, 2000 (in per cent)

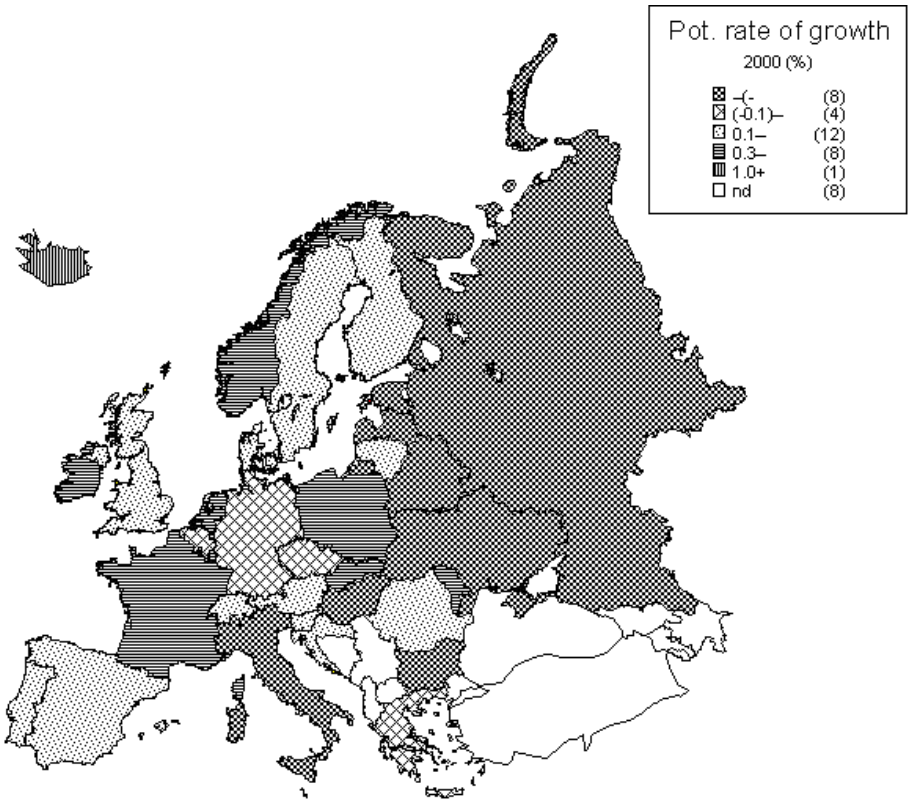


Table 1. Estimating life potential ratio and potential rate of growth for European countries, 2000

Country name	Year*	Population size (million)	Average age	Central expectation of life	Life potential ratio	Population weighted co-variance between age and expectation of life	Potential rate of growth	Expected population in 2020 (million)	EPC Projection Uniform scenario, 2020 (million)	Relative difference between expected and projected figures (%)
Austria	2000	8.10	39.48	41.27	1.045	1182	0.15	8.35	8.36	-0.11
Belarus	2000	10.02	37.23	36.07	0.969	959	-0.12	9.78	9.83	-0.56
Belgium	2000	10.24	39.65	40.67	1.026	1149	0.09	10.42	10.67	-2.27
Bulgaria	2000	8.19	39.74	35.96	0.905	1014	-0.37	7.60	7.43	2.24
Croatia	2000	4.53	37.44	39.42	1.053	1053	0.19	4.70	4.62	1.85
Czech Republic	2000	10.28	38.46	39.05	1.015	1086	0.05	10.39	9.93	4.59
Denmark	2000	5.33	39.11	40.33	1.031	1120	0.11	5.45	5.81	-6.21
Estonia	2000	1.37	38.66	36.37	0.941	997	-0.23	1.31	1.36	-3.66
Finland	2000	5.17	39.16	40.83	1.043	1146	0.15	5.32	5.55	-3.99
France	2000	58.75	38.73	42.74	1.104	1185	0.34	62.86	64.71	-2.85
Germany	2000	82.16	40.83	39.67	0.972	1174	-0.10	80.55	86.18	-6.53
Greece	2000	10.55	40.30	40.34	1.001	1170	0.00	10.56	11.04	-4.31
Hungary	2000	10.22	38.97	36.37	0.933	1006	-0.26	9.71	9.64	0.68
Iceland	2000	0.28	34.62	46.92	1.355	1176	1.05	0.34	0.31	9.74
Ireland	2000	3.78	34.68	44.11	1.272	1095	0.86	4.48	4.39	2.05
Italy	2000	57.68	41.36	39.93	0.965	1196	-0.12	56.32	58.79	-4.20
Latvia	2000	2.38	38.91	36.14	0.929	1003	-0.28	2.25	2.26	-0.31
Lithuania	2000	3.70	37.08	39.10	1.054	1043	0.19	3.84	3.64	5.60
Luxembourg	2000	0.44	38.27	41.99	1.097	1158	0.32	0.46	0.50	-7.61
Moldavia	2000	3.64	33.45	38.71	1.157	925	0.57	4.08	4.39	-6.92

Table 1. Estimating life potential ratio and potential rate of growth for European countries, 2000, continued

Country name	Year*	Population size (million)	Average age	Central expectation of life	Life potential ratio	Population weighted co-variance between age and expectation of life	Potential rate of growth	Expected population in 2020 (million)	EPC Projection Uniform scenario, 2020 (million)	Relative difference between expected and projected figures (%)
Netherlands	2000	15.86	38.18	41.98	1.100	1159	0.33	16.94	17.41	-2.71
Norway	2000	4.48	38.20	42.72	1.118	1151	0.39	4.84	4.93	-1.84
Poland	2000	38.65	36.23	40.43	1.116	1061	0.40	41.84	39.76	5.22
Portugal	EPC	10.00	38.69	39.95	1.033	1105	0.11	10.23	10.53	-2.82
Romania	2000	22.46	37.02	38.43	1.038	1020	0.14	23.09	22.12	4.36
Russia	2000	145.56	37.34	34.55	0.925	931	-0.30	137.07	143.14	-4.24
Slovak Republic	2000	5.40	35.68	40.33	1.130	1039	0.45	5.90	5.60	5.49
Slovenia	2000	1.99	38.63	39.87	1.032	1131	0.11	2.03	1.96	3.54
Spain	2000	39.73	39.65	41.82	1.055	1211	0.18	41.18	41.10	0.20
Sweden	2000	8.86	40.19	41.61	1.035	1174	0.12	9.08	9.23	-1.68
Switzerland	2000	7.16	39.50	42.49	1.076	1219	0.25	7.52	7.51	0.26
Ukraine	EPC	48.94	37.73	34.74	0.921	939	-0.32	45.91	44.25	3.76
United Kingdom	2000	59.62	38.76	41.50	1.071	1137	0.24	62.57	64.38	-2.81
Total		*705.53*						*707.01*	*721.32*	*-1.98*

* Life expectancies of different year were used for Greece (1999), Italy (1998), Moldova (2001), and Russia (1999). Life expectancies for Portugal and Ukraine are estimated. EPC means that population figures are taken from the EPC99 scenario's database.

Appendix

Proof of Formula (5)

According to Equation (5) there is a relationship between central life expectancy e_P and average age a_P:

$$e_P = r \cdot Cov_P(x, e_x^0) + a_P,$$

where $Cov_P(x, e_x^0) = \int_0^\omega x e_x^0 c(x) dx$, the covariance between age and life expectancy weighted by the age-structure of population, *r* is the growth rate of the stable population.

Start with definition of central life expectancy

$$e_P = \frac{1}{P} \int_0^\omega e_x^0 P(x) dx = \frac{B}{P} \int_0^\omega e_x^0 e^{-rx} l(x) dx,$$

because

(*) $$P(x) = B(-x)l(x) = Be^{-rx} l(x).$$

By partial integration and using the rule for derivation a product and, furthermore, considering that the derivative of $e_x^0 l(x) = \int_x^\omega l(y) dy$ is equal to $-l(x)$

$$e_P = \frac{B}{P}\left[x e^{-rx} e_x^0 l(x)\right]_0^\omega + \frac{B}{P} \int_0^\omega \left(rx e^{-rx} e_x^0 l(x) + x e^{-rx} l(x)\right) dx.$$

The first part is 0, and, using (*), the two integrals can be written in form of

$$e_P = \frac{r}{P} \int_0^\omega x P(x) e_x^0 dx + \frac{1}{P} \int_0^\omega x P(x) dx = r Cov_P(x, e_x^0) + a_P.$$

Long-term consequences of stabilisation of reproductive behaviour during socio-economic transition in Poland

Jolanta Kurkiewicz

1. Introduction

The development of human population observed by demographers is perceived as an infinite chain of mutual relationships connecting structures and processes. Today's structure, which is the result of past nuptiality, fertility, mortality and migration, determines the main path of demographic processes. This future most frequently interests researchers who try to foresee the directions of development of demographic phenomena (see Hueveline, 1999).

In this context the aim of this work is to evaluate the long-term impact of changes in procreative behaviour during the socio-economic transition on the population structure in Poland. We consider the composition of population by age and sex as the result of past trends in vital events observed in 1990-2000. Two kinds of models of stable population are constructed. They differ only in relation to fertility, which is assumed to be constant at the pattern observed in 1990 and 2000, respectively. In both cases the mortality table for 2000 is used.

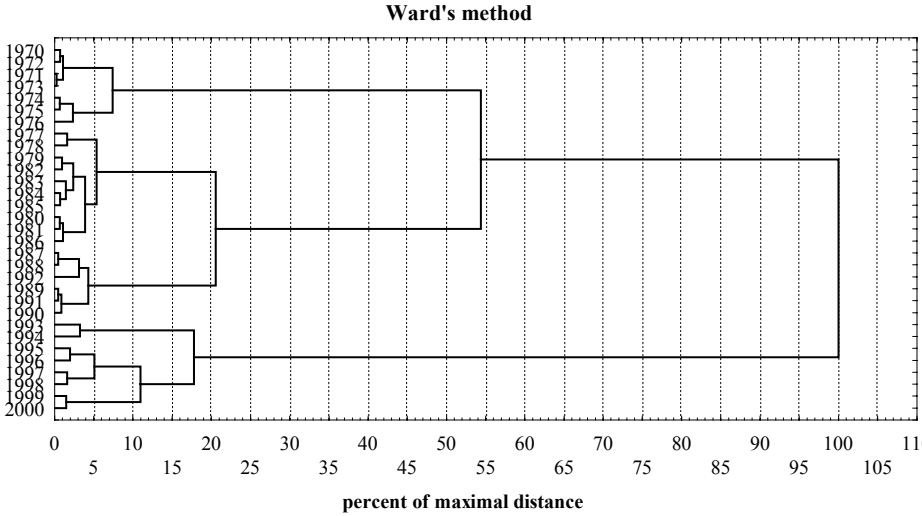
The main problem of our work is proceeded by an analysis of procreative behaviour using a transversal and longitudinal approach. Each period measure has its equivalent in cohort analysis. The information on period characteristics comes from Demographic Yearbooks 1991, 2001, and from the web page of Central Statistical Office (www.stat.gov.pl). The source of the data on cohort characteristics is the report "Recent Demographic Development in Europe" of 2002.

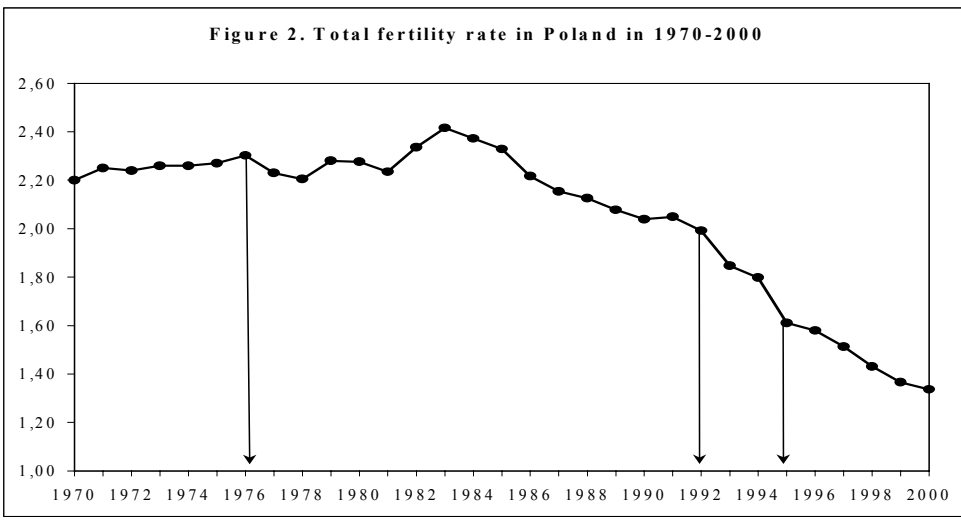
2. Period characteristics of procreative behaviour

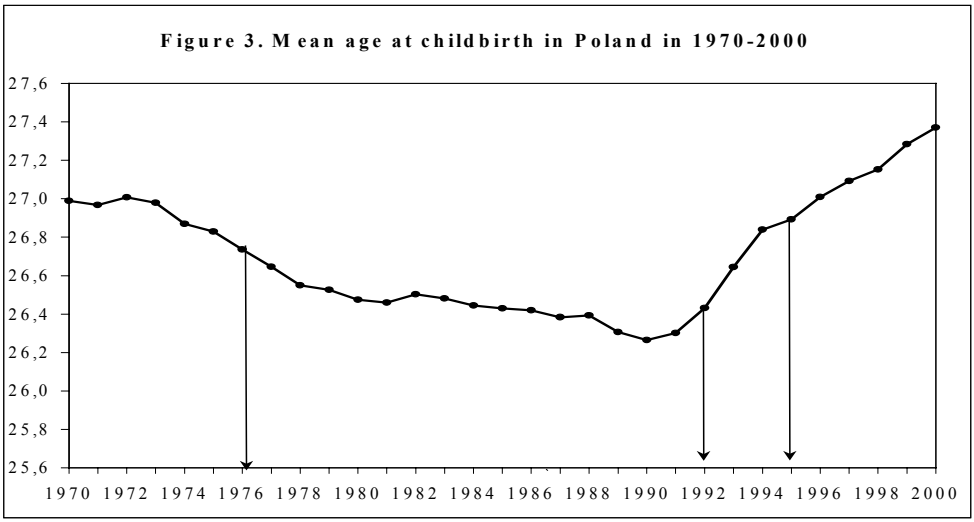
The measures calculated for calendar years reflect the period influences that can lead to the birth postponement under difficult conditions and recuperation in more favourable ones. We intend to isolate the homogenous stages in relation to the fertility pattern expressed simultaneously by both its components, *i.e.*, the total fertility rate (TFR)

and mean age of mothers at childbirth. For this purpose the cluster analysis is used. The results are presented in the Figure 1. The trends of both measures of fertility distribution are presented in the Figures 2 and 3.

Figure 1. Period fertility pattern in Poland in 1970-2000







Taking as the criterion of the classification, the difference between compared units equal to 20% of the maximal distance, stages presented in Table 1 have been obtained. The following regularities of fertility pattern are typical for isolated sub-periods:

I. 1970-1976 – a slow increase in total fertility rates, and a decline in mean age at childbirth,

II. 1977-1992 - an irregular trend TFR with a general tendency to decrease (the highest values are in the middle of 1980^{s}), and a clear decline in mean age at childbirth (until 1990),

III. 1993-2000 – a regular decline in TFR, and an increase in mean age of mothers at childbirth.

Using as a criterion 15% of the maximal distance four stages have been distinguished, because the final sub-period is divided into 1993-1994 and 1995-2000.

Table 1. Stages of changes of fertility pattern in Poland in 1970-2000

Stages	Percent of maximal distance	
	15%	20%
I	1970-1976	1970-1976
II	1977-1992	1977-1992
III	1993-1994	1993-2000
IV	1995-2000	

Source: own calculations.

A comparison of changes in mean age at first birth and proportion of births by ranks is useful to explain in depth the regularities presented above (see Figure 4-5).

The increase of the TFR at the initial stage is the result of an increase in the proportion of first and second births. It is a period of irregular change in mean age at first childbirth with a tendency to rise (the postponement of births). In this case the decrease in mean age at childbirth results from a reduction of births of higher ranks. The second stage is the longest and less homogenous in comparison to the other ones. During 1977-1991 the proportion of first births decreases (until 1987), and then starts to increase. The proportion of second child moves in the opposite directions. The percent of births of higher ranks slowly increases. Until the middle of the 1980, births of first child are postponed, then the trend changes and its new direction lasts until 1991. The regularities of the fertility pattern typical for the final stage result from an increase in the proportion of births of the first and second child and from decrease in births of higher ranks. These changes are accompanied by a postponement of first births. Finally the TFR declines and the age at childbearing increases.

Figure 4. Mean age at first birth in Poland in 1970-2000

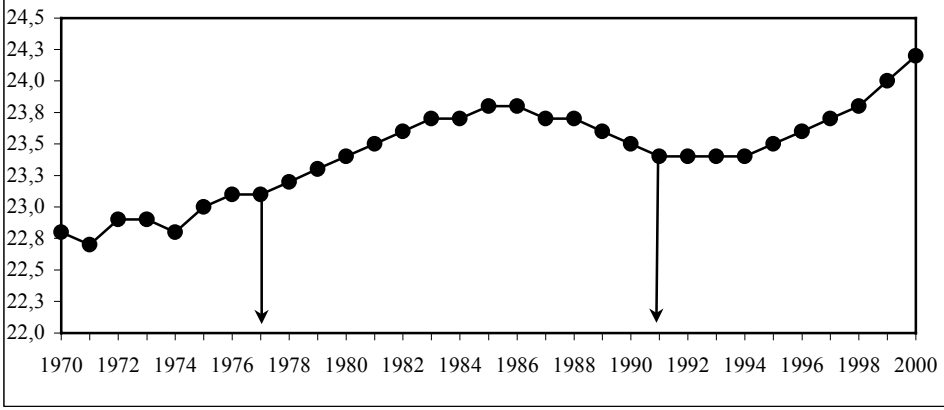
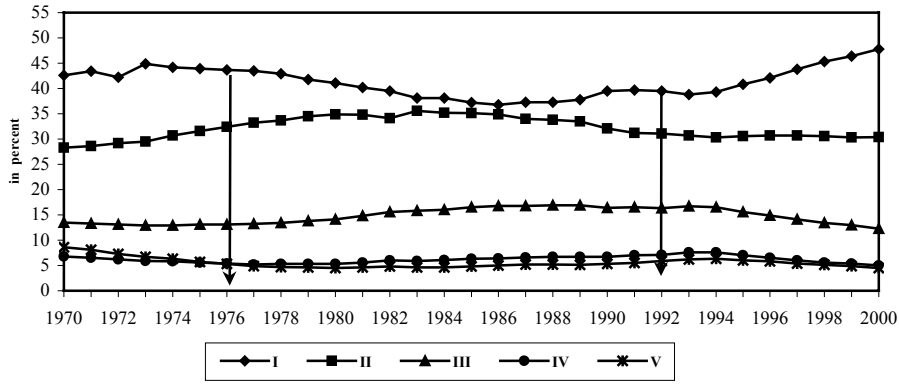


Figure 5. Proportion of live births by rank in Poland in 1970-2000



3. The cohort characteristics of procreative behaviour

The cohort approach is applied for generations 1949-1968 described by: completed fertility and mean age at childbirth. The longitudinal measures express the demographic behaviour of cohorts or generations without influence of temporal postponements and recuperations. The changes of basic characteristics of cohort fertility patterns are presented in the Figures 6-7. The purpose of our investigation is to isolate (using the

cluster analysis) the groups of generations similar in relation to procreative behaviour. The structure of connections is demonstrated in the Figure 8. The clusters of units (generations) that differ from each other less than 15% of the maximal distance are presented in Table 2.

Figure 6. Completed fertility of generations 1949-1968 in Poland

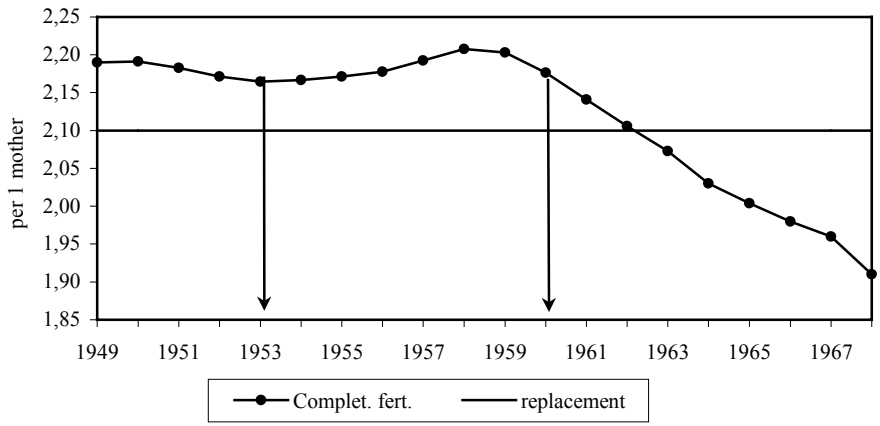


Table 2. Homogenous groups of generations by fertility pattern in Poland

Clusters	15% of maximal distance
I.	1949-1954
II.	1955-1960
III.	1961-1968

Source: own calculations.

The fertility pattern of the six oldest generations (1949-1954) is characterised by a decrease of both completed fertility and mean age at childbirth. The fertility of the next group (1955-1960) increases and reaches a maximum in the birth-cohort of 1958. At the same time the decline of the mean age at childbearing continues in younger generations. The cohorts born in 1961-1968 return to simultaneous decrease of the value of both longitudinal measures of procreative behaviour. A completed fertility below the replacement level appears in the generation of 1963 and next this declining trend.

Figure 7. Cluster for cohort fertility pattern in Poland

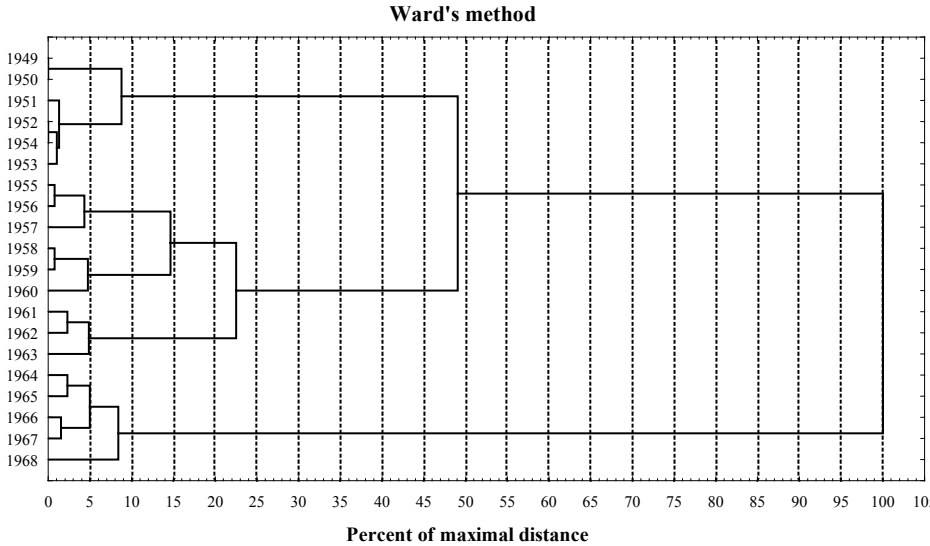
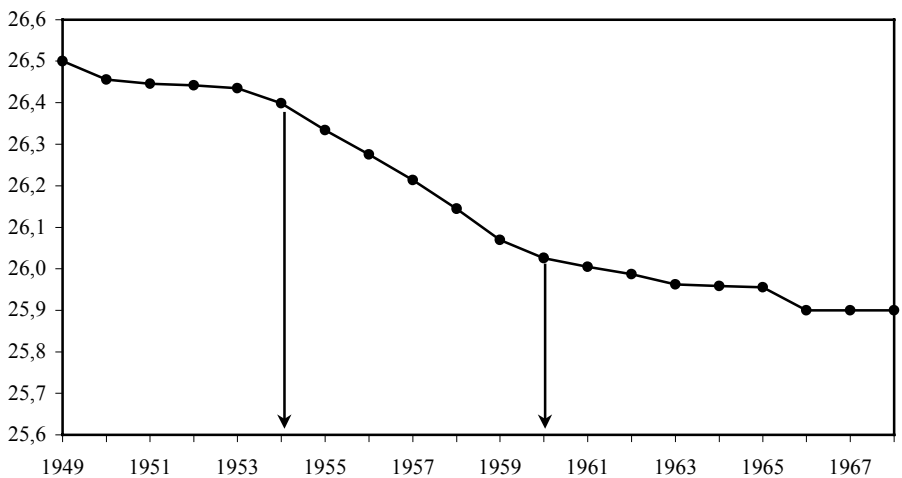


Figure 8. Mean age at childbearing in generations 1949-1968



On the basis of the regularities demonstrated above, the fertility decline occurs in both period and cohort approaches. The changes in the fertility pattern are the result of decrease in the proportion of birth of higher ranks. It is reflected in the increased mean age at childbirth. It is a behaviour characteristic of the initial stages of the second demographic transition (van de Kaa, 1994). The postponement of births is a typical feature of period behaviour. The higher values of completed fertility (in comparison to TFR) allow to expect recuperation in the future. But nevertheless the replacement of the generation is threatened.

The results of cluster analysis indicate that the significant contemporary changes in period behaviour took place at the beginning of the 1990s while in the cohort approach they started with generations born at the beginning of the 1960s.

4. Long-term consequences of procreative behaviours in 1990 and 2000

The reproductive behaviour in 1990 and 2000 is characterised by the measures presented in Table 3, separately for urban and rural populations. The tendencies observed in ten-year period are similar in both urban and rural areas. They differ only with respect to the level of the process. Total fertility, gross and net reproduction rates decreased from a value that almost guaranteed replacement of the generations in 1990 to a level well below in 2000. The mean age of mother at birth of daughter increased more than one year. The socio-economic transformation had some positive implications for mortality, reflected in a significant increase of male and female life expectancy at birth.

Although fertility in rural areas is still higher than in urban ones, it the change in rural areas was greater: in 1990 the period net reproduction rate was above replacement of generation (1.197 daughters per mother); while in 2000 equalled 0.765. This change indicates a decrease by 36% in rural areas in comparison to about 33% in urban regions.

Table 3. Main characteristics of reproduction, Poland, 1990 and 2000

Measures	1990	2000
Total		
Total fertility rate	2.039	1.338
Gross reproduction rate	0.999	0.656
Net reproduction rate	0.984	0.646
Mean age of mothers at birth of daughters	26.14	27.24
Variance of age of mothers at births of daughters	29.57	30.72
Male life expectancy at birth	66.51	69.74
Female life expectancy at birth	75.49	78.00
Intrinsic natural increase rate	-0.0061	-0.0159
Urban		
Total fertility rate	1.765	1.188
Gross reproduction rate	0.865	0.582
Net reproduction rate	0.852	0.573
Mean age of mothers at birth of daughters	26.02	27.32
Variance of age of mothers at births of daughters	28.82	30.12
Male life expectancy at birth	66.49	75.16
Female life expectancy at birth	69.98	77.76
Intrinsic natural increase rate	-0.0061	-0.0201
Rural		
Total fertility rate	2.480	1.587
Gross reproduction rate	1.215	0.777
Net reproduction rate	1.197	0.765
Mean age of mothers at birth of daughters	26.45	27.19
Variance of age of mothers at births of daughters	31.51	31.84
Male life expectancy at birth	66.50	76.00
Female life expectancy at birth	69.37	78.41
Intrinsic natural increase rate	0.0068	-0.0098

Source: Demographic Yearbook. Main Statistical Office. Warsaw 1991and 2001. and own calculations.

The long-term effects of changes in fertility and mortality are summarised in the intrinsic natural increase rate. From 1990 to 2000, it decreased dramatically from -0.0061 to -0.0159 for the total population, from -0.0061 to -0.0201 in urban, and from 0.0065 to -0.0098 in rural areas. It should be emphasised that the effects of the change in fertility dominate the improvement in life expectancy.

The long-term structural consequences of stabilisation of reproductive behaviour are evaluated on the basis of the model of the stable population constructed for total, urban, and rural areas with the intrinsic natural increase rate calculated respectively for 1990 and 2000 (see Table 3). The age pyramids are presented in the Figures 9-17. The age distributions of

populations (real and stable) are characterised by median age given in Table 4. Analysing the consequences in the domain of the ageing process we consider the structures with age groups suitable for this aim. They are shown in Table 5.

Figure 9. Age pyramid of population in Poland in 2000

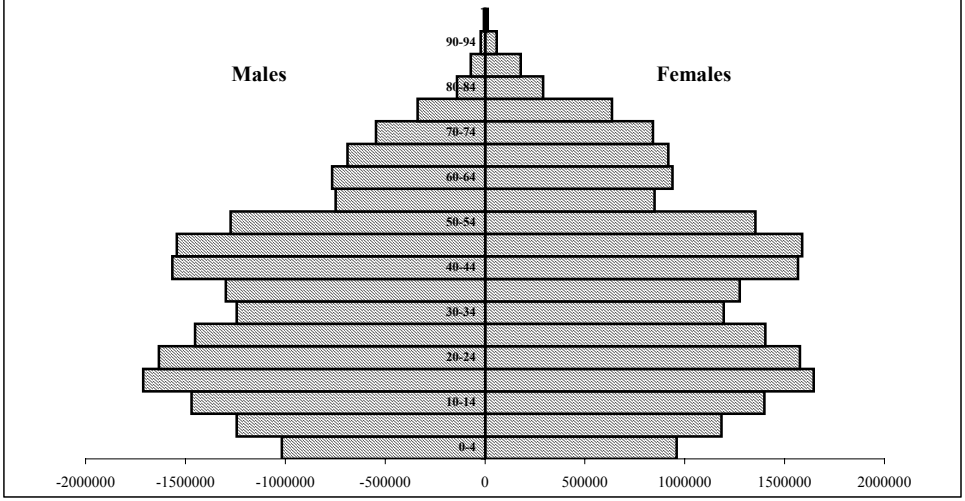


Figure 10. Age pyramid for urban population in 2000

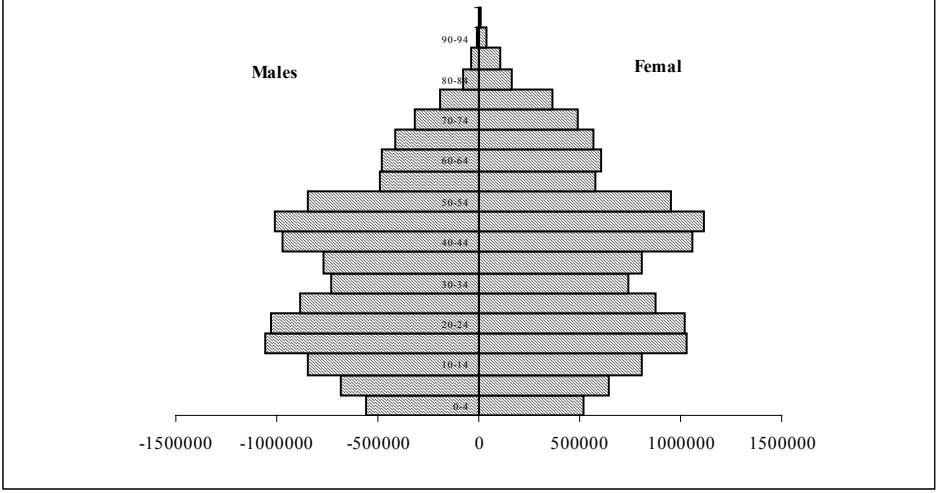


Figure 11. Age pyramid for rural population in 2000

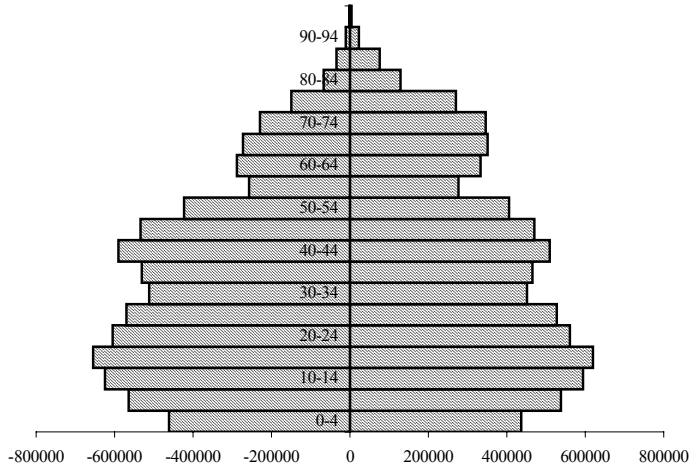


Figure 12. Age pyramid of stable population for Poland with constant fertility on the level in 1990

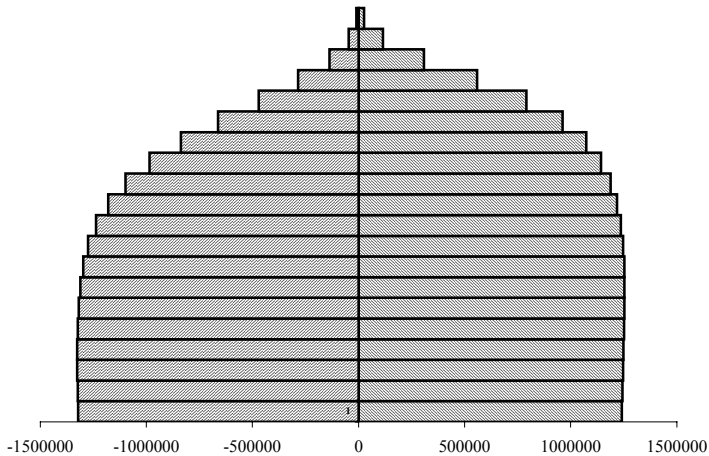


Figure 13. Age pyramid of stable population for rural area with constant fertility on the level in 1990

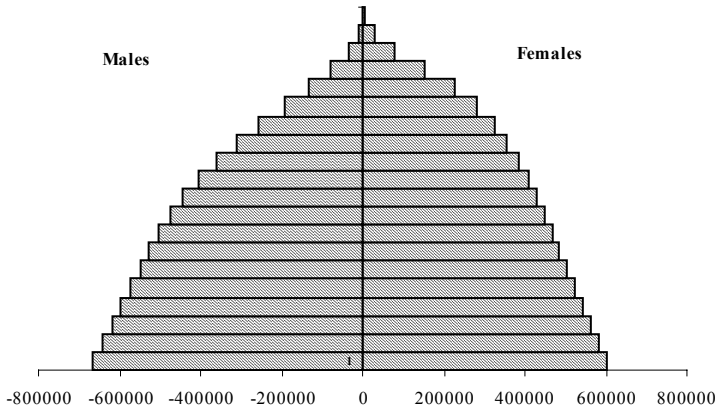


Figure 14. Age pyramid of stable population for urban area with constant fertility on the level in 1990

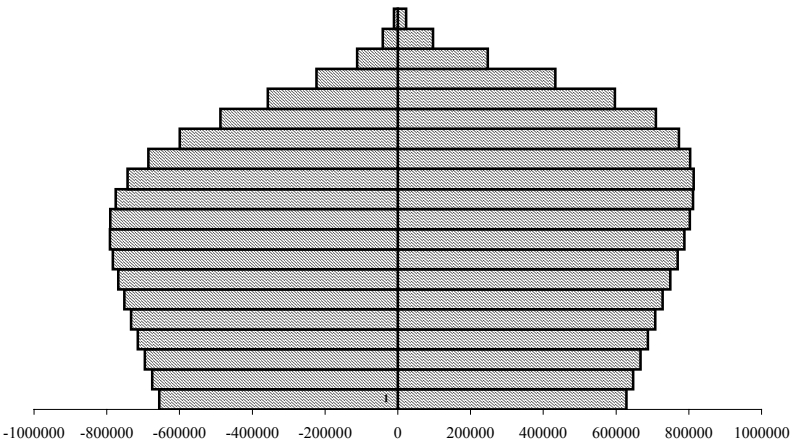


Figure 15. Age pyramid of stable population for Poland with constant fertility on the level in 2000

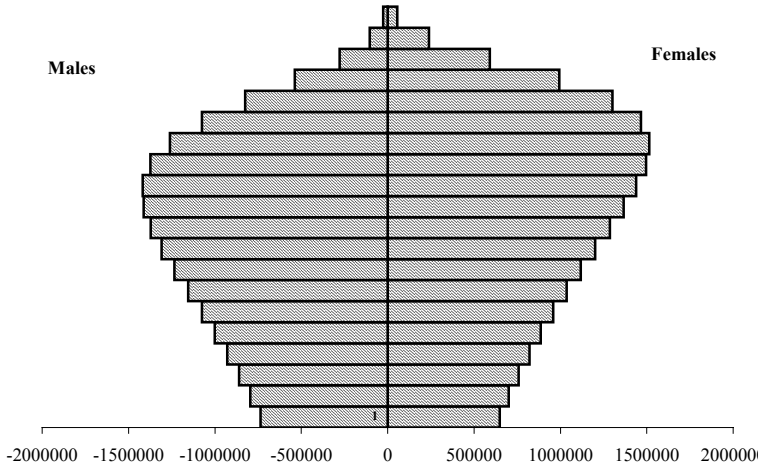


Figure 16. Age pyramid of stable population for urban area with constant fertility on the level in 2000

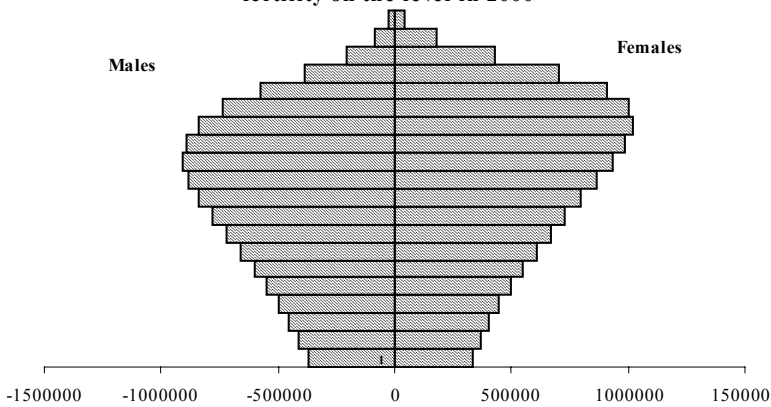


Figure 17. Age pyramid of stable population for rural areas with constant fertility on the level in 2000

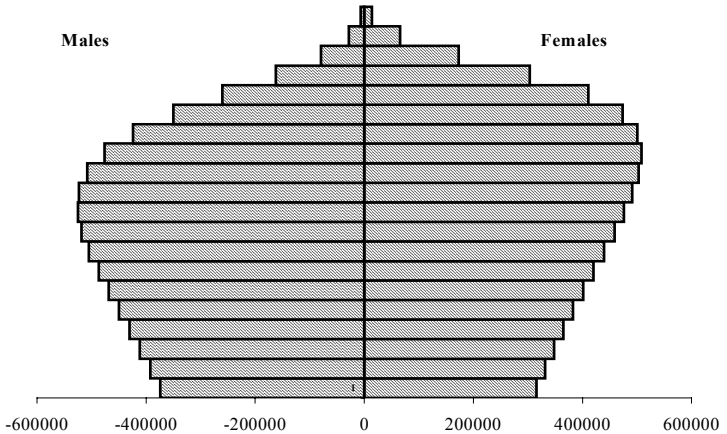


Table 4. Median age of real and stable populations in Poland

Population	Total	Males	Females
Real population in 2000			
Total	35.37	31.76	36.11
Urban	36.66	32.20	36.92
Rural	33.26	32.04	37.1
Stable population with fertility of 1990			
Total	37.43	35.15	39.54
Urban	41.83	39.49	44.25
Rural	30.83	28.51	32.23
Stable population with fertility of 2000			
Total	49.05	46.07	51.92
Urban	52.09	48.97	54.83
Rural	44.56	41.70	47.48

Source: own calculations.

Trends reflected in all of the measures used in the analysis are not surprising. But the dimensions of possible consequences should be investigated. The values of the median allow estimating the shift of the age distributions towards the top of the pyramid resulting from fertility levels below the replacement of generations.

Table 5. Ageing process in real and stable population in Poland

Age	Total	Males	Females	Total	Males	Females
	Real population in 2000					
				Total (in %)		
0-14	18.82	19.87	17.82			
15-64	68.90	70.49	67.39			
65 and over	12.28	9.64	14.79			
			Urban			
0-14	16.98	18.26	15.81			
15-64	71.37	72.56	70.28			
65 and over	11.65	9.18	13.91			
			Rural			
0-14	21.80	22.36	21.23			
15-64	64.91	67.29	62.52			
65 and over	13.29	10.35	16.25			
	Stable population					
	Fertility pattern for 1990			**Fertility pattern for 2000**		
				Total		
0-14	19.94	21.16	18.79	11.61	12.74	10.60
15-64	63.80	65.80	61.90	61.69	65.39	58.40
65 and over	16.26	13.04	19.31	26.70	21.87	31.00
			Urban			
0-14	16.63	17.78	15.57	9.76	10.77	8.88
15-64	63.68	66.15	61.36	60.26	64.26	56.74
65 and over	19.69	16.07	23.07	29.97	24.97	34.38
			Rural			
0-14	24.83	26.11	23.59	14.66	15.97	13.49
15-64	62.90	64.30	61.55	63.09	66.28	60.21
65 and over	12.27	9.60	14.86	22.25	17.75	26.30

Source: own calculations.

If fertility stabilised at the level observed in 1990, and mortality at the level observed in 2000, the proportion of the population aged 65 and over would be lower than in real population only in rural areas, where the fertility level guaranteed reproduction above simple replacement of generation. The proportion of the stable population at age 0-14 years in the total and rural regions would be higher than in reality. Only in urban areas the proportion of the youngest age groups in the stable population is lower than the proportion in the real population in 2000. In such situation the ageing process advances from the top and from the bottom of the age pyramid. The stabilisation of the fertility pattern at the level of 2000 would lead to a deep decrease in the proportion of young people (0-14

years). and a significant increase in the proportion of the old population (65 and more). It indicates a strong process of ageing from both the bottom and the top of the pyramid.

Such simultaneous changes are reflected by values of ratio given in Table 6.

Table 6. Persons aged 0-14 to persons 65+ in real and stable populations

Population	Total	Urban	Rural
Real in 2000	65.26	68.62	61.01
Stable with fertility of 1990	81.51	118.36	49.44
Stable with fertility of 2000	230.06	306.96	151.72

Source: own calculations.

In the stable population constructed with the fertility of 1990 and mortality of 2000, only in rural areas this ratio would be lower than in actual conditions. This relation would increase dramatically. particularly in urban population. if mortality and fertility stabilised on the level observed in 2000.

5. Concluding remarks

An explanation of regularities and trends is easier to formulate if there is a demographic theory to refer to. In relation to contemporary changes in developed countries. the second demographic transition is most frequently cited. The principal foundations of this concept were formulated by Hoffmann-Nowotny (1988). van de Kaa (1987. 1993). Lesthaeghe (1991). The determinants of changes in family formation and reproductive behaviour are considered on three main levels: structural. cultural. and ideational. In the earlier works only highly developed societies are considered where economic development has lost its preponderant role as the determinant of matrimonial and reproductive decisions. Later the situations in post-communist countries are introduced (see for example: Pinelli e*t al.* (2001). Lesthaeghe and Moors (2000)). The explanations proposed for Western countries need some reformulation in relation to Central and Eastern Europe ones. Kotowska (1999) has proposed some modifications in the conceptual framework to be used in these countries.

It should be emphasised that changes in the matrimonial and procreative behaviours of the societies in transition are connected with two groups of determinants. The phenomena of the second demographic transition are overlapping the social, economic, and political transformation that is occurring in this region. Two groups of causes of a very different nature are influencing each other and producing the acceleration of demographic developments towards fertility below replacement level that is causing the acceleration of the ageing process in the near and distant future.

References

Hueveline P., 1999, "The global and regional impact of mortality and fertility transitions", *Population and Development Review* 25(4), 681-702.

Hoffmann-Nowotny H.-J., 1988, "Structural and cultural determinants of Europe's second demographic transition", *Bevolking and Gezin* 1, 73-89.

Kotowska I.E., 1999, Drugie przejście demograficzne i jego uwarunkowania (The Second Demographic Transition and its Determinants). in: I.E.Kotowska (ed.), *Przemiany demograficzne w Polsce w latach 90 w świetle koncepcji drugiego przejścia demograficznego* (Demographic Changes in Poland in the 1990s from the Perspective of the Second Demographic Transition), Warsaw School of Economics. Warsaw.

Lesthaeghe R., 1991, The Second Demographic Transition in Western Countries: An Interpretation IPD Working Paper 1991-2, Brussels.

Lesthaeghe R., and G.Moors. 2000, Recent Trends in Fertility and Household Formation in the Industrialized World. IPD-WP 2000-2 paper prepared for the Welfare Policy Seminar to be held at the National Institute of Population and Social Security Research. Tokyo, March 14, 2000.

Pinelli A., H.-J. Hoffmann-Nowotny and B. Fux. 2001, *Fertility and New Types of Household and Family Formation in Europe*. Population Studies. no. 35, Council of Europe Publishing. Strasbourg.

Council of Europe, 2002, *Recent Demographic Developments in Europe 2002*, Strasbourg: Council of Europe Publishing.

GUS (Central Statistical Office), 2000, Rocznik Demograficzny (Demographic Yearbook), Warsaw.

GUS (Central Statistical Office), 2001, Rocznik Demograficzny (Demographic Yearbook). Warsaw.

Van de Kaa D.J., 1987, *Europe's Second Demographic Transition*, Population Bulletin, Population Reference Bureau. Inc. Washington D.C.

Van de Kaa D.J., 1994, The Second Demographic Transition Revisited: Theories and expectations. in: G. Beets *et al.* (eds.) *Population and Family in the Low Countries 1993: Late Fertility and Other Current Issue,* NIDI/CBGS Publication. No. 30. Berwyn. Pennsylvania/ Amsterdam. Swets and Zeitlinger, 81-126.

PART III HEALTH, MORBIDITY AND MORTALITY

Health and death in the Baltic States

Catherine Gaumé and Guillaume Wunsch

1. Introduction

The three Baltic States, Estonia, Latvia, and Lithuania, constitute an interesting population laboratory for testing hypotheses concerning the determinants of mortality changes. These countries have experienced the gradual decline in mortality observed in all the European nations during the past century but, as part of the now defunct USSR, have also been subjected to the abrupt changes accompanying the move in and out of Socialism, and the policies of the latter. For the case of Latvia, see the chapter by Krumins this volume. Though demographers are good in describing mortality levels and trends, they are somewhat at a loss of relevant results when explaining spatial and temporal differences in mortality. Several determinants of mortality changes in the USSR have been proposed and many of these factors can be applied to the Baltic situation too. To what extent these factors really do explain the observed patterns remains however a moot point which needs to be examined. Moreover, the Baltic States are not a homogeneous group in both culture and population composition. The purpose of this chapter is thus twofold: first to examine the past and current trends in mortality in this region and evaluate the plausibility of the causes of this evolution, and second to analyse the possible differences in health among these three populations in order to show the *diversity in unity* (to paraphrase the logo of a past European Population Conference) proper to our continent.

2. Mortality trends in the twentieth century

The demographic transition in Estonia and in the north of current Latvia was one of the earliest in Eastern Europe. Katus locates its beginning at the middle of the nineteenth century, *e.g.* one half-century before Russia (Katus, 1999). In the decade 1850-1860, fertility as well as mortality started a continuous and irreversible decline in Estonia. The oldest

mortality tables by sex established for each of the three Baltic territories date from the end of the nineteenth century (Katus, 2000).

In 1897, life expectancy at birth in Lithuania was equal to 41.1 years for men and 42.4 years for women. In Estonia, it was respectively 41.9 and 45.5 for men and women, and in Latvia 43.1 and 46.9 (Krumins *et al.,* 1991).

These figures place the area at a definitely more advanced stage in mortality transition than Russia, whose inhabitants had a life expectancy, during this period, of approximately 32 years (Meslé *et al.,* 1996). Nevertheless, they lagged behind the Western European countries: in 1899, the life expectancy in France for males was 43.7 years and 47.1 years for females (Vallin, 1973). Estonia, Latvia and Lithuania still had in 1926 a 9-year advantage of life expectancy compared to Russia. However, 30 years later this advantage did not exist anymore; Russia and the Baltic republics had reached the same levels of life expectancy: 68 years for both sexes. During the second half of the twentieth century, mortality in the Baltic region evolves in a similar way to the European part of the Soviet Union.

After World War II, the steady reduction of mortality levels in the Baltic Republics can be explained by the fight against infectious diseases, particularly successful thanks to the diffusion of antibiotics (Meslé *et al.,* 1996). In the middle of the 1960's, mortality related to this type of pathology reached very low levels, hence the first stage of the epidemiologic transition was completed. J. Bourgeois-Pichat was the first to notice in 1985 : " Il n'y avait pas, de 1960 à 1970, de contraste entre les pays d'Europe de l'Est et les autres pays industrialisés capitalistes"[1] (Bourgeois-Pichat, 1985). During the following years, divergences appear. In order to increase life expectancy further, it then became necessary to stop the progression of both cardiovascular diseases and cancers. Western countries started successfully the struggle against these diseases, and as early as the 1970's, mortality began falling again at a more accelerated pace. On the other hand, Estonia, Latvia and Lithuania, as well as other Eastern and Central European countries did not succeed in stopping the progression of these diseases in the society. Since the

[1] "There were no differences, from 1960 to 1970, between Eastern European countries and the capitalist industrialized countries."

middle of the 1960's, male life expectancy at birth stagnated or decreased and female life expectancy progressed only very slightly. Thus, the gap between East and West had widened during these thirty-five last years. This negative long-term trend has been aggravated in the European republics of the Soviet Union by a dramatic mortality crisis at the end of the 1980's.

The slow deterioration of life expectancy in the Soviet Union since the middle of the 1960's has been linked mainly to the increase of male mortality between the ages of 20 and 50 (Avdeev *et al.,* 1997). Attributing this evolution to a degradation of the health care system, as some have done, is not bearable because of the characteristics of the subpopulation concerned. If the health care system had actually had a dominating influence, children, women and the elderly would have been affected also. According to Avdeev *et al.,* this deterioration is without any doubt a consequence of the socio-economic situation. Men at working ages are more sensitive to social and economic tensions. "La mortalité excessive entre 20 et 60 ans chez les hommes pourrait ainsi être une réaction croissante des actifs à un monde dans lequel ils sont impliqués mais auquel ils ne participent pas réellement."[2] (Avdeev *et al.,* 1997). The lack of autonomy of the population in a communist regime, as a principal factor of explanation of the long term mortality deterioration, had been studied before by Watson (Watson, 1995). She completely reconsidered the explanations of this degradation based on health behaviours (tobacco, alcohol, eating habits, etc.). According to this author, the Eastern European reduction in male life expectancy, which occurred between 1970 and 1990, was the consequence of a specific social process. Under the Soviet era, populations developed a feeling of deprivation, related to the idea they had of Western 'normality'. This dissatisfaction was amplified by the lack of autonomy in the public domain. "There is some evidence that the "cumulated frustrations" which derived from living in state socialism and in a globalizing world, had important emotional and motivational consequences, and that these had implications for health." (Watson, 1995). The lack of autonomy perceived by the individuals relating to their context generated a culture that P. Watson qualifies as "neo-traditional". In a context of economic and political dissatisfactions, as well as exclusion from the institutional sphere, the family was of

[2] "Excessive male mortality between 20 and 60 years could thus be a reaction of those employed to a world in which they are involved but do not take part."

crucial importance. It is where individuals give meaning to the world and organise their social life. In socialist countries, traditional roles between gender still existed; women found greater coping opportunities in the family sphere and this would explain, according to Watson, the vulnerability of men.

3. Recent fluctuations in mortality

The period of strong fluctuations in mortality trends these last fifteen years in the Baltic States can be divided, as shown by Meslé and Hertrich (Meslé and Hertrich, 1999), into four different phases:

- From 1984 to 1987, life expectancy increases by more than two years for men. Nearly 60% of this progress is a result of the fall in violent mortality during adulthood. One single event occurred in this period, which could explain this evolution: the anti-alcohol campaign launched by Gorbatchev.

- From 1988 to 1992, life expectancy declines in a similar way to its former increase.

- In 1993 and 1994, life expectancy decreases even more quickly than in the previous period, and the crisis reaches its maximum. Men lose two years of life expectancy in Estonia and Lithuania, and four years in Latvia. Violent deaths and cardiovascular mortality are the two major causes of deaths contributing to this spectacular degradation. During these years, male excess mortality is at its highest, the gap between male and female life expectancy reaching 14 years.

- After 1994, the situation improves very quickly. In 1996, the three countries reach a mortality level at least comparable to what it was in 1984, before the beginning of the fluctuations.

Such broad variations in mortality levels have never been observed in time of peace or in absence of famine or epidemic. Men at working ages are the principal group concerned and the crisis is mainly explained by an upsurge of violent and cardiovascular deaths. This phenomenon is noticed all over the European part of the former Soviet Union, to different degrees however. Leon *et al.* refute the possibility for Russia of errors in the

coding of causes of death over the period 1984-1994, because cancer mortality remains stable whereas strong fluctuations are observed in other causes of death (Leon *et al.,* 1997). This stability proves that the quality of the data was not modified. In addition to that, the strongest variations occur at adulthood where the quality of death certificates is the highest. These remarks remain valid in the case of the Baltic States.

4. Explaining the recent mortality crisis

The first attempts at explaining this crisis, addressed mainly to Russia, are very evasive: ecological disaster, shock therapy applied to the economy, and collapse of the health care system. These explanatory factors have been reconsidered one after the other, whereas other elements of explanation appear to be important.

The role of the environment can be refuted because of the age of the population group concerned (Chen *et al.,* 1996), but also because the levels of industrial pollution decreased in the 1990's due to a fall in production following economic reorganisation (Shkolnikov *et al.,* 1998). Moreover, environmental factors act with delay on diseases, and this would imply instead a gradual increase in mortality.

According to Chen *et al.,* the hypothesis of a collapse of the health care system does not seem adequate, principally because children, who represent the most vulnerable group in the case of a deterioration of the health care system, were not affected by the crisis. Moreover, the impact of curative medicine on cardiovascular and violent mortality is limited. However, the level of infectious mortality (especially tuberculosis), which is sensitive to a shortage of drugs, slightly increased over the period. Shkolnikov *et al.* referring to Russia, state that "the collapse has not happened" (Shkolnikov *et al.,* 1998). According to various estimations (Shapiro, 1997; Davis, 1998), the total health expenditure for Russia was in 1994 only 10% lower compared to 1990. If the collapse had not happened, privatisation of the health sector could however have restricted access to health care (Shkolnikov *et al.,* 1998). Becker and Bloom (Becker and Bloom, 1998) estimate that a part of the mortality increase in the older age groups can nevertheless be charged to failures in the medical system.

Looking at the mortality crisis as the result of the collapse of the health care system is an interpretation based, according to Shapiro, on the glorification of the past (Shapiro, 1997). In Soviet times, drugs were indeed often not available, and the effectiveness of the ones produced was very debatable; at best, they proved to be placebos. "Soviet medicine was a mixture of the irrelevant, the reasonably qualified, and the downright dangerous" (Shapiro, 1997). She also underlines the problem of excess hospitalisation and medical consultation serving only to obtain illness certificates justifying absence from work. Regarding the supposedly new inequality of access to health care, Shapiro is dubitative and reminds us that under the Soviet era access to medical care was related to one's position in the society.

Aiming to understand the recent mortality crisis, Chen *et al.* distinguish a historical dimension from a contemporary one (Chen *et al.,* 1996). In a first series of explanations, they isolate a delay-effect induced by bad living habits during the last decades characterised by high alcohol and tobacco consumption, an unbalanced diet, and the absence of physical exercise (all risk factors for cardiovascular diseases), and a catching-up effect related to the deaths avoided during the anti-alcohol campaign of Gorbatchev. "The current crisis may be the legacy of both the mistakes and the successes of the past." (Chen *et al.,* 1996). Avdeev *et al.* put forward for Russia the hypothesis of population heterogeneity vis-à-vis the risk of death related to alcohol (Avdeev *et al.,* 1997).

Since the second half of the twentieth century, alcohol plays a considerable role in Soviet mortality due to extremely high levels of consumption, over 10 litres of pure alcohol per capita and per year since the 1980's, and this number does not even take into account samogon consumption (Treml, 1997). The anti-alcohol campaign launched by Gorbatchev in 1985 caused a real decrease in consumption, which quickly had very positive effects on health, particularly among adults. According to Shkolnikov and Nemtsov (Shkolnikov and Nemtsov, 1997), almost all the fall of Russian mortality between 1984 and 1987 was a result of the reduction in alcohol consumption. On the other hand, the mortality increase since 1988 is much more complex to analyse due to the difficulty in isolating the effect of alcohol from the effects of other factors. According to Leinsalu, fluctuations in alcohol consumption were of the same level in all Baltic Republics, and the impact on mortality was

similar. "The high level of alcohol consumption is certainly an important factor in excess mortality" (Leinsalu, 1995).

Goskomstat classified deaths directly related to alcohol abuse in four categories (Meslé *et al.,* 1996): alcoholic psychoses, chronic alcoholism, cirrhoses of the liver, and alcoholic poisonings. A relation between alcohol consumption and mortality by accident and suicide has been clearly established (Andreasson *et al.,* 1988). Till the beginning of the 1990's, Russian mortality by road accident and alcoholism followed the same pattern. In the 1980's and 1990's, suicide and homicide are also affected by fluctuations in alcohol consumption (Shkolnikov *et al.,* 1995). It has also been shown that the risk of a fatal cerebral vascular accident increases with high alcohol consumption, whereas moderate alcohol consumption protects from coronary diseases (Fontaine *et al.,* 1996). In addition, alcohol decreases the immunising functions and thus increases the risks of infectious and parasitic diseases, particularly tuberculosis. Alcohol is also a risk factor for cancers; nevertheless, it takes several decades of exposure before its effects are diagnosed. Due to this delayed action, the stability of cancer mortality trends between 1984 and 1994 remains nevertheless consistent with the hypothesis of alcohol as an essential determinant of mortality over this period.

In the contemporary dimension, explanations are related to recent economic, social, and political changes. Chen *et al.* insists on the economic impoverishment of Russia (Chen *et al*., 1996). Mean income per capita decreased by about two-thirds between 1990 and 1995. During the same period, GNP per capita fell by 31% in Estonia, 37% in Russia and Lithuania, and 46% in Latvia (1999). According to Krumins (1997), in Latvia this impoverishment was accompanied by a reduction in principal foodstuffs consumption. However, these modifications of nutrition habits, and particularly the reduced consumption of meat and dairy products to the profit of cereals, had a positive effect on cardiovascular diseases (Shapiro, 1997). On the other hand, the reduction noticed in fruit and vegetable consumption had a negative impact. According to Becker and Bloom (Becker and Bloom, 1998), it is possible that geographical variations in mortality were due, at least partly, to diet but it remains difficult to allot the fast increase in cardiovascular diseases to changes in food habits.

Impoverishment does not seem to have a significant power in explaining the mortality increase. Walberg *et al.* (Walberg, 1998) showed that the strongest declines of life expectancy in Russia occurred in the richest areas in 1990, *i.e.* where the decrease of household incomes had less impact. Shkolnikov *et al.* shares the idea that the sudden Russian mortality increase cannot really be explained by a fall in standards of living. In the first half of the 1990's, they were higher in Russia than in many communist countries where mortality was lower; evolutions of standards of living and mortality are not synchronous. Moreover, the youngest and the elderly, the most economically dependent age categories, underwent a mortality deterioration definitely milder than the working age population (Shkolnikov *et al.,* 1998). The link between economic growth and health improvement, or vice-versa, is therefore complex.

The specific effect of economic reforms on health is difficult to isolate. Does a fast economic reorganisation have harmful consequences on health or on the contrary does it increase economic performances and thus minimises the health crisis? Brainerd (Brainerd, 1998) analysed the relation between standardised mortality rates and the type of economic reforms in 22 Central and Eastern European countries as well as in the former USSR, between 1989 and 1994. The correlation between mortality increase and the speed and the depth of the reforms towards a market economy is strong only in certain countries of Eastern Europe. In the countries that chose a fast and radical reorganisation of their economy, the Baltic States in particular, the increase in mortality rates was higher than in the states where the transition was more gradual.

After analysing changes occurring at the economic level, Chen *et al.* seeks explanations for the mortality increase on the social level. Concomitantly with the growth of the private sector, the income inequalities in the Baltic States increased. Between the end of 1980's and the end of 1990's, the Gini coefficient increased in the three states (World Bank, 2000)[3]. Many studies done in Western countries have shown the existence of a social gradient in mortality, particularly for cardiovascular and violent mortality. According to Chen *et al.,* these social inequalities act on mortality via not only material deprivations but also via one's

[3] In 1987-90, the Gini coefficient was equal to 0.23 in Lithuania and 0.24 in Estonia and Latvia ; in 1996-99, it reached 0.32 in Latvia, 0.34 in Lithuania and 0.37 in Estonia.

personal environment, *i.e.* one's position in society, social cohesion and social network confidence and hope in the future. "Psychosocial stress may mediate between disparities and mortality" (Chen *et al.,* 1996).

This hypothesis of stress as a risk factor seems to be appropriate both for the Russian and Baltic cases, on the one hand because these countries experienced significant socio-economic upheavals which contributed to increasing social pressure, and on the other hand, because psychological factors have an influence on cardiovascular and violent mortality. Thus, for example, the incapacity of men in the 50-60 age group to cope with the new situation coincides with the excess mortality in this age group. According to Shapiro, stress could explain a large part of the abrupt rise of mortality. According to this view, individuals are not capable to cope with stress because they have no adaptation strategy or because the socio-economic situation is so chaotic that the choice of a strategy is difficult. The labour market transformations plunged a part of the population in a state of confusion and uncertainty as regards the future (Shkolnikov *et al.,* 1998). Stress can also increase bad health behaviours. In addition, an organism under stress is predisposed to developing diseases. The link between cardiovascular stresses and diseases is particularly complex; according to Fontaine *et al.,* even if it is not possible to say today that stress is a direct cause of coronaropathy, it can nevertheless activate the evolution of this disease via the nervous system (Fontaine *et al.,* 1996).

In an attempt to explain mortality, the relational network of individuals appears to be another important factor. It is more and more generally accepted that social support acts as a regulator of stress (Fontaine *et al.,* 1996) and that social cohesion is a determining factor of public health (Kennedy *et al.,* 1998). According to a study conducted for 40 Russian areas by Kennedy *et al.*, with data going back to 1994, social capital is strongly correlated with standardised mortality rates, with life expectancy and mortality rates by causes, for both men and women. This relation remains after controlling income per capita.

In addition to economic and social transformations, the countries of the former Soviet Union had to face a disruption of political institutions and consecutively a weakening of law and order. Criminality and corruption have grown. Chen *et al.* thinks that the increase in violent mortality, particularly in homicides, can partly be explained by this political

disruption. Analysis made by Walberg *et al.* showed a positive correlation between decrease in male life expectancy and increase in crime recorded over the period 1990-1994 in Russia. Criminality rate is used here as an indicator of civic cohesion of the population (Walberg *et al.,* 1998). The data used, provided by Goskomstat, only takes into account recorded crimes and thus certainly underestimates the extent of the phenomenon.

5. Evolution of health indicators in the 1990's

As we have just seen, the decrease in life expectancy during the period 1988-94 can be explained by diverse factors. We will analyse now more closely the possible deterioration of the health care system, in order to understand whether privatisation in progress led indeed to a reduction of health facilities and medical personnel, and whether the costs of health care increased for patients and by this way contributed to reduced access to care. We will also analyse the evolution of self-perceived-health and mental health. The last section deals with health related behaviours such as alcoholism, tobacco and drugs consumption. Do these various indicators follow the same pattern as life expectancy?

5.1. Health facilities

The Soviet Union was the first country to introduce into its constitution the right for everyone to benefit from health care. The improvement of the medical system was part of the national plan, health being considered as a public service like any other. But in fact, health was not a priority for the state, according to the estimations made by Field (1994a). The share of the budget devoted to health decreased since the 1960's till the collapse of the Soviet Union, declining from 6% to approximately 2% of the GNP. Nevertheless, statistically speaking, the country seemed to be at a very high position on a world scale of health care resources. Actually, the effort had been put on construction of hospitals and training of doctors. As Field underlines: "The medical care system was oriented toward numerical indices and practical goals […]." (Field, 1994b). Within the Baltic States, Lithuania had the highest numbers of medical personnel per capita in 1992 and 1998, the situation hardly changed during these seven years (see Table 1).

Table 1. Health facilities in the Baltic countries in 1992 and 1998

	Estonia		Latvia		Lithuania	
	1992	**1998**	**1992**	**1998**	**1992**	**1998**
Hospitals	118	78	176	150	200	187
Hospital beds						
Thousands	14.8	10.5	33.8	23.2	44.5	35.6
Per 10000 population	97.3	72.7	130.0	95.0	119.3	96.2
Physicians (including dentist)						
Thousands	6.0	5.3	10.7	8.0	16.6	16.9
Per 10000 population	39.8	36.6	41.0	32.7	44.5	45.6
Medical mid-personnel						
Thousands	12.2	10.4	23.8	15.6	40.6	38.0
Per 10000 population	80.0	72.1	91.0	64.0	108.7	102.6

Source: see references Estonian Medical Statistics Bureau, Latvian Medical Statistics Bureau and Lithuanian Health, Information Centre, 1993 and Ministry of Social Affairs of Estonia, Department of Statistics and Analysis, Medical Statistics Bureau, Latvian Health Statistics and Medical Technology Agency, Health Statistics Department and Lithuanian Health Information Centre, 1999.

On the other hand, Latvia experienced drastic cuts during this period: a reduction of 20% of the number of doctors per capita and 30% of medical mid-personnel. Concomitantly, the average number of medical examinations per capita fell in Latvia, from 10.5 in 1985 to 6.1 in 1992, and in 1998 Latvians visited only 4.6 times their doctor (Ministry of Welfare of the Republic of Latvia, 1999). In the three states, the number of hospital beds fell by 20% to 30% between 1992 and 1998.

5.2. Population health

In the very disturbed context of mortality during the 1990's, the *Norbalt Living Conditions Project* is an invaluable source of information for apprehending levels and trends of the principal health indicators. It is the only survey related to living conditions carried out simultaneously in the three Baltic States. The first round of the project concerning the three Baltic countries goes back to 1994, the second to 1999. In Lithuania, an initial survey was held just before independence in 1990. The Norbalt Living Conditions Survey I and II are the result of collaboration between Fafo (Institute for Applied Social Science) in Oslo and of local institutions in the Baltic States. Through the various stages of the project, the same topics were approached and a large number of questions were identical. It is thus possible to make comparisons in time and space. The

first part of each questionnaire collects information on the household and its different members; the second part is addressed to a randomly selected individual within the household. These two parts cover the following fields: housing conditions, labour force, economic self-assessment, income, working conditions, health conditions, violence, migration, attitudes and values, and social contacts. The questions dealing with health were only answered by one member over 18 years old of each household, *i.e.* in Estonia a total of 4455 people in 1994 and 4726 in 1999, in Latvia respectively 3132 and 3044, and in Lithuania 2411 and 2743. These samples are representative of the populations concerned and the response rates are very high: 90% for the whole 1994 surveys. The data collected are of a high quality, the methodology used was the one developed in the Scandinavian context for several decades.

The Finbalt Health Monitor is also a valuable source of information, but it was not held for the first time the same year in the three Baltic countries (1990 in Estonia, 1994 in Lithuania and only 1998 in Latvia). Stankuniene *et al.* (1999) has examined the health-related behaviours according to those data.

Subjective health

"How would you characterise your health in general?" is the first question of the Norbalt survey related to health; five possibilities of answer are proposed: very good, good, fair, bad and very bad. This question makes it possible to have a measurement of health status as perceived by individuals. According to Miilunpalo *et al.* "The subjective health assessment reflects a person's integrated perception of health, including its biological, psychological and social dimensions, that is inaccessible to any external observer" (Miilunpalo *et al.,* 1997). Nevertheless, this approach is not free of criticism as pointed out by Gourbin and Wunsch (2002): the standards of reference used by an individual to evaluate himself are impossible to know; in addition health remains a multidimensional concept which is difficult to apprehend by only one single measure.

In the successive surveys carried out in 1994 and 1999, whatever the country or the sex considered approximately half of the individuals declared being in average health. For the following analysis, we will only

focus on the proportions of individuals in the samples rating their health as good or very good. The situation regarding subjective health has hardly changed between 1994 and 1999 (see Figures 1 and 2). Lithuanian men generally declare themselves in good or very good health. Among women, Estonians perceive their health the best. The position of Latvia is the worst for both sexes. Thus for example, in 1999, only a little more than half of the young men aged less than 25 considered their health higher than average in Latvia, versus three-quarters in Estonia or Lithuania. Women always perceived their health badly compared to men. This tendency is verified by the majority of surveys. These differences in subjective health can be partly explained by the fact that women have a different relation to their body and health. As Vallin (Vallin,1973) underlines, they are accustomed to consult the medical sphere and thus have more facility to speak about their health problems. In addition, in the countries of the former Soviet Union, there is a selection effect: male excess mortality being particularly high, a part of the men who could have complained about bad health died prematurely, men in good health being thus over-represented. Within the Baltic States, the larger sex differences are observed in Lithuania. In 1999 these differences are particularly marked before 50 years and they grow blurred thereafter.

Differences in health perception also appear according to ethnic origin. Between the two rounds of Norbalt, the distribution of population by ethnic origin is almost the same: 65% of titular ethnicity in Estonia, 57% in Latvia and 82% in Lithuania. In 1994, the titular ethnicity group declared its health to be better than others and these differences are more marked among women. The most significant gap is between Estonian and Russian women. In 1999, all these differences were reduced, and they almost disappear for men in Estonia and Latvia. In Lithuania, inequalities remain between Lithuanian and Russian men and the other ethnic groups, to the detriment of the latter. Within a country and an ethnic origin, differences between sexes are noticeable in Lithuania, where the share of the non-local population is also the weakest. Thus, Russian ethnic men claim themselves twice more often in good or very good health those women (44% versus 19%).

Figure 1: Percentage of men rating their health as good or very good

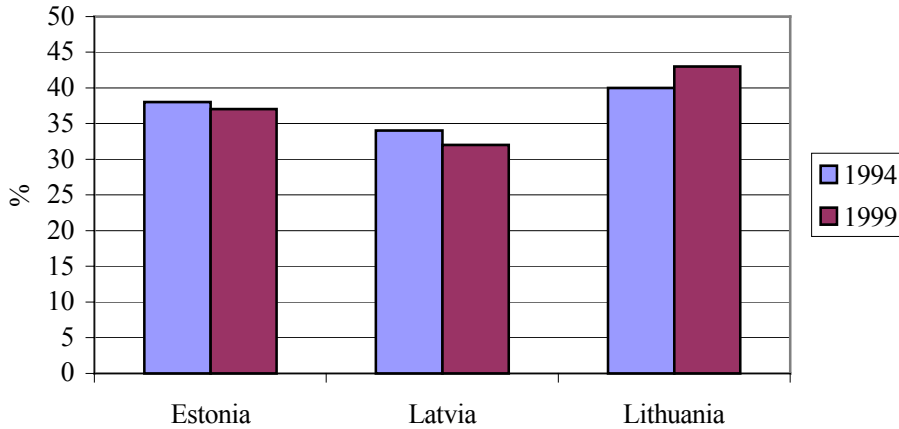
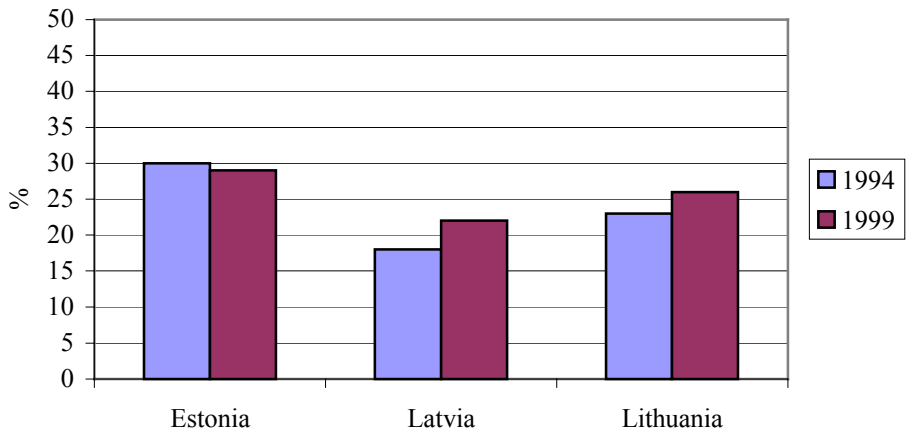


Figure 2: Percentage of women rating their health as good or very good



Leinsalu (Leinsalu, 2002) has shown in analysing the Estonian Health Interview Survey data for 1996-97 that in Estonia, low educational level, Russian nationality, low personal income and rural residence (but for men only) are the major factors underlying a poor self-rated-health.

Illness or disabilities of prolonged nature

In the three countries, in 1994 and in 1999, women complain more often about illness or disabilities of prolonged nature than men do, whatever the four large age groups considered (less than 25 years old, 25 to 49, 50 to 64, 65 and over). In Estonia, the proportion of individuals suffering from such pathologies is always higher. Latvia and Lithuania come in second and third position. In 1994, half of the women in Estonia suffer from chronic diseases or handicaps, whereas a little more than the third say so in the two other countries. In five years time, the situation has improved for all of the Baltic countries. Proportions declaring a chronic disease have dropped by 4 to 7 points within each country among both women and men. In 1999, if differences between sexes are very weak in Latvia, 31% against 28%, the proportions are 44% and 35% in Estonia, 29% and 20% in Lithuania respectively for women and men. Paradoxically in Estonia, where women generally declare themselves more often in good or very good health, they also have more often illness or disabilities of prolonged nature. Hence, among Estonian women of average health, about half (45%) of them suffer from chronic diseases, *i.e*. twice as much as in the two other countries.

Mental health

In the two rounds of the Norbalt Living Conditions Survey, people had to specify how much certain symptoms related to mental health had disturbed them during the previous week. Four answers were possible: not at all, a little, quite a bit, and extremely. We choose to gather the answers "quite a bit" and "extremely", and thus to analyse variations within this category. Among the eight symptoms taken into account, the most frequently quoted in the three Baltic countries are feeling tense or keyed up, headaches and nervousness or shakiness inside.

The evolution between 1994 and 1999 is very positive since the proportions of people suffering from these various symptoms have all decreased (see Figure 3 and 4). Estonia benefited from the most significant improvement. In 1994, the country distinguished from the two others by a very high percentage of people experiencing the symptom "worrying too much about things". At the opposite, Lithuanians were

more often disturbed by a feeling of worthlessness than the others were. In 1999, differences between countries are attenuated. In 1994 and in 1999 as well, Lithuanians seem to suffer less from psychological disorders than Latvians or Estonians. As women more often declare themselves in bad health than men, they also more frequently complain about mental health symptoms.

The consumption of sedatives or other such medicines that can be linked to mental health is astonishingly higher in Lithuania. In this country, in 1994, 70% of women and 40% of men interviewed took occasionally or regularly such medicines, versus 30% and 15% respectively in Estonia, whereas Latvia occupied an intermediate position. As the frequency of psychological disorders decreased during the second half of the 1990's, consumption of this type of drugs decreased also, losing 10 points in each country. In general, the higher the consumption, the less often these drugs were prescribed by a doctor.

Figure 3: Quite a bit or extremely disturbed by the symptom - Men

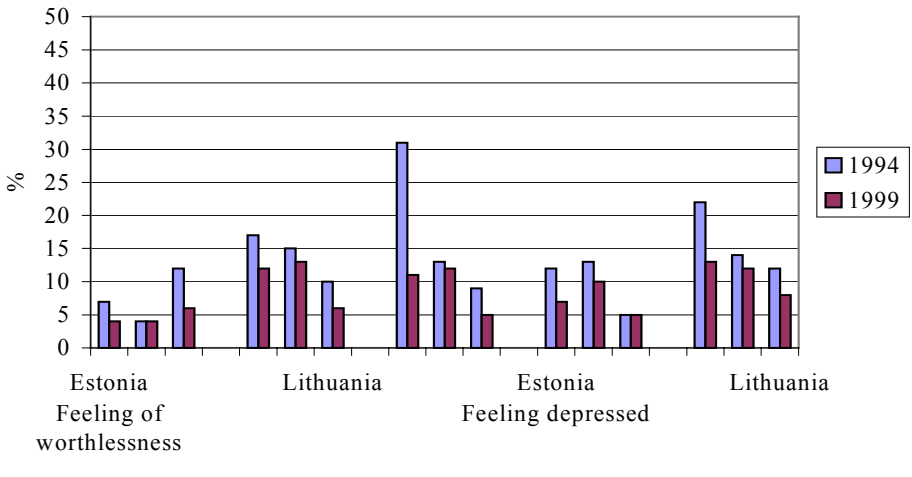
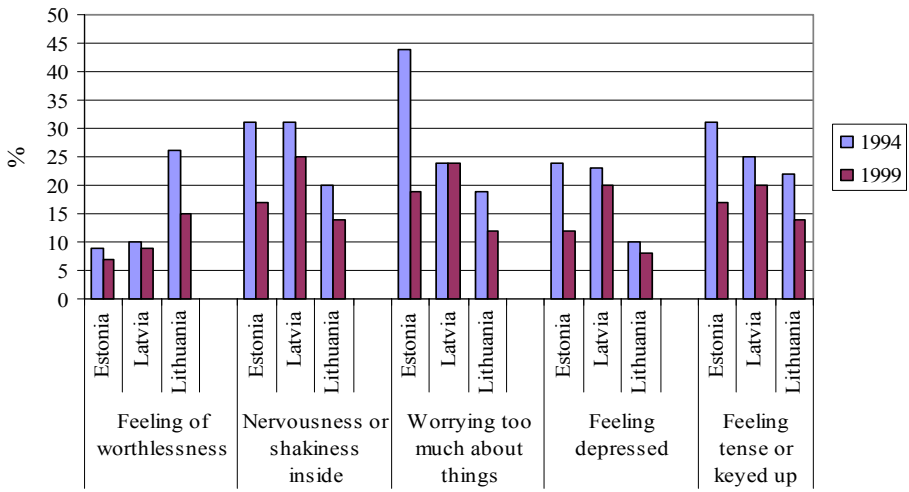


Figure 4: Quite a bit or extremely disturbed by the symptom - Women



Access to the health care system

Concerning access to health care and cost of health, we limit our analysis to 1999 because no data is available for 1994. In 1999, people were asked about contacts they had with medical personnel during the last six months. In Latvia, the share of population having visited or visited by a general practitioner, a specialist, or a dentist is lower than in the two neighbouring countries, for both men and women. In each country, women consulted more often than men, particularly their general practitioners did. For example, half of Lithuanian women visited their general practitioner, whereas a little more than a third of men did. Regarding differences by age, 50% or more of women had visited their general practitioner in the last six months if they were 45 years old in Lithuania, compared to 55 years old in Estonia and 65 years old in Latvia. The most frequent visits, *i.e.* to the general practitioner, took place very seldom in the private sector in Lithuania (less than 2%), whereas they represent approximately a quarter of all consultations in Estonia. Visits to a specialist take place mainly in the public sector and there are no big

differences between the countries. On the other hand, visits to dentists in the private sector account for more than half of the cases.

Cost of health services

Differences observed in access to health services can be explained by the costs that differ according to country. In Estonia and Lithuania, more than 90% of the patients pay absolutely nothing when they visit their general practitioner; in Estonia mainly because they are covered by illness insurance, in Lithuania because the services are free (see Figure 5). In Latvia, the situation is totally different, 80% of the patients paying at least part of the cost of consultation. In Latvia, only a quarter of the people interviewed belong to a household in which at least one of the members benefits from a health insurance, whereas this proportion rises to 60% in Lithuania and to 84% in Estonia (see Figure 6). Regarding the implementation of health insurance, Estonia is clearly in advance and Latvia behind. This explains why Latvians complain more often having to refrain from using some medical treatments because of their high costs. For example 30% declare refraining from dental care when they need it, *i.e.* twice as much as in Estonia or Lithuania.

Smoking

Tobacco consumption is stable over the short period considered: about half of men smoke in each of the three countries, and among women less than10% smoke in Lithuania, less than 15% in Latvia and less than 20% in Estonia. Women smoke less often than men do, and when they smoke, their average consumption of cigarettes is lower: 9 to 11 cigarettes for women versus 16 for men. The largest proportions of smokers are found between 25 and 45 years old.

Figure 5: Method of payment of general practitioner consultation

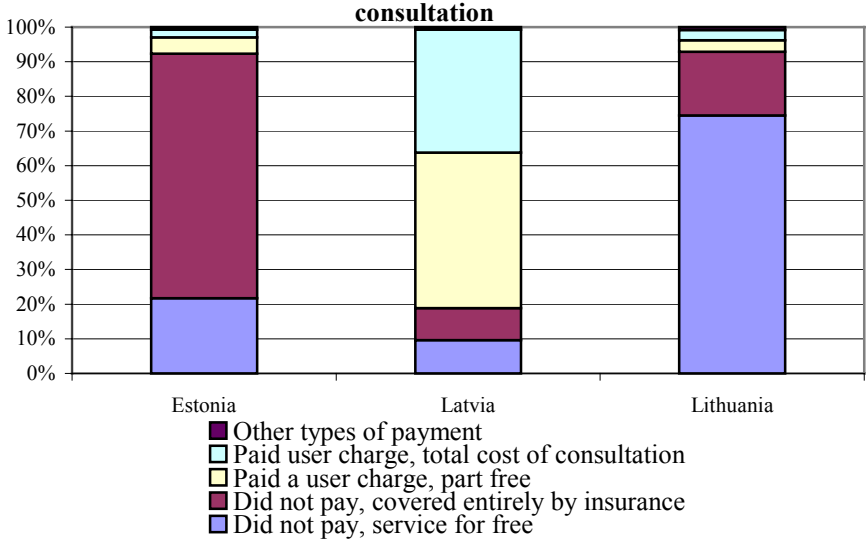
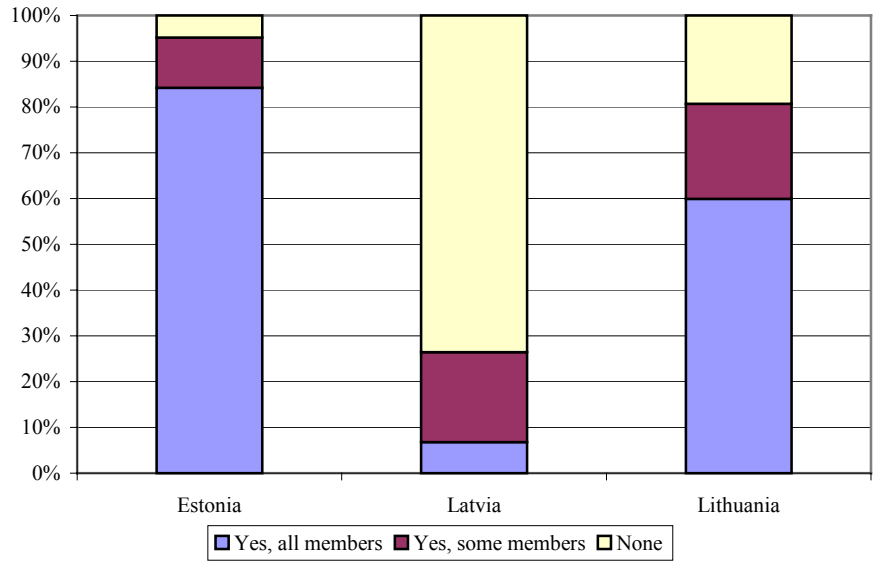


Figure 6: Coverage by health insurance of the household



Drinking

Between 1994 and 1999, proportions of men and women having consumed alcohol less than seven days before the survey decreased in the three countries. The most significant fall occurred in Lithuania. Latvia was dissociated from its neighbours in 1994 because of lower shares of consumers; in 1999 it is joined by Lithuania. Trends are the same for men and women, proportions being nevertheless reduced by half for women. Among men who have drunk alcohol the month before the 1999's survey, Latvians drank on average on 1.8 days during the last two weeks versus 2.5 days for Estonians and Lithuanians. There is hardly any difference between the two rounds of Norbalt.

For those who have drunk the month preceding the survey, whereas Latvian men drank less often in 1999, they drank a greater quantity of spirits: 5.7 glasses (on average) during the last time they drank alcohol, versus 5.3 glasses for Lithuanians and 'only' 3.6 for Estonians. Thus, Estonians drink more often than the others but definitely lower quantities. In alcohol consumption, spirits exceeds clearly all other kinds of alcohol. Estonia has had the most moderate consumption of wine and beer, and Lithuania the strongest. Women drink less often and lower quantities, except for wine in Lithuania. The highest differences between sexes relate to the quantity of spirits: women drink half of what men drink.

Drugs

One of the last questions of the 1999's survey in the health part of the questionnaire is devoted to illicit drugs: "Have you during the past 5 years ever been offered drugs?". In the three Baltic countries, two constants exist: the 15-34 year-old men answer more often in an affirmative way, and after 35 years of age percentages become extremely weak. Estonia arrives ahead for positive answers, followed by Latvia and then Lithuania. About one-third of young men aged 15 to 24 declare having been proposed drugs.

6. Conclusion

Among the three Baltic countries, and considering the period 1994-1999, the lowest levels of life expectancy both for males and females are observed in Latvia. It is also in this country that the inhabitants have the poorest subjective health. However, if there seems to be an overall relationship between expectation of life and subjective health, it does not hold anymore for sex differentials. Though the difference in life expectancy between males and females was as high as 12 to 14 years in 1994 at the peak of the crisis, men considered themselves in better health than women, complained less of illness and disabilities of prolonged nature, had less mental health problems (according to them!), and consulted physicians less often than women did. Can subjective health measures therefore be adequately compared between men and women?

Concerning the changes in health indicators between 1994 and 1999, subjective health has not changed much but one observes significant improvements in terms of mental health and illnesses or disabilities of prolonged nature. The 1999's survey shows however that the three countries are not equal in respect to the cost of health services. While in Lithuania or Estonia, 90% of the population has access to free health services, the proportion amounts only to 20% in Latvia. Unfortunately, no surveys of the Norbalt type were held before 1994 in all three Baltic countries. It is therefore not possible to compare the health situation in the second half of the 1990s with what it was at the beginning of the period of mortality increase.

In the long run, smoking and alcohol consumption by males probably explain part of their poor performance in terms of life expectancy, as these behaviours are not recent. Though these behaviours can partly be related to the stagnation or slow deterioration in male life expectancy in the Baltic countries, they are less relevant in explaining the mortality crisis or the improvements thereafter. The same can be said for a possible effect of the deterioration of the environment and even of the collapse of the health care system, as we have seen from the literature on the subject. Could stress induced by the economic and social transformations and the lack of suitable adaptation strategies therefore be a main culprit, possibly in synergy or in interaction with behavioural risk factors? If this were the case, preventive health policies should not only focus on early detection,

physical exercise, reduction of tobacco and alcohol consumption, and on eating habits (OMS, 2003). Attention should also be given to stress-inducing socio-economic factors such as unemployment and job insecurity. This would however mean moving from individual prevention to societal prevention, a much harder task indeed!

Acknowledgements

The authors wish to thank Krumins for reading a preliminary version of this chapter. They would appreciate receiving comments from readers.

References

Andreasson S., P. Allebeck, and A. Romelsjo, 1988, "Alcohol and mortality among young men: longitudinal study of Swedish conscripts", *British Medical Journal* 296, 1021-1025.

Avdeev A., A. Blum, S. Zakharov, and E. Andreev, 1997, "Réaction d'une population hétérogène à une perturbation: un modèle d'interprétation des évolutions de mortalité en Russie", *Population* 1, 7-44.

Becker C. M. and D. Bloom, 1998, "The demographic crisis in the former Soviet Union", *World Development*, Special Issue: The Demographic Crisis in the Former Soviet Union 26 (11), 2029-2043.

Bourgeois-Pichat J., 1985, L'évolution récente de la mortalité dans les pays industrialisés, in: *La lutte contre la mort*, INED - IUSSP , Travaux et documents, cahier n°108.

Brainerd E., 1998, "Marked reform and mortality in transition economies" *World Development*, Special Issue: The Demographic Crisis in the Former Soviet Union 26 (11), 2013-2027.

Chen L.C., F. Wittgenstein, and E. McKeon, 1996, "The upsurge of mortality in Russia: Causes and Policy Implications." *Population and Development Review* 22 (3), 517-530.

Davis C., 1998, "Morbidité, mortalité et réformes du système de santé dans les états en transition de l'ex-URSS et de l'Europe de l'Est.", *Revue d'études comparatives Est-Ouest* 29 (3).

Estonian Medical Statistics Bureau, Latvian Medical Statistics Bureau and Lithuanian Health, Information Centre 1993, *Health in the Baltic Countries 1993.*

Field M. G., 1994a, *The health crisis in the former Soviet Union: a report from the "post-war" zone*, the thirteenth international conference on the social sciences and medicine, Lake Balaton, Hungary.

Field M. G., 1994b, *Requiem for an unamended health system: an assessment of the soviet socialized medicine*, Congress of the International Sociological Association, Bielefeld.

Fontaine O., H. Kulbertus, and A.-M. Etienne, 1996, *Stress et cardiologie*, Masson, Paris.

Gourbin C. and G. Wunsch, 2002, La santé, la maladie et la mort, in: *Démographie: analyse et synthèse. III Les déterminants de la mortalité*. Paris, Editions de l'INED**,** 9-24.

Katus K., 1999, *Notes on life tables of Estonian population in Soviet period*, European Population Conference, The Hague.

Katus K., 2000, "Long-term mortality trend in the Baltic Countries.", *Trames* 4 (3), 231-256.

Kennedy B. P., I. Kawachi and E. Brainerd, 1998, "The Role of Social Capital in the Russian Mortality Crisis." *World Development*, Special Issue: The Demographic Crisis in the Former Soviet Union 26 (11), 2029-2043.

Krumins J., 1997, "Health and mortality during a transition to a market economy: case of Latvia", *Revue Baltique* 10, 114-129.

Krumins J., T. Valkonen, and P. Zvidrins, 1991, "Mortality Trends in Finland and Latvia since the 1920s." *Yearbook of Population Research in Finland* XXIX, 61-72.

Leinsalu M., 1995, "Time trends in cause-specific mortality in Estonia from 1965 to 1989, " *International Journal of Epidemiology* 24 (1), 106-112.

Leinsalu M., 2002, "Social variation in self-rated health in Estonia: a cross-sectional study." *Social Science & Medicine* 55, 847-861.

Leon D. A., L. Chenet, V. Shkolnikov, S. Zakharov, J. Shapiro, G. Rakhmanova, S. Vassin and M. McKee, 1997, "Huge variations in Russian mortality rates 1948-94: artefact, alcohol or what?" *The Lancet* 350, 383-388.

Meslé F. and V. Hertrich, 1999, *The health crisis in the Baltic countries: a common and varied experience*, European Population Conference, The Hague.

Meslé F., V. Shkolnikov, V. Hertrich and J. Vallin, 1996, *Tendances récentes de la mortalité par cause en Russie 1965-1994*, Données statistiques n°2, INED, Paris.

Miilunpalo S., I. Vuori, P. Oja, P. Matti and H. Urponen, 1997, "Self-Rated Health Status as a Health Measure: The Predictive Value of Self-Reported Health Status on the Use of Physician Services and on Mortality in the Working-Age Population." *Journal of Clinical Epidemiology* 50(5), 517-528.

Ministry of Social Affairs of Estonia, Department of Statistics and Analysis, Medical Statistics Bureau, Latvian Health Statistics and Medical Technology Agency, Health Statistics Department and Lithuanian Health Information Centre, 1999, *Health in the Baltic Countries 1998.*

OMS, 2003, Intégrer la prévention aux soins de santé, *Education Santé*.

Shapiro J., 1997, *The hypothesis of stress as a leading explanatory variable,* IUSSP, International Population Conference, Beijing.

Shkolnikov V., G. A. Cornia, D. A. Leon and F. Meslé, 1998, "Causes of the Russian mortality crisis: evidence and interpretations." *World Development*, Special Issue: The Demographic Crisis in the Former Soviet Union 26 (11), 1995-2011.

Shkolnikov V., F. Meslé, and J. Vallin, 1995, "La crise sanitaire en Russie. I. Tendances récentes de l'espérance de vie et des causes de décès de 1970 à 1993." *Population* 4-5, 907-944.

Shkolnikov V. and A. Nemtsov, 1997, The anti-alcohol campaign and variations in Russian mortality, in: J. L. Bobadilla, C. A. Costello and F. Mitchell (eds.), *Premature Death in the New Independent States*, National Academy Press, Washington D.C.

Stankuniene V., D. Jasilionis, and J. Krumins, 1999, "Social differences in mortality, morbidity and health - related behaviour during transition: research findings in the three Baltic countries", *Revue Baltique* 14, 9-35.

Treml V. G., 1997, Soviet and Russian Statistics on Alcohol Consumption and Abuse, in: J. L. Bobadilla, C. A. Costello and F. Mitchell (eds.), *Premature Death in the New Independent States*, National Academy Press, Washington D.C.

Vallin J., 1973, *La mortalité par génération en France depuis 1899*, Travaux et documents, cahier n°63, INED, PUF.

Walberg P., M. McKee, V. Shkolnikov, L. Chenet and D. A. Leon, 1998, "Economic change, crime, and mortality crisis in Russia: regional analysis", *British Medical Journal* 317, 312-318.

Watson P., 1995, "Explaining rising mortality among men in Eastern Europe", *Social Science & Medicine* 41 (7), 923-934.

World Bank, 2000, *Making transition work for everyone. Poverty and Inequality in Europe and Central Asia*, Washington.

Some aspects of reproductive health in Hungary

Catherine Gourbin and Eva Gardos

1. Introduction

In the field of reproductive health, the European situation in the matter of stillbirth and infant mortality is traditionally described as relatively homogeneous both concerning the levels and the trends observed. We will present here the evolution of these two phenomena in Hungary since 1955. These evolutions, purely descriptive, will be compared first with those of two other countries, Austria and the Czech Republic, and then some factors possibly explaining the observed differences will be presented. The frequency of live births with low birthweight and infant mortality by birthweight for the most recent period (1990-2000) will be examined, and a comparison between some socio-demographic variables of women having an induced abortion or an infant death will be presented. Finally, as social policies and medical structures set up for taking care of pregnancy and early childhood can also influence health and infant mortality, we will briefly present a broad outline of these policies and structures in Hungary.

As Hungary is a country with agricultural predominance, it seems reasonable to compare it with countries with an old history of industrialisation or having a common history. Austria (a rural predominance country) with a historical past linked to Hungary, and the Czech Republic (Bohemia and Moravia), industrialised since the 19th century and with a common historical past with the Austro-Hungarian Monarchy, were retained for the comparisons of the mortinatality and infant mortality evolutions. Data presented in this chapter (births, infant deaths, and induced abortions) were taken one year out of five from the demographic yearbooks of the three countries referring to the period 1955-2000. Birth data in these yearbooks come from vital registration records and thus concern only events declared to the vital registration. Therefore, the mortality risks will depend in each country on the definitions and criteria determining the vital registration of live birth, stillbirth and death, and can be particularly sensitive to any change in this field. Before establishing any comparison, we will briefly present the

legislation concerning this registration in the three countries. Concerning birthweight, the comparison with the Czech Republic and Austria will relate to the period 1980-2000. The comparison of the evolutions of foeto-infant mortality between the various countries was done on the basis of infant mortality probabilities by age at death. In this study the risks of infant mortality were calculated by period, the denominator being the number of live births occurring during one calendar year and the numerator the number of deaths between 0 and 1 year which have occurred during the same calendar year. The bias introduced is small, insofar, as the yearly variations of the number of live births are small. The stillbirth rate was calculated with the total of the births (live births and stillbirths) recorded during one calendar year as denominator.

The distributions of birthweight and the probabilities of death associated with the various categories of weight were compared for the three countries. Mortality risks by birthweight and age at death were calculated. Three classes of birthweight were retained: less than 1 000 g, 1 000-2 499 g, 2 500 g or more. The comparisons relate to the early neonatal mortality, neonatal mortality, and post-neonatal mortality.

2. Evolution of stillbirth rate and infant mortality in Hungary, Czech Republic and Austria

2.1. Comparability of the data: A preliminary condition to comparative analysis

By limiting the comparison to three countries, there are chances that the situations will be more homogeneous. In fact, no criterion is equivalent in the three countries since 1955.

Hungary: the declaration of birth (live birth or stillbirth) to the vital registration is compulsory since 1895, and the 28 weeks criterion of gestation duration required for recording a stillbirth has been changed to 24 weeks since 1997. The criteria for registration of a live birth (recognition of signs of life) were specified in 1952 with the adoption of the WHO recommendations[1]. In 1984, the Hungarian Central Statistical

[1] Live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation breathes, or shows any other evidence of life, such as beating of the heart, pulsation of

Office (HCSO) replaced the birth registration form (for live birth and stillbirth) and the spontaneous abortion form by two other forms: one for live birth, the other for foetal death whatever the gestation duration at death. The latter form includes a specific part for early and medium-term foetal deaths (before the $28^{th}/24^{th}$ week of gestation duration) and another for late foetal deaths, the term "stillbirth" being then abandoned in favour of "late foetal death". This change of denomination was introduced in line with a new legislation. Vital registration of late foetal deaths was terminated. This might have had however a perverse effect. The equivalence between "late foetal death" and "stillbirth " not having been explicitly presented, the change might have created a "legislative vacuum" for the obligation to declare these late foetal deaths at the statistical registration. There is however no evidence of such an effect. If there is no legal obligation anymore, the religious obligation continues if the parents wish to bury their stillborn child. The decrees promulgated by HCSO on the need for filling in the statistical forms relative to the occurrence of these events still remain in force.

Austria: since the end of the 19th century, a minimal body length crown-heel of 35 cm (equivalent to 28 weeks of gestation duration according to WHO) is the legislative criterion for the registration of a stillbirth. The definition of live birth, in use since 1977, does not follow exactly that recommended by WHO since this event is recognised only if the presence of one of the three following signs is observed: breathing, beating of the heart, or pulsation of the umbilical cord. Before this date, breathing was the only sign of life making it possible to distinguish a live birth from a stillbirth. Contrary to what was foreseeable, this modification did not involve variations in the frequencies of the reported events. An explanation is as follows: the changes introduced into the legislative text agreed with the directives given in the deontologic code of the midwives whose last amendments go back to 1963.

Czech Republic: in 1965, the WHO definition for a live birth was adopted. Before this date, only breathing was retained as a sign of life. On the other hand, the definition of a stillbirth has not changed and remains conditional on gestation duration of at least 28 weeks. The last

---

the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered liveborn (WHO, 1950).

legislative change on March 1st 1988 added a criterion of viability to the definition of live birth: henceforth a 24 hour minimal lifespan is required for the registration of the live born baby with a birthweight lower than 500g.

2.2. Trends in late foetal mortality and infant mortality

Before presenting a brief description of the age at death structure, first of all, we will consider the traditional subdivision into infant mortality and late foetal mortality. By means of comparisons with other countries, we will try to clarify some features specific to Hungary. With regard to this country, we will refer to the very complete description of Hungarian infant mortality written by Klinger in 1982 (Klinger, 1982).

Infant mortality

Between 1955 and 2000, the infant mortality rate dropped by more than six times in Hungary and the Czech Republic, and by ten in Austria. However, even if the trends in the three countries are similar, the Hungarian level is the highest by far, and this is visible for the whole period (Table 1). The amplitude of the differences existing between the three countries changes according to the rhythm of the fall. In Hungary, between 1955 and 1975, infant mortality decreases from 59.98‰ to 32.85‰, but the fall is far from uniform during this period: if, between 1955 and 1965, the fall is fast and of 3‰ per year on average, it is only 0.6‰ per year during the following decade. On the other hand, between 1975 and 1980, mortality decreased by almost a third before remaining stationary between 1980 and 1985. During the 10 following years the decrease continues at a regular rhythm (approximately 1‰ per year), then slows down during the period 1995-2000 to reach the level of 9.2‰ in 2000. Until 1970, the ratio of the rates between Hungary and Austria are about 1.3. From this date, the rhythm of the decrease accelerates in Austria, and, since 1990, the level of its infant mortality rate is lower by almost half that of Hungary. In 1955, the level of infant mortality in the Czech Republic is lower by half than that observed in Hungary. The rhythm of the fall is similar to that noted in Hungary: a strong fall in the infant mortality level between 1955 and 1960 followed by a period of stagnation of about fifteen years and a resumption of the fall at the end of the 1970s. The level of the rate (4.1‰) reached in 2000 (the lowest

among the three countries) is lower than the Hungarian rate by more than half.

Table 1. Evolution of infant mortality (by thousand live births) and of late foetal mortality (by thousand births) in Austria, Hungary and Czech Republic – 1955-2000

Infant mortality				**Late foetal mortality**			
Year	**Austria**	**Hungary**	**Czech Republic**	**Year**	**Austria**	**Hungary**	**Czech Republic**
1955	45.56	59.98	27.89	1955	17.48	16.11	11.07
1960	37.53	47.63	20.03	1960	14.98	13.19	9.85
1965	28.27	38.84	23.72	1965	11.90	11.27	7.45
1970	25.89	35.89	20.20	1970	10.06	9.91	6.90
1975	20.54	32.85	19.36	1975	8.37	8.21	5.66
1980	14.34	23.16	16.85	1980	6.58	7.72	5.58
1985	11.17	20.36	12.47	1985	4.63	6.17	4.44
1990	7.83	14.82	10.80	1990	3.58	5.53	4.05
1995	5.24	10.66	7.70	1995	4.37	3.49	3.11
2000	4.83	9.22	4.10	2000	4.21	5.48	2.84

Source: Demographic yearbooks of the various countries

Late foetal mortality

Contrary to infant mortality, the level of late foetal mortality in Hungary in 1955 is slightly lower than that observed in Austria but higher by almost 50% than that of the Czech Republic. The decline of late foetal mortality is regular between 1955 and 1975, slows down between 1975 and 1980, accelerates again between 1980 and 1985 (it decreases by almost 20% during this period) and slows down again. A dramatic decrease is observed between 1990 and 1995; the increase from 1995 to 2000 is due to the change of criterion concerning gestation duration.

The profiles of evolution between the three countries are very different. If until 1970, the Austrian level of late foetal mortality is higher than that observed in Hungary, it decreases afterwards very quickly, reaching a level of 4.2 ‰ in 2000. At this date, just like almost during the whole period, it is in the Czech Republic that the level of late foetal mortality is the lowest.

Age at death structure

In Hungary, between 1955 and 1975, the stability of early neonatal mortality probability[2] is remarkable; the light rise during the years 1965-70 could be the result of an improvement in the declaration of live births (Table 2).

Table 2.Trends in early neonatal mortality (by thousand live births), neonatal mortality (by thousand live births) and post-neonatal (by thousand survivors at 28 days) in three European countries, 1955-2000

Early neonatal mortality				(a)Post-neonatal mortality			Neonatal mortality		
Year	Austria	Hungary	Czech Republic	Austria	Hungary	Czech Republic	Austria	Hungary	Czech Republic
1955	22.72	22.33	12.68	31.58	31.20	16.16	18.14	29.71	11.92
1960	20.22	22.10	10.72	25.50	27.37	13.10	13.29	20.83	7.02
1965	17.79	23.61	14.95	21.72	27.52	17.29	8.46	11.63	6.54
1970	16.80	24.45	13.14	20.78	28.40	15.12	7.07	7.71	5.15
1975	12.90	23.34	12.88	16.33	26.74	14.83	5.21	6.27	4.58
1980	7.55	15.34	9.43	10.06	17.83	11.28	5.11	5.42	5.64
1985	5.49	12.75	6.93	8.41	15.64	8.59	4.24	4.80	3.91
1990	3.28	8.73	5.76	5.39	10.83	7.68	3.42	4.04	3.14
1995	2.49	5.54	3.04	3.44	7.30	4.94	1.99	3.39	2.77
2000	2.49	4.58	1.65	3.28	6.17	2.54	1.55	3.07	1.57

(a) 0-29 days until 1965 for Austria and Hungary

Source: Demographic yearbooks of the various countries

After this long period of stagnation, the contrast offered by the years 1975-80 is amazing, with a fall of this mortality so much absolute (difference of 8‰) as relative (reduction of more than 30% in 5 years).
After a weak deceleration at the beginning of the eighties, the early neonatal mortality rate is divided by more than two between 1985 and 1995. However, in spite of a level of 4.58‰ in 2000, the early neonatal mortality rate is approximately twice higher than that of the two other countries. In Austria, the decrease of the risk of early neonatal mortality is

[2] Deaths occurring between birth and 6 completed days divided by the number of live births.

relatively slow between 1955 and 1970, accelerates starting from this date to reach a level of 2.49‰ in 2000. In the Czech Republic, the level of early neonatal mortality observed in 1955 is lower by almost 50% than that of the two other countries, but the trend proves to be the same, since it is only from 1975 that early neonatal mortality starts to drop, and in 2000, after a fast and continuous fall, this level is only 1.65‰. It is probable that the small rise observed in 1965 in the Czech Republic is the consequence of the modification of the definition of live birth. In addition, the fact that, in the three countries, the reduction in early neonatal mortality begins to be really effective only after 1975, is probably due to the improvement of medical techniques and the establishment of infrastructures dedicated more specifically to neonatal care. For example in Hungary, in 1974 three prenatal intensive centres (PIC) were opened. In 1975 the health government installed a neonatology program and 10 new PICs were opened. Currently 23 PICs are active.

The evolution of the probability of neonatal mortality[3] is similar to that of early neonatal mortality. A significant decrease occurs only in 1975, except in Austria where a regular fall of the risk is observed since 1955, with however an acceleration between 1975 and 1980. In 2000, just like early neonatal mortality, the level of neonatal mortality is twice higher in Hungary than in the other two countries. The decline of post-neonatal mortality[4] in the three countries (Table 2) is regular over the period, but again the hierarchy observed in 1955, a higher level of post-neonatal mortality in Hungary (29.71‰ versus 18.14‰ in Austria and 11.92‰ in Czech Republic) is maintained, and even if the fall slows down since 1970, it is nevertheless permanent. In the year 2000 in Hungary, post-neonatal mortality is at a level of 3.07‰ and is almost double that in the two other countries. In the three countries, one can observe that in 1955, the level of post-neonatal mortality is lower than that of neonatal mortality, a sign of a former improvement in the conditions of hygiene and preventive attitudes (vaccinations). Whereas, these last 25 years, the

[3] Deaths occurring between birth and 27 completed days divided by the number of live births.

[4] Deaths occurring after the 27th day and before the end of the first year of life divided by the number of survivors at the 28th day.

fall concerns mainly the mortality of the first week, a probable consequence of the progress in medical techniques.

Whatever the age at death considered, the values of the risks, in general higher in Hungary at the beginning of the period, will remain so until 2000. The level of Hungarian late foetal mortality, lower than in Austria in 1955, becomes also the highest since 1980. Similarly, the risks of early neonatal and neonatal mortality, closest in 1955, are now almost two times higher in Hungary than in Austria. Could this infant excess mortality be partially explained by the strong incidence of children of low birthweight observed in Hungary? It is undeniable that infant mortality and particularly early neonatal mortality depend largely on two factors of morbidity implying higher risks of death- the proportions of live births with a weight lower than 2 500 g (low birthweight) or of less than 37 weeks of gestation duration (premature birth). A low birth weight can be the result of a low gestational age or a delay of foetal growth *in utero,* but the large majority of infants with low birthweight are pre-term births. To answer this question we have compared distributions of live births with low birth weight in the three countries. Because of its greater reliability compared to gestation duration, birth weight is the only factor retained for the analysis.

3. Structure of births by weight: incidence and risks of mortality

In Hungary, between 1956 and 1974 the proportion of the low birthweight babies (< 2 500 g) increases by more than 50%[5], reaching its maximum in 1974 (11.7%) before slow but regular decline. During the eighties, it stabilises at around 10% and then starts a slow decline to the level of 7.7%at the end of the 1990s. Both in Austria and in the Czech Republic the frequencies of low birthweight babies remain stable at about 6% during these 20 last years. With regard to the proportion of the children of extremely low birthweight (< 1 000 g), it remained similar in the three countries until 1995 (about 0.3%) but one can observe a very small increase in these births in Austria in 2000, with a proportion of 0.5%[6].

[5] This dramatic increase during the sixties is due to the increase of deliveries in a hospital (from 34% in 1950, it reaches 85% in 1960, and 98% in 1980) and consequently to a more precise statement of the weight at birth.

[6] This could be due to a better declaration of these children in relation with the increasing performances of neonatal care techniques.

In Hungary, between 1990 and 2000, the mortality of children of extremely low birthweight (< 1 000 g) decreases by about 40% for early neonatal mortality and by 35% for neonatal mortality (Table 3). In the Czech Republic, the decrease of mortality for the category of less than 1000g is also significant, early neonatal and neonatal mortality dropping respectively by more than 80% and 60%.

In Austria the fall remains moderate, by about 20% to 30% for these ages at death. It is true that in this country, the levels of mortality observed in 1990 were lower by almost 50% than in the Czech Republic and Hungary. Over the same period, in Hungary the children of a birth weight ranging between 1 000 g and 2 500 g had three times lower risk of death in the early neonatal period. Neonatal mortality also fell by almost 60%.

Table 3. Infant mortality by age at death and birthweight in Austria, Czech Republic and Hungary, 1990 – 2000

	Early neonatal mortality			Neonatal mortality			Post-neonatal mortality		
	Austria	**Hungary**	**Czech Republic**	**Austria**	**Hungary**	**Czech Republic**	**Austria**	**Hungary**	**Czech Republic**
				1990					
< 1 000 g LB Austria : 236 Hungary: 544 Czech Rep.: 302	364.4 (86)	718.7 (391)	609.3 (184)	495.8 (117)	790.4 (430)	745.0 (225)	58.8 (7)	105.3 (12)	181.8 (14)
1 000 – 2 499 g Austria : 5 033 Hungary : 11110 Czech Rep.: 6862	25.0 (126)	43.7 (486)	51.7 (355)	32.0 (161)	57.1 (297)	70.1 (481)	14.8 (72)	15.2 (330)	16.6 (106)
≥ 2 500 g Austria : 85 510 Hungary : 114 025 Czech Rep.: 123490	1.0 (85)	1.9 (220)	1.7 (214)	1.4 (123)	2.6 (297)	2.4 (298)	2.7 (229)	2.9 (330)	2.4 (298)

Table 3. Infant mortality by age at death and birthweight in Austria, Czech Republic and Hungary, 1990 – 2000, continued

	Early Neonatal Mortality			Neonatal mortality			Post-neonatal mortality		
	Austria	**Hungary**	**Czech Republic**	**Austria**	**Hungary**	**Czech Republic**	**Austria**	**Hungary**	**Czech Republic**
				1995					
< 1 000 g LB Austria : 330 Hungary : 464 Czech Rep.: 317	297.0 (98)	495.6 (496)	394.3 (125)	384.8 (127)	603.4 (280)	545.7 (173)	64.0 (13)	168.5 (31)	194.4 (28)
1 000 – 2 499 g Austria : 4 757 Hungary : 8 728 Czech Rep. 4950	13.0 562)	29.0 (253)	21.6 (107)	17.0 (81)	39.1 (341)	35.8 (177)	7.9 (37)	14.7 (123)	16.1 (77)
≥ 2 500 g Austria : 83 582 Hungary :102 862 Czech Rep: 90 760	0.7 (61)	1.3 (138)	0.8 (77)	1.1 (90)	1.9 (197)	1.4 (125)	1.6 (133)	2.2 (223)	1.8 (160)
				2000					
< 1 000 g Austria : 380 Hungary : 587 Czech Rep.: 320	273.6 (104)	408.9 (240)	140.6 (45)	342.1 (130)	509.4 (299)	259.4 (83)	52.0 (13)	145.8 (42)	113.9 (27)
1 000 – 2 499 g Austria : 4578 Hungary : 7 609 Czech Rep: 4 976	9.6 (44)	14.6 (111)	12.5 (62)	13.1 (60)	21.9 (167)	17.9 (89)	6.6 (37)	12.8 (95)	9.2 (45)
≥ 2 500 g Austria : 73 690 Hungary : 89 356 Czech Rep. 85614	0.6 (47)	1.1 (96)	0.5 (43)	0.9 (65)	2.7 (247)	0.7 (59)	1.1 (133)	1.8 (161)	0.8 (70)

The Czech Republic, which had the highest levels of early neonatal and neonatal mortality in 1990, is characterised by a dramatic and regular decrease, these two mortalities are nearly four times smaller for this category of weight, thus allowing the Czech Republic to precede Hungary in 2000. Early neonatal mortality related to the children of 2 500 g and more, about 2‰ in the three countries in 1990, drops by almost 40% in Hungary and Austria, but the Czech Republic records a fall of about 70%.

One can observe a stagnation of the levels of neonatal mortality in Hungary for this class of weight whereas post-neonatal mortality falls by nearly 40% and by about 60% in Austria and the Czech Republic respectively.

The comparison of the risks of mortality by birth weight between Hungary and the two other countries enables us to note that, whatever the birth weight, the levels of infant mortality are higher in the year 2000 in Hungary. The small superiority observed in Hungary compared to the Czech Republic in 1990 for the class of weight 1000-2499 g disappears in 1995. It is interesting to underline, for the Czech Republic, the spectacular fall of the risks of mortality observed whatever the age at death and the category of birth weight.

If the decline of Hungarian infant mortality generally follows the same tendencies as those observed in the two others countries, it is however interesting to note that the rates remain always higher. A greater frequency of low birthweight partly explains the higher mortality observed in Hungary but the rates of mortality by birthweight are also higher than those of the two other countries. Could these characteristics of Hungarian infant morbidity and mortality be partly explained by the use of induced abortion and the characteristics of the women having recourse to abortion on one hand, by the medical infrastructures and the social and medical measures concerning pregnancy and early childhood on the other hand? With the aim of giving some answers to this question, we will first briefly present the frequency of recourse to induced abortion in Hungary.

4. Induced abortion

Studying the recourse to induced abortion means that we consider the existence of a relation between induced abortion and occurrence of a subsequent birth with a low birthweight. The high frequency of these two phenomena leads to including induced abortion in the study of the incidence of low birthweight. The recourse to induced abortion, as means of birth control, since its legalisation in the fifties, was a frequent phenomenon in Central Europe. In Hungary, the legal status of induced abortion (complete depenalisation since 1956) implies a relatively exhaustive collection of this data and the possibility to monitor the evolution of the frequency of induced abortion.

4.1. Legal framework

In 1956, induced abortion becomes legal and the only requirements for performing it were the following: request is accepted (this authorisation was without doubt) and it has to be practised in an approved establishment. In 1973, authorisation for induced abortion has to be given by a special subcommittee (chaired by a medical doctor) which can authorise it for a broad range of reasons (eugenic, social, psychological or psychosocial). In July 1988, the obligation to obtain the authorisation from a special subcommittee is removed, authorisation of a doctor being sufficient after request of the woman. The abortion must always be practised before the end of the 12th week of gestation duration, the 16th week for those under the age of legal majority, the 24th week for therapeutic interruption of pregnancy, and without limit in the case of malformation of the foetus (Blayo, 1995). Abortion remains free for women becoming pregnant in spite of the installation of an IUD, or when it is a therapeutic one. For the other cases, it is partially refunded.

In 1992, the Hungarian Parliament amends the law: legal abortion is always possible during the first 12 weeks of the pregnancy. After this limit, it remains possible if the health of the pregnant woman is threatened, if the foetus runs serious risks, if the woman was raped or if the pregnancy causes for the woman "an acute crisis"[7]. A compulsory consultation with a nurse belonging to the Family Protection Office is required in order to inform the woman on the possibilities of keeping the child and on the various contraceptive methods. In practice, it is as easy as before to undergo an induced abortion. The duration related to the other reasons is maintained, but in the case of an error of diagnosis concerning the pregnancy, the abortion can be practised until the 16th week of gestation duration. Only the therapeutic abortion remains free; in the other cases, it is paid by the woman. But the amount can be reduced according to the economic situation of the family.

Legalisation of induced abortion permits that it is realised in a hospital under correct medical conditions. However, as this legalisation was adopted many years ago, it led to practices with methods more traumatic

[7] Defined as a situation leading to a physical or psychological traumatism, or an insufferable social situation being able to endanger the health and the growth of the foetus (Berbik, 1994).

than those currently used. The techniques of vacuum-aspiration spread only in the sixties in the United States, in the seventies in Western Europe. These techniques were popularised in Hungary only in the 1980s, but the technique of curettage used before has not been abandoned. The technique of curettage implies a dilation of the uterine cervix more important than the techniques of vacuum-aspiration. Moreover, a dilation of the cervix too fast and bigger than 12 mm would cause a lesion involving a loss of elasticity of the cervix; premature births of children of low birthweight could occur. Although these risks were frequently denounced, particularly in the case of repeated induced abortions (WHO, 1979; Harlap and Davies, 1975; HCSO, 1972), the method of dilation - curettage prevails in Hungary until now and it is possible that repeated induced abortions carried out with the same type of traumatic method causes an incompetence of the uterine cervix more or less accentuated, leading to a premature birth.

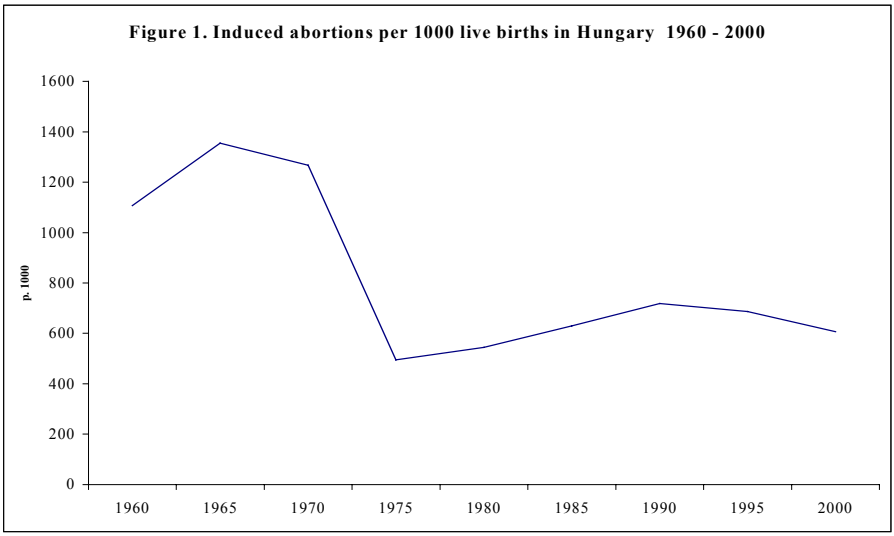
4.2 Frequency of recourse to induced abortion

After its liberalisation in 1956, the number of induced abortions increases dramatically and does not cease growing until 1965, year where the ratio of the number of induced abortions per 1 000 live births reaches 1 390 and stabilises around this very high level up to 1969 (Figure 1). From this date, one can notice a decreasing trend, related undoubtedly to the greater diffusion of oral contraception[8]. This fall is reinforced by the legislative dispositions of December 1973, the ratio of induced abortions being then divided by two. Parallel to this new legislation, the access to oral contraception is simplified and becomes more frequent. The year 1980 marks the resumption of a slow but regular increase. The ordinance of 1988 does not lead to an abrupt increase of induced abortions and rather seems to confirm an existing situation. Finally, these last years a small decrease in the frequency of induced abortions is observed, the ratio reaching a level of 607‰ in 2000.

Could the high level of induced abortion observed in Hungary have a consequence on subsequent pregnancy outcomes, such as for example births of infants with low birthweight, if traumatic techniques are used and if woman has had several induced abortions during her lifetime?

[8] 1967 is the year during which, for the first time, an oral contraceptive is implemented (Klinger, 1984).

Without longitudinal data, the answer to this question is not possible. We however compared, from the published data, some characteristics of the women who have had an induced abortion with those experiencing an infant death over the period 1980-2000.



4.3 Characteristics of the women experiencing an induced abortion or an infant death

This comparison will relate only to two demographic characteristics: age of the mother and parity. Concerning marital status, published information is not available before 2000 for infant deaths. We have to underline, however, that until 1995, more than 50% of the women who underwent an induced abortion were married.

The distribution of induced abortions according to the age of the woman shows that the recourse to abortion among women aged 15 to 50 years is a diffuse phenomenon concerning all the age groups. For the age groups less than 20 years and 35 years and more, one can observe a very small increase of induced abortions for the age group less than 20 (from 10% to 13% between 1980 and 2000) and a clear reduction for the age group 35 years and more, since the percentage decreases from 26% in 1980 to 13% in 2000. In parallel, one can observe an increase in the frequency of live births among women of 35 years and more (from 4% to 7%) as well as an

increase in the proportion of infant deaths occurring among mothers of this age group (from 7% to 13%), a probable consequence of a greater number of births at ages associated with a higher level of infant mortality.

Concerning parity, the distribution of induced abortion according to the number of previous children shows, between 1980 and 2000, an increase in the proportion of induced abortions among women having three children or more (respectively 20% and 28%) whereas this proportion remains stable at around 20% among women without a previous live born infant. The increase in the frequency of live births occurring among women having had 3 children or more was similar (from 16 to 22 %), while the proportion of primiparous among the total of live births remains stable over the period (45%). It could be assumed that the proportion of infant deaths occurring in these same categories of parity remains similar for primiparous women (from 34% to 36%), but increases for women of parity three or more, a result close to that observed according to age, these two characteristics being strongly associated.

This short comparison shows the difficulty to draw conclusions. Recourse to induced abortion could possibly avoid infant deaths because undergone among women with demographic and social characteristics associated to higher risks of infant death. For example, it was rather frequent among women of 35 years or more or of high parity (characteristics associated with a higher infant mortality). On the opposite, it was until these last years most frequent among married women (a characteristic associated with a lower infant mortality risk).

5. Social and health care policies concerning pregnancy and childhood

To what extent the levels of infant mortality can be put in relation with the health policies concerning mother and infant welfare? Social policies concerning pregnancy and childhood take generally into account various axes whose objectives are:

- Medical*:* by founding and generalising the rules of child welfare and by ensuring the medical protection of the mother and the child (exemption from payment of the care, compulsory medical antenatal monitoring);

- Economical: by financially helping the mother (or the parents if the child is born within a married couple) of the child (allowances of childbirth and family);

- Social: by reducing the workload of the woman during pregnancy or the first years of life of the child (reduction of working time, maternity and parental leave) and by enabling the mother to keep her occupation.

Legislative measures are however not the main reasons of the infant mortality decrease. In Hungary, it is from the beginning of the 1950s that some measures of social protection of the pregnancy are set up[9]. We describe below the main dispositions taken by the Hungarian governments. They concern the social policyholders, *i.e.* almost all the female population resident in Hungary.

5.1 Socio-economic field

The Code of Labour declares that the working pregnant woman temporarily has to be given another job that is more appropriate to her health status or her current job has to be modified. Her salary must not decrease, even if the number of working hours decreases. However, for changing the job the woman's agreement is required. The Code suggests that the two parties have to find an agreement. During the pregnancy, night-work is prohibited. Unfortunately, lack of information in this field is particularly prejudicial to the women belonging to the lowest social groups: not recognising this possibility, they will not seize this opportunity even if their occupation is physically heavy. In 1977 however, the Hungarian Ministry of Health promulgated a decree allowing women having a high-risk pregnancy not to work for a certain length of time or, if that proved to be necessary, during all their pregnancy while keeping their sickness insurance. In practice, there is a very broad recourse to medical certificates for leaving work making it possible to decrease the painfulness of work. This recourse is accentuated by the fact that a pregnancy does not give permission to a reduction of worktime. Klinger (Klinger, 1985) underlines that a quarter of the pregnant women were thus regarded as "in danger". The legal maternity

[9] Let us note that at that time the number of induced abortions exceeds the number of births.

leaves were 24 weeks in the case of an infant born alive and 6 weeks for a stillbirth (of which if possible four weeks before the childbirth), during which the mother received her full wages. In the event of death of the baby during its first year of life, a leave of two weeks was allowed.

A parental leave up to 36 months and a child care allowance for that period were instituted since 1967. The child care allowance was a fixed amount of provision (approximately 20% to 24% of the average wages) till the child was up to 3 years old. Between 1967 and 14 April 1996 it was due by right of having social security. Since 15 April 1996 it can be claimed by Hungarian citizens, by immigrants, blood-parents, adopting or foster parents if the per capita monthly net income of the family did not surpass the income that is stipulated by the law. The income limit was the same as that for family allowance. Child-care allowance was due up to the age of 10 years of the disabled or mentally handicapped child, irrespective of the level of income. Since 1 January 1999 it is provided by individual title (one of the parents of each child is entitled). Since January 2001 grandparents are also entitled after the first birthday of the child if the parents do not have resort to it. The amount of provision always equals the prevailing amount of the minimum old-age pension. Whatever the duration of the leave, employment is guaranteed during all the period. In addition, arrangements of the working time such as reductions of worktime or a greater flexibility, can also be proposed to the mothers (Klinger, 1991). Childcare fee is provided until the child's second birthday on insurance base. Its current amount is 70% of the average daily earnings, not exceeding, however, the double of the minimum wage valid on the day of entitlement. This provision was introduced in 1986, but was abolished in 1996, and launched again on 1st January 2000. It must be pointed out that, until 1990, the countries of Central and Eastern Europe benefited from a policy of full employment and that the work of women was quasi-universal there.

Pregnancy-confinement allowance is more or less around 70% of the woman's average salary. This provision also existed before 1990. It concerns only the births, live birth or stillbirth, declared to the vital registration system. It was given to all the mothers justifying an antenatal monitoring, without however specifying the conditions of this monitoring (gestation duration at the first consultation, minimal number of antenatal visits). Between January 1993 an April 1996, a pregnancy allowance was

given, from the first prenatal care onwards[10]. Pregnant woman received a monthly amount, which was the same as the family allowance given for one more child.
From April 1996 onwards, a maternity subsidy replaces the pregnancy allowance, if during pregnancy the woman took part in antenatal visits at least four times.

Family allowance (between 1 January 1999 and 8 November 2002 child raising benefit[11]) is a fixed amount provision granted for keeping a child up to the end of participation in public education (elementary and secondary schools), paid by the central budget. Up to 31 March 1990, employees, and following 1 April 1990, Hungarian citizens, immigrants, blood-parents, adopting and foster parents were entitled to receive it. Since 1 April 1996 families with one or two children could receive this allowance only in case if the per capita monthly net income of the family did not surpass the income that is stipulated by the law. Families with three or more children as well as those with disabled children receive family allowance irrespective of the level of income. Since 1 January 1999 family allowance is again provided by individual title. The amount of the family allowance increases with the rank order of the children up to the third child and then remains constant[12]. It is low for the first child. In the years 1980s it reaches approximately 40% of the average wage for three children and the family benefits allocated to a six child family are practically equal to the average wage (Klinger, 1991). Between 1996 and 1998 the entitlement and the amount of the provision depended on the family's income. Since 1 January 1999, child-raising benefit is provided to the family on its own right. Currently a three-child family receives an amount of family allowance equal to about a third of average net earnings and in a family of 9 children it comes out to the average net earnings.

---

[10] But not before the 13rd week of pregnancy

[11] – Family allowance: is provided for children up to the school-age.
– Schooling support: is due to parents, foster parents, professional foster parents and guardian in respect of the child nurtured in their own household if he or she is
a) in the compulsory schooling age (6 to 16 years),
b) still studying in public institution but not surpassing 20 years of age.

[12] Family allowance is provided for children up to school-age.

5.2 Medical field

Until 1990, health care (monitoring of the pregnancy or curative care) was completely free of charge for all people resident in Hungary. Presently, the situation is almost the same, because the patient has to present the health insurance card for having free health care, but the health institutes are not able to check if the health insurance fee has been paid for this person. A government decree on prenatal care (1992) declares that the prenatal care is free of charge. A minimal number of four antenatal visits was compulsory before 1992, but the average number of visits went from 4 to 8. The gestation duration at which the monitoring of the pregnancy began was variable. At that time, it was estimated that it took place on average around the 12th week of pregnancy. The changes occurred since then (modification of the organisation of the antenatal monitoring and first compulsory visit before the 14th week of pregnancy for beginning payment of maternity allowances) tend to advance the date of the first consultation which would be currently on average before the 8th week of pregnancy.

Organisation of health care

The health law (1997) declares that the patient has the right to choose the doctor, if there is no legal exception. Practically there was a free obstetrician's choice before that law. The governmental decree on prenatal care states that the obstetrician-gyneacologist can be chosen free. Traditionally there are three parties in prenatal care: the GP, the obstetrician-gynaecologist physician, and the MCH (maternal and child health) nurse. GPs have an important role in villages, where an outpatient clinic is not available. In these settlements GPs meet more pregnant women than in urban areas. There is a system of moving medical experts' service, which provides the obstetrician-gynaecologist expertise. In the framework of that service the visit of a gynaecologist-obstetrician is ensured every month, the nurse and the general practitioner being in charge of gathering the patients and their medical files. In towns outpatient clinics are available. Private doctors can provide prenatal care too. Either the GP or the obstetrician- gynaecologist direct the patient to a specialist, other than obstetrician-gynaecologist, if it is necessary. The MCH nurse has the most complex role in the prenatal care. She provides a general assistance to the woman, helps to prepare for the delivery,

informs her on her rights etc., and keeps in touch with the GP and obstetrician- gynaecologist. This system dates from the beginning of the 1960s. At the first consultation, the woman receives a "notebook of pregnancy" which she has to present at each of her visits. At each consultation, blood pressure and albuminuria are checked as well as uterine height and foetal cardiac rhythm. In 1972, the Health Law declares that curative-protective health-care appropriate to woman's physiological status has to be provided. Once the pregnancy identified, a MCH nurse having received a specific training centred on the medical supervision of the pregnant women and the children of less than one year, visits these women regularly and incites them to go to the dispensary in case of problems. At the time of childbirth, the mother will be sent to the maternity that she has chosen. However, from the end of the 1970s onwards, the progressive disappearance of small maternities was decided because they had not sufficient infrastructure, and the health administration wanted to provide health care of the highest available level to all pregnant women and infants. The localisation of the health resources was suffering from a fixed disparity for decades: counties having a population of the worst health status come in for the poorest resources. This is the rule of inverse provision. Looking at the utilisation of health service there are fewer differences. This is due to the fact that some of the university clinics and county hospitals have a regional function, too. For some of the specialised provisions the territorial unit is the region instead of the county (a region comprises three counties). Moreover, a certain proportion of inhabitants living in the counties of poorer provisions use the health service in other countries (Orosz, 2001). According to the SANA formula used in the British health care system, either health institutes or the population in the central region, including Budapest, use much more service than should be due by the need. In other regions utilisation is less than the need. The concentration in some urban centres of the specialised units (neonatal services) causes many problems (accessibility of the medical structures, distance of the family) if a transfer *in utero* or a transfer of the newborn is decided. Finally, and from the seventies onwards, one observes the emergence of private medical practice besides the public sector, but few statistics exist on this topic.

The provisions taken in the socio-economic and medical fields (such as flexibility of work time, facilities for granting childcare fees and childcare allowances) show, at least in their principles, a preoccupation with the

protection of early childhood. The general educational level of the society, the unhealthy way of life, the high proportion of smoking pregnant women, and the underfinancing of Hungarian health care makes it possible to better understand the differences in levels of infant mortality, and particularly of mortality during the first month of life, existing between Hungary and the two other countries. In Hungary in the past 30 years the differences in infant mortality by the mother's educational level more than doubled, while in 1990 only 14% of the relating population attended high level education. In the Czech Republic this ratio was 20 and in Austria 35 (HCSO, 2001). In the middle of 1990s the difference was much less, the value of the Hungarian indicator even exceeding that of the Czech Republic (24% vs. 22%), but lagging much behind Austria (48%).

6. Conclusion

The trends of the age at death structure of Hungarian infant mortality are more or less the same as those observed in Austria and Czech Republic, but they show a net delay in the decrease of all the mortality rates. In the year 2000, in the three countries, one can observe a convergence of the various mortality rates towards similar levels, but whatever the age at death considered, it is in Hungary that the level of mortality is the highest. Even the stillbirth rate, which was lower than the one observed in Austria until the end of the 1960s, is higher now. The significant proportion of live born children with low birthweight has a certain influence on the levels of mortality, but the mortality risks by birthweight are higher in Hungary whatever the class of weights is taken into account.

One possible explanation is the widespread use of induced abortion as a method of birth control. This practice remains frequent in spite of the availability of modern methods of contraception. We compared the characteristics of the women having had an induced abortion with those experiencing an infant death, but it was not possible to draw specific conclusions in the absence of longitudinal data. In the medical and socio-economic fields, various dispositions, concerning antenatal monitoring and protection of early childhood, were taken into account. They make it possible to ensure that mothers who are employed receive a certain protection from their professional environments, which could have a harmful impact on the pregnancy. The Hungarian health government has

made a great effort to improve the health status in the foetal period and in infancy. However, after 1990 the differences in the economic and social status of the population increased a lot, and the deprivation has a negative impact on health status. The system of health care has been under-financed for a long time and as a consequence there is a lack of either medical or ancillary workers. The non-proportional location of health provisions also decreases the chance of low-birth-weight or diseased children to survive. These elements could partly explain the higher levels of infant mortality, but could they totally explain the high proportions of premature births and, consequently, of live born children with low birthweight observed in Hungary?

References

Berbik I., 1994, "New Hungarian abortion act: First results", *Planned Parenthood in Europe* 23 (1), 24-25.

Blayo C., 1995, Enregistrement des avortements en Europe et comparabilité des informations recueillies, in: J. Duchêne and G. Wunsch (eds.), *Collecte et comparabilité des données démo-sociales en Europe - Chaire Quetelet 1991*, Academia-L'Harmattan, Louvain-la-Neuve, 253-276.

Ceskoslevenska Statistika, 1955-2000, *Pohyb Obyvatelstva*, Praha: Ceskoslevenska Statistika Publishing.

Harlap S. and A.M. Davies, 1975, "Late sequele of induced abortion. Complications and outcome of pregnancy and labor", *American Journal of Epidemiology* 102 (3), 217- 224.

Hungarian Central Statistical Office, 2001, *International Yearbook*, Budapest: HCSO Publishing.

Hungarian Central Statistical Office, 1955-2000, *Statistical Yearbooks of Hungary,* Budapest: HCSO Publishing.

Hungarian Central Statistical Office, 1992, *Demogràfiai évkönyv de 1956 à 1992*, Budapest: HCSO Publishing.

Hungarian Central Statistical Office, 1972, *The effect of the number of abortions on premature births and perinatal mortality in Hungary*, Budapest: HCSO Publishing.

Hungarian Central Statistical Office, 1992, *Demogràfiai évkönyv de 1956 à 1992*, Budapest: HCSO Publishing.

Klinger A., 1991, "Les politiques familiales en Europe de l'Est", *Population* 46 (3), 511-526.

Klinger A., 1985, "La lutte contre la mortalité infantile", in: J. Vallin and A. Lopez (eds.) *La lutte contre la mort*, Travaux et Documents Cahier n°108, INED, PUF, Paris, 275-292.

Klinger A., 1984, *The impact of policy measures, other than family planning programmes on fertility. The use of the Hungarian longitudinal Studies*, Budapest: Research Reports of the Demographic Research Institute.

Klinger A., 1982, *Infant mortality in Eastern Europe 1950-1980*, Budapest: Statistical Publishing House.

Orosz E., 2001, *Félúton, vagy tévúton (Halfway or astray),* Egészséges Magyarországért egyesület, Budapest, 261-267.

Österreichischen Statistik, 1955-2000, *Demographisches Jahrbuch Österreich*, Vienna: Österreichischen Statistischen Zentralamt Publishing.

WHO, 1979**,** "Gestation, birthweight, and spontaneous abortion in pregnacy after induced abortion", *The Lancet*, 20 January, 142-145.

WHO, 1950, *Rapports sur la définition de la mortinatalité et de l'avortement*, Comité d'experts des statistiques sanitaires, document W.H.O./HS/STDEF/4, Geneve: WHO Publishing.

Deviation from epidemiological transition. The case of Hungary

Etelka Daróczi

1. Introduction

The present paper highlights age-and cause-of-death specific features of male and female mortality levels and dynamics in Hungary, prior to, during and following the socio-economic transition at the end of the 1980s in order to answer the question: do the details of recent mortality improvements project a turnaround of previous trends? Therefore, particular attention will be paid to mortality changes in "the most active" age groups (30–49 and 50–69) of both the male and female population. From among the major groups of death causes, cardiovascular and cerebrovascular diseases, neoplasms, digestive diseases–liver diseases taken separately–and external causes will be dealt with as being highly relevant to the success or failure of epidemiological transition.

2. Data and method

Data and methods used are based on complete life table indicators and the actual number of deaths by age and cause (recalculated, when necessary, according to ICD-10). These data are regularly published by the Hungarian Central Statistical Office (Demographic Yearbooks). Comparative time series of economic indicators were taken from the latest official statistics (Hungarian Statistical Yearbook, 2001).

Abridged life tables (ages 0, 1–4, 5–9, … 75–79, 80–85 or 0, 1, 5, 10, … 75, 80, 85) were calculated from complete life tables, using standard methods. Abridged life tables by selected causes of death were produced by decomposing all-cause abridged life tables following Valkovics' (1984) method. The essence of the method is simple: it redistributes the total number of life-table deaths in each age group ($_nd_x$) according to the actual percentage distribution of death ($_nD_x$) by cause. Stationary population ($_nL_x$) of abridged life tables by cause of death is calculated by distributing cause-specific $_nd_x$ between consecutive age groups using the ratios of all-cause life tables. The disadvantage of this approach is that life

expectancies calculated for the highest ages (in our case 85 years of age) are constant for each cause of death (and therefore equal to all-cause e_{85}). For this reason, life expectancies at birth and probabilities of dying up to age group 80–84 will only be considered for the purposes of the present paper.

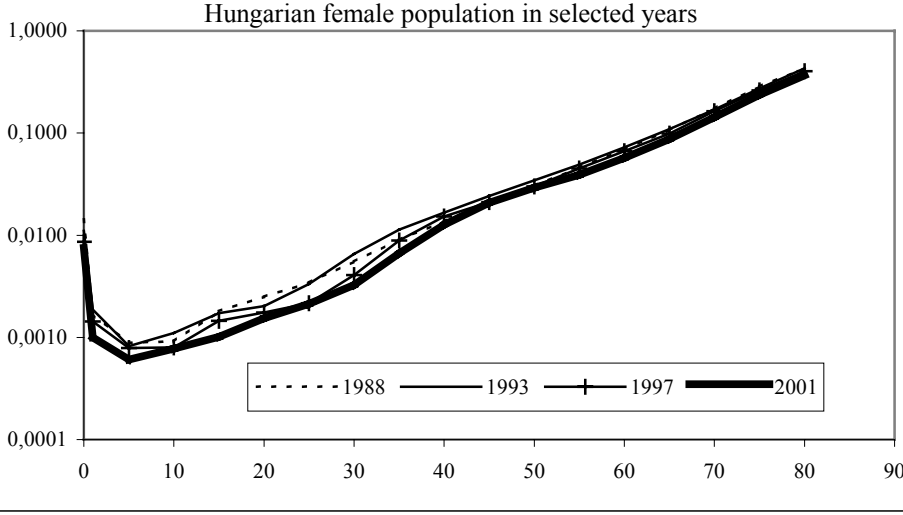
3. System-specific mortality changes in Hungary

Following a relatively short period of convergence, high mortality variations among European countries have reappeared in a distinctly different geographical pattern. At the beginning of the 1950s, a neat line of break was situated between the countries of the Northwest (Great Britain, Belgium, the Netherlands, Luxembourg, France, Iceland and Scandinavia) and the rest of Europe. There were few exceptions: Ireland and Finland with relatively high mortality in the Northwest while Switzerland in Central Europe and Greece in the South with life expectancies as high as in Denmark that time. Up to the mid-1960s mortality variations have spectacularly decreased, mainly as a result of rapid improvements in high-mortality South European countries (Yugoslavia, Italy, Portugal, Romania, Spain) and, to a lesser extent, due to the modest positive changes in Central Europe (Austria, Poland, Hungary, Germany).

In Hungary, life expectancy at birth increased annually by about half a year between 1949 and 1966: from 59.3 to 67.6 years of the male and from 63.5 to 72.2 years of the female population (Figure 1). This was achieved by successfully combating infectious diseases (particularly TB) and suppressing infant and child mortality. Results in these fields were so overwhelming that they could leave significant problems in other areas unnoticed. In 1953 male life expectancy change slackened and that of females became negative (-0.3 years). Plausible reasons include economic hardship and the introduction of ban on induced abortion (Monigl, 1992). In 1956, armed suppression of the revolution and related forceful events decreased life expectancies at birth by 1.3 (males) and 0.4 years (females). 1962 marks the "successful completion" of collectivisation, "supported" by extensive (*i.e.* not technology- but labour- and capital-intensive), and excessive, industrialisation. Between 1960 and 1966 about 600,000 workers were "released" from agriculture and migrated or commuted from

rural to urban areas. Rural exodus put pressing demand on urban housing that could not be satisfied. In 1962 administrative restrictions were introduced on in-migration to Budapest (Daróczi, 1981). It cannot be accidental that this year produced a sudden negative change in life expectancy: -1.15 years for both males and females.[1] All in all, between 1949 and 1966 changes in life expectancy followed the ups and downs of socio-economic dynamics, with male and female mortality trends proceeding practically parallel (R=+0.9945).

Figure 1. Probabilities of dying from abridged life tables of Hungarian female population in selected years

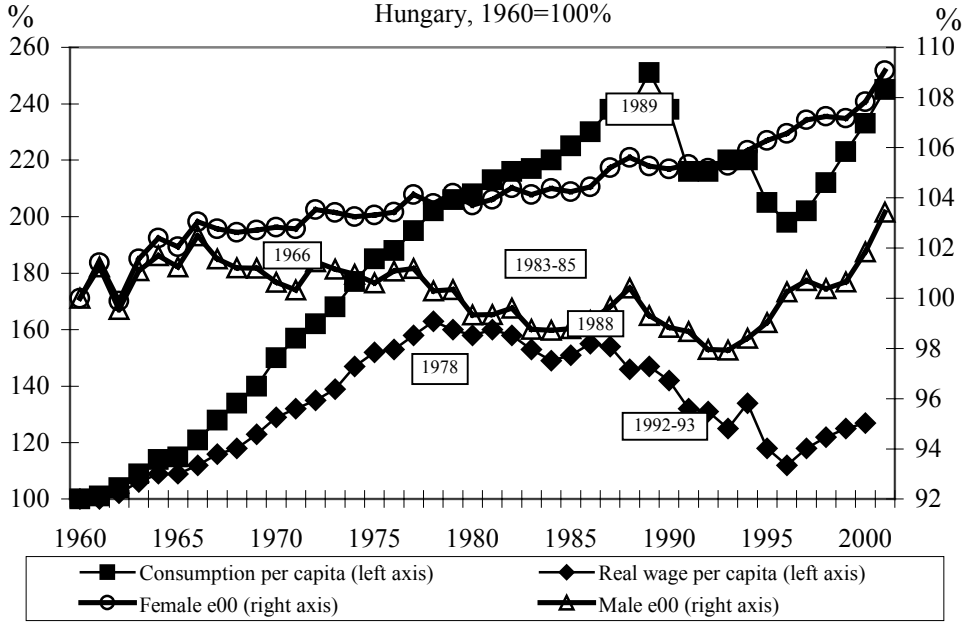


During the 1960s the European mortality landscape changed suddenly, as if by magic, and conspicuously in a system-specific manner (Daróczi, 1988, 1997). Dynamic increase in life expectancy continued in all countries, which had started from very low post-war levels, with the exception of the socialist states of Europe. In Portugal, for example, life expectancy at birth of the male population increased by almost 9 years between the early 1960s and the early 1980s but significant improvements (4–5 years) were also reached in Spain and in Greece where the starting levels were higher. Mortality decrease also continued in other, wealthier,

[1] Year 1962 was also marked by unprecedented low fertility. TFR dropped from 1,94 in 1961 to 1,79 in 1962.

countries though at a slower pace. Replacing the Northwest–Southeast line, a new line of break distinguished itself, an East–West divide.

Figure 2. Living standard and life expectancy over time in Hungary, 1960=100%



Hungary was not hit particularly hard, though neither armed conflicts, nor natural catastrophes, nor new, devastating epidemics could be blamed. Moreover, the economic situation was, for some time, improving (Figure 2). Genuine causes should be searched deeper. Some of them can be found in–lagged or simultaneous–effects of personal and family tragedies, adaptation stress or failure to adapt to the situation following post-war socio-political landslide or forced restructuring in the economy (see *e.g.* Carlson and Hoffmann, 2002 for macro indicators; Losonczi, 1989 for micro effects). Another group of causes embraces the mismanagement and waste of human and material resources (including health and nature) derived from a self-contained chase for increasing quantity produced and the autocratic policy which only focussed on the aim but not the means, the conditions, the immediate side-effects or the long term consequences. The third group of causes involves the consequences of dogmatic philosophy, rigidity, disguising or denying facts–all inherent in socialist

systems. Such and similar background factors led to the situation that health care concentrated on diseases and shortcomings "inherited from the capitalist past" (maternal and child care, tuberculosis) and traditional, massive, centralised medical interventions and prophylactics.

4. Living standards and life expectancies at birth

The fact that the Central and East European turnaround in mortality trends during the mid-1960s failed to correlate with economic changes in those countries by no means indicates an absence of relationship. Nevertheless, it may help to understand why mortality increased so much in Hungary where people were relatively well-to-do as compared to other Central and East European countries (Losonczi, 1989)[2].

Per capita consumption–which is a better indicator of living standards than GDP per capita–almost monotonously increased in Hungary up to 1989 when it reached 250% of the 1960 level (Figure 2). This was largely the result of an increase in various social benefits[3], pensions[4], income from the second economy, production for self-consumption and other sources (*i.e.* bank loans for housing). Real wages, however, only increased up to 1978, reaching 160% of their 1960 value. As real wages per capita started to decrease, earlier increase in male mortality accelerated. Obviously no direct causal relationship can be postulated but similarity of changes in male life expectancy and real wages between 1978 and 1994 is rather conspicuous (R=+0.750). Changes in female life expectancy rather follow, though not too closely, the trend of per capita consumption (R=+0.594).[5]

[2] Losonczi (1989) also refers to specific psychological factors like the effects of repeatedly frustrated political hopes and the uncertainties arising from stick–carrot policies.

[3] The total number of persons receiving child care allowance (introduced in 1967) or child care fee (introduced in 1985) amounted to 244,680 in 1989.

[4] The number of retired population doubled between 1966 and 1989 (from 685,000 to 1,368,000).

[5] One could hypothesize that besides biological and behavioural factors, disproportionately large share from social income redistribution (child care allowance, pension) also protected women.

During the initial phase of divergence from the path of epidemiological transition (1966–1984) life chances of both men and women took unfavourable turns. Since male life expectancy at birth decreased (by 0.14 year annually) and female life expectancy stagnated (at an annual +0.05 year), mortality trends by gender diverged (R=–0.634). While in 1966 men lived "only" 4.9 years less than women did at an average, the gap increased to 8.1 years by 1984.

During the second half of the 1980s, consequences of mistaken socio-economic policy were becoming more and more obvious in Hungary. Economic collapse threatened the country, which was completely indebted. Internal and external conditions of unavoidable, radical political changes were evolving. Per capita consumption was nevertheless still increasing, being kept high for political reasons, irrespective of economic performance. Probably this fact and perhaps the positive psychological effects of hopeful expectations for future changes contributed to the upward turn in life chances of both men and women. During the four-year period between 1984 and 1988 life expectancies at birth increased by 1.1 and 0.9 years respectively. The gender gap therefore somewhat decreased. This opened a new phase in the trend of Hungarian mortality when male and female life expectancies regained a more or less parallel path (during 1985–2001 the correlation coefficient between them was R=+0.856).

Mortality as an indicator of welfare or culture and high mortality levels in state socialist economics received real attention by neither scientists nor politicians until the 1980s. Western Europe did not take notice of the Eastern part of the Continent while in the countries concerned negative societal phenomena were regarded as taboo (with few exceptions, see Valkovics, 1984; Pollard, 1986). Later, however, and particularly following the sweeping political changes at the end of the 1980s, important studies on East–West mortality division have been published in increasing number[6] (Meslé, 1991; Okólski, 1993, 1994; Watson, 1995; Bobak and Marmot, 1996; Meslé, 1996; Hertzman and Siddiqi, 2000; McKee and Shkolnikov, 2001 and many others). More recently, in June 2002 the IUSSP Committee on Emerging Health Threats, chaired by

[6] An important step ahead was made by the IGU Symposium on "The Geographical Inequalities of Mortality" organized in Lille, France, April 1990. Contributions to this Symposium were published in *Espace, populations, sociétés* 1990/3, 1991/1 and 2.

Shkolnikov, had a seminar in Rostock on the "Determinants of diverging trends in mortality" which also produced excellent papers on this topic (*i.e.* Caselli, Meslé and Vallin, 2002; Carlson and Hoffmann, 2002; Meslé, 2002; Rychtařiková, 2002).

5. Recent changes

5.1. Age patterns of mortality

For the purposes of the analysis of recent mortality changes in Hungary, abridged life table indicators of four years (1988, 1993, 1997 and 2001) will be compared. The last pre-transition year (1988) produced local maximums in male and female life expectancies. During the following harsh years of socio-economic transition, mortality trends of both men and women took negative turns. Male life expectancy at birth reached its lowest post-war level in 1993 (64.5 years). But ever since, mortality decreased at a relatively rapid pace with minor halts around 1997. Changes between 1988–1993, 1993–1997 and 1997–2001 will be considered for their age- and cause-specific structures in order to detect similarities and dissimilarities with regard to the specific features of subsequent stages of epidemiological transition. Curves of probabilities of dying in the selected years (Figures 3 and 4) reveal the directions of change and the relative importance of specific age groups. The scales of change during these three short periods (five – four – four years of length) are more clearly detectable by Figures 5 to 8 indicating absolute and relative temporal changes in male and female ${}_nq_x$-s, respectively. During the first period of socio-economic transition (1993–1988) mortality of men increased in all age groups above 25. Absolute increase–which has a direct impact on life expectancy–was the largest for men aged 50–70 (Figure 5) and relative increase concentrated between ages 30–50. During the subsequent periods of decreasing male mortality, absolute changes were the largest at high ages (particularly between 2001-1997), but relative changes concentrated in young adult age groups from 20 to 39 years of age (Figure 7). Though between 1997–1993 and 2001–1997 economically active age groups experienced mortality declines, these were less significant than previous increases. Most important improvements took place at higher ages, especially between 2001 and 1997. The story is essentially similar for women (Figure 6) though absolute changes (both positive and negative) were much less significant in active ages. The scale

of mortality decrease above 60 is, however, similar to that of man. Rather hectic relative changes in female ${}_nq_x$-s (Figure 8) also follow the male pattern. Comparing the two four-year post-transition periods it can be stated that Hungary entered the stage of mortality declines at high ages without having recuperated previous serious losses in active age survival ratios.

Figure 3. Probabilities of dying from abridged life tables of Hungarian male population in selected years

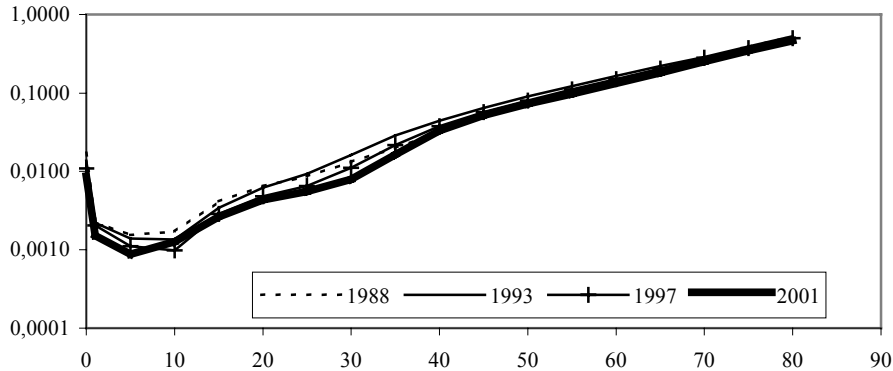


Figure 4. Probabilities of dying from abridged life tables of Hungarian female population in selected years

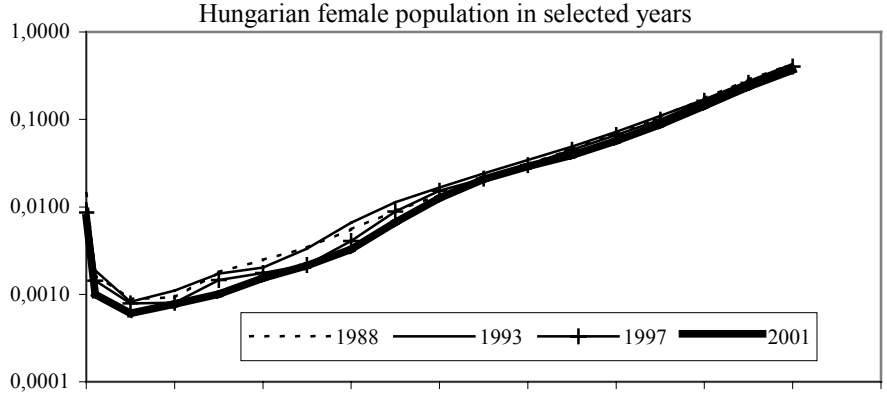


Figure 5. Absolute differences in probabilites of dying from abridged life tables of Hungarian male population between indicated years

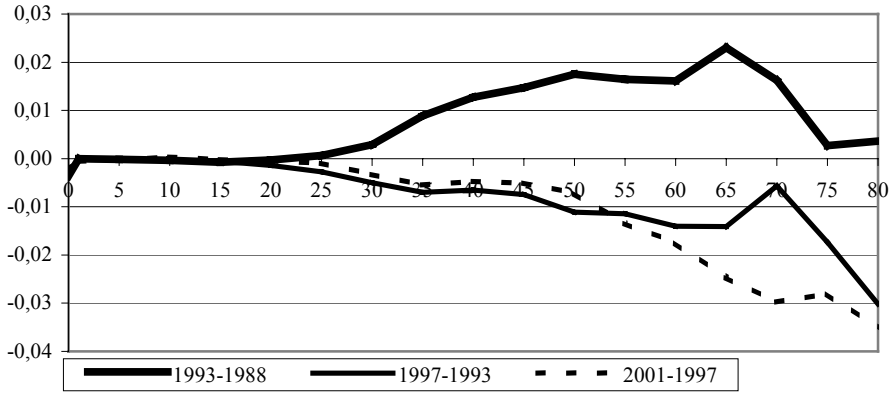


Figure 6. Absolute differences in probabilites of dying from abridged life tables of Hungarian female population between indicated years

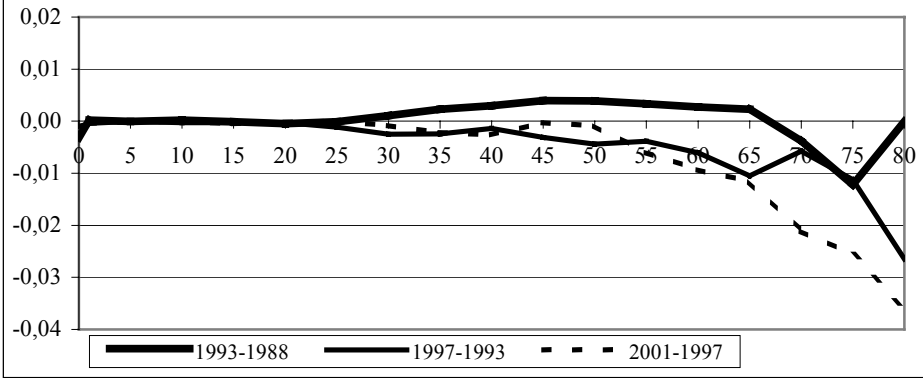


Figure 7. Relative differences in probabilites of dying from abridged life tables of Hungarian male population between indicated years

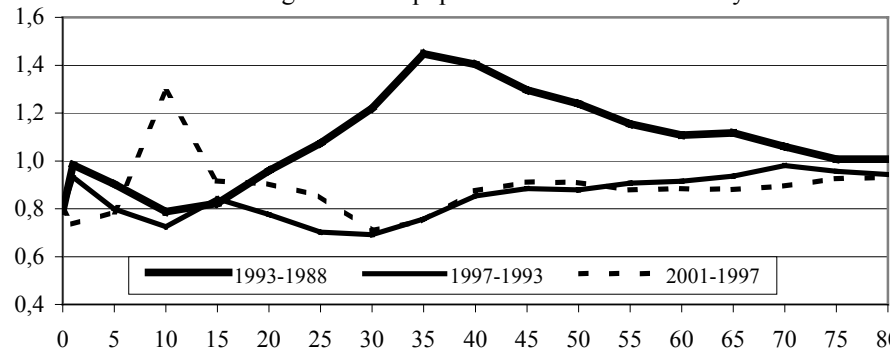
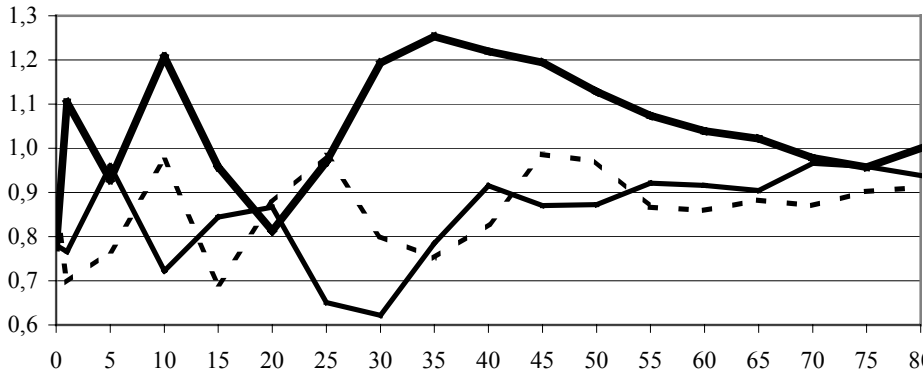


Figure 8. Relative differences in probabilites of dying from abridged life tables of Hungarian female population between indicated years



5.2. Mortality structure by selected medical causes of death

Modernisation process of the mortality pattern by medical causes of death (Tables 1 and 2) is not well advanced. Though infectious diseases are only responsible for about 1–3% and respiratory diseases for about 2–5% of deaths among younger and older middle aged men (30–49 and 50–69), slight increases between 1988 and 1993 were indicative (they were, however, annulled by subsequent decreases). In this period, the most dramatic changes were represented by sudden increases in the percentage of deceased males due to liver diseases from 10.6 to 19.0% and from 6.3

to 9.7% in ages 30–49 and 50–69 respectively. Moreover, these figures have hardly changed during subsequent periods of overall recovery. The only positive feature of this phenomenon is that practically all this increase happened to the "detriment" of external causes[7], which kill men at younger ages than liver diseases (Figure 9). No significant changes occurred in the relative importance of neoplasms or circulatory diseases.

Percentages, and their directions of change, of female victims (Table 2) of liver diseases were also striking. Between 1988 and 1993 these percentages increased from 9.7 to 17.2% and from 4.9 to 7.5% in ages 30–49 and 50–69 respectively. The relative number of female deaths due to external causes gradually decreased between subsequent years involved in the analysis. The only, but not negligible, difference in comparison with males, is that the average "life table" age (*i.e.* life expectancy) of females deceased due to liver diseases is much lower than that of females killed by external causes (Figure10). This fact is partly responsible for more leisurely recent improvements in female life expectancies as compared to men. The average (life table) age of female victims of neoplasms is similar to that of women killed by external causes.

[7] The number of accidental deaths (male and female together) decreased from 8,582 in 1992 to 6,476 in 2001 and the number of fatal suicides (male and female together) dropped from 4,000 to 2,979 during the same period.

Table 1. Percentage distribution of deceased male population by age groups and selected causes of death in Hungary

Diseases	Infectious	Neoplasms	Circulatory excluding cerebro-vascular	Cerebro-vascular	Respira-tory	Digestive excluding liver diseases	Liver	Con-genital	Perinatal	External	All other causes	Total
Age groups	A00-B99	C00-D48	I00-I59, I70	I60-I69	J00-J99	K00-K69, K80-K100	K70-K79	Q00-Q99	P00-P96	V01-Y98		
in year 1988												
0-14	1,3	5,2	1,2	0,2	6,2	0,9	0,0	18,4	45,5	12,4	8,8	100
15-29	0,3	8,8	5,8	2,1	2,2	1,6	2,6	2,1	0,0	67,0	7,6	100
30-49	1,1	19,2	22,9	5,7	2,6	3,0	10,6	0,4	0,0	28,6	5,9	100
50-69	0,9	28,6	33,9	11,8	4,3	2,0	6,3	0,1	0,0	8,3	3,9	100
70-	0,7	20,5	43,1	16,6	6,7	2,2	1,5	0,0	0,0	5,4	3,4	100
All ages	0,8	23,0	35,6	12,9	5,2	2,2	4,4	0,5	0,9	10,5	4,1	100
in year 1993												
0-14	1,4	5,1	0,7	0,8	6,5	1,2	0,0	21,3	40,9	13,2	9,0	100
15-29	0,5	8,7	7,0	1,3	1,8	2,0	3,3	2,6	0,0	65,5	7,4	100
30-49	1,5	17,6	20,8	5,3	2,8	3,3	19,0	0,3	0,0	22,6	6,7	100
50-69	0,9	28,0	32,1	10,5	4,6	2,1	9,7	0,1	0,0	8,0	4,1	100
70-	0,5	20,5	43,6	15,6	7,2	2,2	2,0	0,0	0,0	5,1	3,2	100
All ages	0,8	22,6	34,6	11,7	5,4	2,3	7,5	0,4	0,6	9,9	4,2	100
in year1997												
0-14	1,2	5,9	1,0	0,5	4,8	0,4	0,1	20,6	42,7	11,1	11,8	100
15-29	0,6	9,3	6,5	1,4	2,5	0,7	1,6	2,4	0,0	67,5	7,5	100
30-49	1,3	21,7	19,9	5,4	2,6	2,5	17,4	0,3	0,0	22,2	6,6	100
50-69	0,7	32,2	30,4	10,1	3,9	1,9	9,2	0,0	0,0	7,3	4,2	100
70-	0,5	23,4	42,7	15,1	6,1	2,1	1,9	0,0	0,0	4,7	3,5	100
All ages	0,7	26,1	34,0	11,6	4,7	2,0	6,7	0,3	0,5	9,0	4,4	100
in year 2001												
0-14	2,8	6,1	0,9	0,2	3,3	0,5	0,2	20,3	42,1	12,4	11,3	100
15-29	0,4	10,9	5,1	0,8	2,4	0,7	1,7	2,2	0,0	68,7	7,1	100
30-49	1,1	24,2	19,1	4,6	2,2	2,6	17,7	0,3	0,0	23,9	4,3	100
50-69	0,6	34,2	28,7	10,2	3,2	2,0	9,8	0,1	0,0	7,4	3,7	100
70-	0,4	24,7	41,2	16,2	4,6	2,1	1,8	0,0	0,0	4,6	4,5	100
All ages	0,6	27,8	33,0	12,2	3,7	2,1	6,7	0,3	0,4	8,9	4,3	100

Table 2. Percentage distribution of deceased female population by age groups and selected causes of death in Hungary

Diseases	Infectious	Neplasms	Circula-tory excluding cerebro-vascular	Cerebro-vascular	Respira-tory	Digestive excluding liver diseases	Liver	Con-genital	Perinatal	External	All other causes	Total
Age groups	A00-B99	C00-D48	I00-I59, I70	I60-I69	J00-J99	K00-K69, K80-K100	K70-K79	Q00-Q99	P00-P96	V01-Y98		
in year 1988												
0-14	1,2	4,6	0,8	0,2	5,3	0,7	0,0	23,7	47,5	7,7	8,2	100
15-29	0,6	16,0	7,9	3,1	3,5	2,5	2,3	3,8	0,0	48,8	11,5	100
30-49	0,8	33,5	15,8	8,0	2,7	2,8	9,7	0,7	0,0	19,2	6,9	100
50-69	0,6	31,8	30,6	14,3	2,6	2,3	4,9	0,2	0,0	6,2	6,5	100
70-	0,4	15,0	48,0	19,9	3,6	2,5	0,6	0,0	0,0	6,1	4,0	100
All ages	0,5	20,0	40,8	17,4	3,3	2,4	2,2	0,5	0,8	7,2	4,9	100
in year 1993												
0-14	2,5	4,5	0,8	0,8	7,3	1,0	0,1	22,2	39,2	12,0	9,6	100
15-29	0,8	19,1	8,1	3,9	4,1	2,2	2,4	5,7	0,0	39,8	13,8	100
30-49	0,8	29,8	16,2	7,3	3,4	3,1	17,2	0,5	0,0	14,2	7,5	100
50-69	0,5	31,9	31,4	11,9	3,2	2,5	7,5	0,1	0,0	5,3	5,7	100
70-	0,3	15,8	48,7	18,8	4,1	2,4	0,7	0,0	0,0	5,4	3,8	100
All ages	0,4	20,5	41,5	16,0	3,9	2,5	3,4	0,4	0,5	6,2	4,6	100
in year 1997												
0-14	1,0	6,7	0,8	0,3	3,0	0,5	0,0	22,9	43,7	10,6	10,3	100
15-29	1,2	16,6	7,7	2,6	4,8	1,9	1,7	5,3	0,0	45,0	13,2	100
30-49	0,9	37,6	15,3	7,7	3,0	2,5	13,3	0,8	0,0	12,6	6,4	100
50-69	0,4	36,0	28,9	11,5	3,4	2,1	6,9	0,1	0,0	4,7	6,0	100
70-	0,3	16,8	48,6	18,1	3,8	2,6	0,7	0,0	0,0	4,9	4,3	100
All ages	0,4	22,2	41,6	15,7	3,6	2,5	2,8	0,3	0,4	5,6	4,9	100
in year 2001												
0-14	1,2	7,3	0,6	0,4	4,8	0,4	0,4	23,7	42,2	8,7	10,2	100
15-29	0,8	23,1	8,8	3,6	3,8	0,5	0,8	6,0	0,0	40,4	12,1	100
30-49	0,6	40,8	15,0	7,2	2,6	2,4	13,7	0,8	0,0	11,6	5,3	100
50-69	0,4	38,7	26,7	11,1	3,0	2,5	7,6	0,1	0,0	4,7	5,4	100
70-	0,3	17,4	47,5	18,9	2,7	2,7	0,9	0,0	0,0	4,7	5,0	100
All ages	0,3	23,1	40,8	16,4	2,8	2,6	3,0	0,3	0,3	5,3	5,2	100

Figure 9. Male life expectancies at birth on the basis of Hungarian abridged life tables by selected causes of death 1987-2001

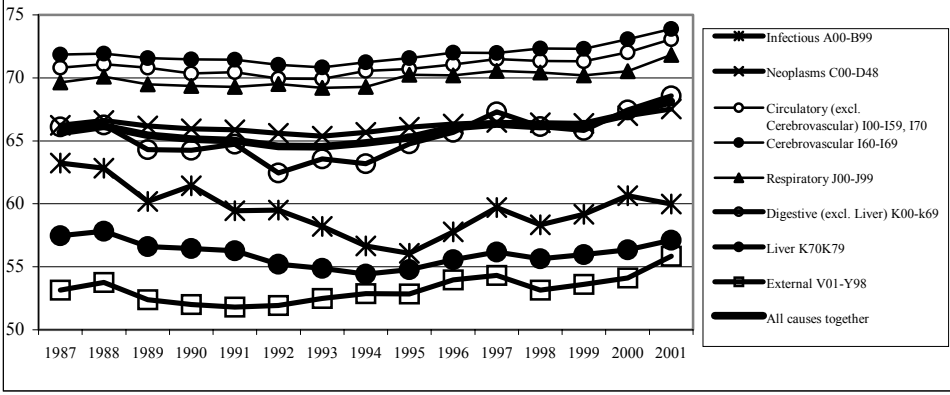
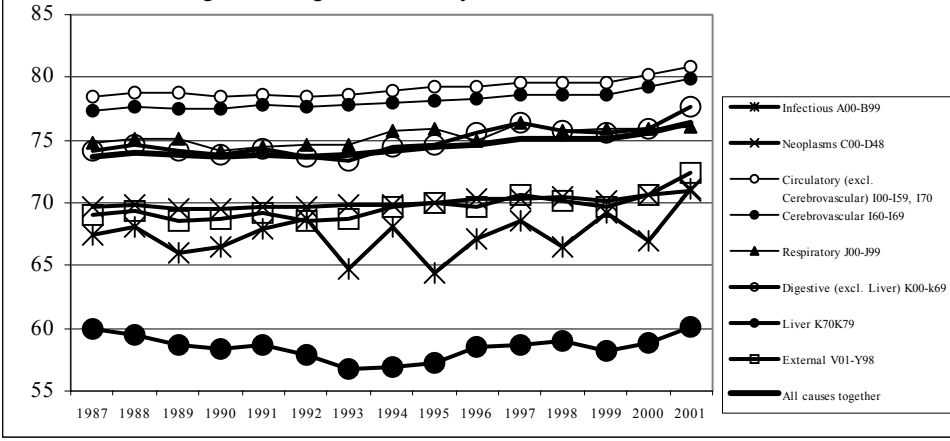


Figure 10. Female life expectancies at birth on the basis of Hungarian abridged life tables by selected causes of death 1987-2001



Another distinctive feature of the female pattern of leading causes of deaths is the significant and steady increase of neoplasms in practically each age group studied (Table 2). The only exception was the period of 1988–1993 for younger middle aged (30–49) women for whom the relative weight of neoplasms decreased from 33.5 to 29.8%. This drop was, however, rapidly "recuperated" later during the 1990s. As a sign of "modernisation", percentages of circulatory diseases among causes of

death have modestly decreased, particularly from 1993 onwards. But since neoplasms kill women at younger ages than cerebrovascular or other circulatory diseases (and the difference is greater than in the case of men), this "exchange" has slowed down the overall increase in female life expectancies.

Considering the relatively small significance of infectious, respiratory and digestive (excluding liver) diseases as causes of death, hectic changes in life expectancies at birth of their victims–immediate drops following 1988 and recoveries from 1992 onwards–, individually did not make large impacts on male and female life expectancies individually, but their aggregate effect is not negligible (more noticeable in the case of men than women, see Figures 9 and 10). On the contrary, with regard to rapid increases in the weight of liver diseases, significant drops in the average age of their victims between 1988 and 1993/1994 contributed largely to decreasing life expectancies in that period. Positive changes in average life expectancies at birth of all men and women during the late 1990s are, for the most part, attributable to significant increases in life expectancies of victims of the leading causes of death, namely, cerebrovascular and other circulatory diseases, and, in the case of men, neoplasms and external causes.

6. Conclusion

Repercussions of radical societal transformations at the turn of 1980/1990s on mortality levels of Hungarian population have been largely disencumbered by the dawn of the new millennium. Moreover, the 1988 peak in life expectancies was surpassed by more than two years for both men and women in 2001 (Figure 1). But a closer look at changes in age-specific mortality indicators and the cause-of-death pattern warns against drawing far-reaching conclusions. Hungarians die too young from both avoidable and unavoidable diseases and the "cardiovascular revolution" is still to come. Much effort is needed at all levels (governmental, local, individual) and in various fields (living standards, living and working environment, health services, education etc.) to achieve a breakthrough in the health status of the Hungarian population and to reduce our heavy handicap in the enlarged European Union.

References

Bobak M., M.G. Marmot, 1996, "East–west mortality divide and its potential explanations: proposed research agenda", *British Medical Journal* 312, 421–425.

Boys R.J., D. P. Forster, P. Józan, 1991, "Mortality from causes amenable and non-amenable to medical care: the experience of eastern Europe", *British Medical Journal* 303, 879–883.

Carlson E., R. Hoffmann, 2002, State Socialist Development Policy and Rising Working-Age Male Mortality.
www.demogr.mpg.de/Papers/Workshops/020619_paper09.pdf

Caselli G., F. Meslé, J. Vallin, 2002, "Epidemiologic transition theory exceptions", *Genus* LVIII (1), 9–51.

Daróczi E., 1981, "A belföldi vándorlás intenzitásának és térbeli szerkezetének változása Magyarországon 1960–1978 között" (Spatial patters and trends in internal migration in Hungary, 1960–1978), *Demográfia 1*, 37–72.

Daróczi E., 1988, A halandóság területi eltérései Magyarországon. Egyetemi doktori értekezés. Kézirat (Spatial variations in mortality in Hungary), University doctoral thesis, Manuscript.

Hertzman C., A. Siddiqi, 2000, "Health and rapid economic change in the late twentieth century", *Social Science & Medicine* 51, 809–819.

Losonczi Á., 1989, *Ártó–védő társadalom. Ahogy a társadalom betegít és gyógyít* (Society hurts, society protects. The ways society affects and heals), Budapest, KJK.

Marmot M., M. Bobak, 2000, "International comparators and poverty and poverty and health in Europe", *British Medical Journal* 321, 1124–1128.

McKee M., V. Shkolnikov, 2001, "Understanding the toll of premature death among men in eastern Europe", *British Medical Journal* 323, 1051–1055.

Meslé F., 1991, "La mortalité dans les pays d'Europe de l'Est", *Population* 3, 599-650.

Meslé F., 1996, Mortality in Eastern and Western Europe: a Widening Gap, in: D. Coleman (ed.), *European Population in the 1990s,* Oxford University Press.

Meslé F., 2002, Mortality in Eastern Europe and the former Soviet Union: long-term trends and recent upturns.
www.demogr.mpg.de/Papers/Workshops/020619_paper27.pdf

Meslé F., J. Vallin, 2002, "Mortalité en Europe: la divergence Est–Ouest" *Population-F* 57 (1), 171–212.

Monigl I., 1992, *Az 1952–53. évi népesedéspolitikai program Magyarországon. Dokumentumgyűjtemény* (The Hungarian Population Policy Program of 1952–1953. Collection of Documents), KSH NKI Kutatási Jelentései 11 (DRI HCSO Researh Reports 11), Budapest.

Okólski M., 1993, East–West mortality differentials, in: A. Blum, J.-L. Rallu, *European population. Volume 2: Demographic Dynamics*, John Libbey Eurotext: 168–189.

Okólski M., 1994, Health and Mortality, in: *European Population Conference, 1993. Proceedings. Volume 1:* 119–205. UN ECE: Geneva, Council of Europe: Strasbourg.

Omran A.R., 1971, "The epidemiologic transition: a theory of the epidemiology of population change", *Milbank Memorial Fund Quarterly, 49*, 509–538.

Pollard J.H., 1986, *Cause of Death, Expectation of Life and the Hungarian experience with Some International Comparisons,* School of

Economic and Financial Studies, Research Paper No 307, Macquarie University.

Rychtařiková J., 2002, The Case of the Czech Republic. Determinants of the recent favourable turnover in mortality.
www.demogr.mpg.de/Papers/Workshops/020619_paper34.pdf

Watson P., 1995, "Explaining rising mortality among men in eastern Europe", *Social Science Medicine* 41, 923–934.

Valkovics E., 1984, "L'évolution récente de mortalité dans les pays de l'Est: Essai d'explication à partir de l'example hongrois", *Espace, population, sociétés* 3, 141–168.

Mortality and health during the transition to a market economy in Latvia

Juris Krumins

1. Data collection and data accuracy

1.1. Registration of deaths and causes of deaths

Since the restoration of independence of Latvia in 1991, together with other transformations, changes have occurred in the state statistical system. The law on civil certificates (effective from October 1993) was adopted. Religion was added as a registered indication in the civil certificate of death, but the level of education was eliminated. Confidentiality requirements to of the information about a deceased person were strengthened by the Law on State statistics (1993) and by the Personal Data Protection Law (2000).

From January 1996 all health care institutions and the CSB of Latvia started to use the 10th Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) for the coding of causes of death. The 10th Revision is rather complicated for practical users during the period of introduction. Therefore checking and coding of medical certificates of death has been centralised in Latvia in the Medical Statistics Bureau of the Ministry of Welfare.

From March 1997 all health institutions and physicians were obliged to fill a new form of death certificates. According to requirements all records in the certificates must be written in Latvian language without abbreviations and corrections.

Throughout the 1990s there were several indications concerning verification and coding system of causes of death. Illogical, imperfect and incorrect diagnoses are still found because physicians are poorly informed about the completion and further use of medical documentation and statistical information (Ministry of Welfare, 2001, 65).

Territorial and international comparisons of mortality by cause of death raise doubts about the reliability of diagnoses. For example, it is doubtful that in Latvia mortality from myocardial infarction is three times lower than in Finland, Norway or Sweden. Some pathologies, for example chronic obstructive pulmonary diseases, in Latvia are incorrectly registered as diseases of the circulatory system, wrongly considering terminal status as a basic disease (Ministry of Welfare, 2001, 66).

Autopsies are the most exact way to determine cause of death. The requirement of obligatory an autopsy for hospital deaths from several diseases was cancelled in 1990. The performance of autopsies since 1992 is regulated by the Law on a deceased person's body protection and use of human tissue and organs in medicine. According to that Law, autopsy can be performed only if a person during his/her life allowed it in a written form. If will is unknown, it should be expressed by relatives in written form. Autopsy can be performed exceptionally if: cause of death is infectious disease, cause of death is a disease undiagnosed during lifetime, the weight of a stillborn baby is over 500 grams or an autopsy is requested by investigator or prosecutor. The decision whether to take or not to take the results of autopsy into account for the statistical registration of cause of death is made by the deputy chief physician in any hospital.

During the 1990s the autopsy rate in Latvia declined significantly: in 1990 the proportion of autopsies was 59%, but in 2000 26% of the total number of deaths in hospitals (Ministry of Welfare, 1995, 30; Ministry of Welfare, 2001, 62). Such a trend was determined by changes in a remuneration of clinical autopsies, changes in the legal regulations and the rules that give rights to family members who refuse autopsies.

There are no published data confirming the completeness of the registration of deaths and causes of death. In the Circular "On the execution of birth, perinatal and infant death documents" (March 1999), issued by the Medical Department of the Ministry of Welfare, it was stressed that the Registry offices and the CSB has received a number of uncompleted or incorrectly filled birth, perinatal and infant death certificates.

The problem of quality and comparability of vital statistics exists in all countries. It depends strongly on the quality of diagnoses of the cause of death, on the system of registration and coding, and on the training of medical practitioners. It seems that the technology of collecting data of vital statistics, the organisational structure of the flows of information, including the centralised coding of the cause of death in the Medical Statistics Bureau, and the tabulation of statistics in the CSB according to internationally accepted methodological principles, ensures the necessary level of data quality, suitable for the analyst to draw valid conclusions.

1.2. Information on population at risk and survey data

Since 1991 a new definition of live birth and, consequently, an infant death concept has been according to international standards adopted in Latvia (Ministry of Health Care, 1991). The minimal duration of gestation to determine live birth was changed from 28 weeks to 22 weeks, which relatively more influenced the numerator than denominator in the infant mortality rate.

As a result a rapid rise of infant mortality occurred in 1991 from 13.7 per 1000 live births in 1990 to 15.7 in 1991 (CSB, 2002, 131). According to an evaluation performed by experts of the CSB, near to 40 %of total increase of the infant mortality rate resulted from the methodological changes in the registration, but the other 60 %was an actual increase of infant mortality rate. This means that the decrease of life expectancy in 1991 according to published official data has been overestimated.

The difference between Population Census 2000 data and the current demographic statistics, previously calculated and published by the CSB was found equal 42 thousand persons or 1.8% of the total population (CSB, 2002, 10). The size of that difference varied over age and sex groups. The largest differences were discovered in ages 28-57 years, which could be explained mainly with rather high level of undocumented emigration, especially in the first years after regaining of independence of Latvia, when legislation on emigration terms was not developed.

CSB has performed recalculations of the population numbers by age and sex between two recent population censuses, based on the final results of the 2000 Census and corrected migration figures. Insignificant changes in

the age-specific mortality rates resulted from recalculations of population stock, which cannot seriously affect trajectories of mortality trends during the 1990s.

Surveys performed during the transition period give us important additional information about different aspects of the health status and the main determinants affecting people's health. Two Norbalt living conditions surveys provide data which are comparable over time and between countries around the Baltic sea: Norbalt I, conducted in 1994 (Aasland, 1996), and Norbalt II, conducted in 1999 (CSB and FAFO, 2000).

Among surveys focused on specific health issues the following should be mentioned:
- Family, health and job, conducted in 1992 (Eglite, 1997);
- Family and fertility survey, conducted in 1995;
- Reproductive health and behaviour, conducted in 1997 (Vjatere, 1998);
- Food in the Baltic countries, conducted in 1997;
- FINBALT health monitoring;
- Environmental factors of health, conducted in1999;
- Health and habits of pupils in secondary schools, conducted in 1999;
- Teachers on/of health education, conducted in 2000;
- Time use skills for health, conducted in 2000 (Eglite, 2000).

2. Mortality and life expectancy

2.1. Changes in life expectancy and mortality by causes of death

Mortality analysis of the Latvian population has been performed mainly by academicians of the University of Latvia (Baltins, 2000; Krumins, 1991-2000; Zvidrins, 1999), analysis of health status mainly by specialists of the Institute of Economics (Eglite, 1997 and 2000), University of Latvia (Gosa, 1999; Krumina, 1996), Latvian Academy of Medicine (Brigis, 1995, 2001) and specialists from the CSB and Ministry of Welfare. A specific feature of mortality research during the 1990s is broadening of comparative mortality analysis to the three Baltic countries (Krumins and Zvidrins, 1993; Krumins, 1994; Zaborskis *et al.*, 1995; Meslè and Hertrich, 1999; Stankuniene *et al.*, 1999) and the Baltic Sea

area (Krumins *et al.*, 1991), performed by Estonian, Finnish, French, Belgian, Latvian and Lithuanian researchers.

Latvia fully conforms to the pattern of an unprecedented divergence in life expectancy trends between Western European countries, where life expectancy is constantly growing, and Central and Eastern European countries, where it is stagnating or regressing. A similar situation in Russia has been named "prolonged mortality crisis" (Vishnevsky and Shkolnikov, 1997).

Gorbachev's anti-alcohol campaign led to a sharp rise in life expectancy between 1985 and 1987, but the relaxation of the measures very quickly caused a relapse in the late 1980s. The situation deteriorated during the break-up of the Soviet Union and transition period to the market economy.

In 1990, before radical socio-economic and political changes occurred, life expectancy in Latvia was the third lowest among European countries for males (below Russia and Turkey) and the fifth lowest for females, below Hungary, Romania, Yugoslav Republic of Macedonia and Turkey (Recent demographic developments in Europe, 2002, 97). Life expectancy at birth in Latvia fell pronouncedly (by six years), between 1989 and 1994 (Table 1), when for males it was lower by 4.5 years than in 1958-1959, but for females it was almost at the level of 1958-1959.

Table 1. Life expectancy at birth in Latvia - changes compared to previous year and differences by sex, 1989-2000 (years)

Years	Male	Female	Fem.-Male	Years	Male	Years	Fem.-Male
1989	- 1.01	+ 0.02	9.91	1995	+ 0.04	+ 0.23	12.34
1990	- 1.04	- 0.58	10.37	1996	+ 3.18	+ 2.52	11.68
1991	- 0.36	+ 0.17	10.90	1997	+ 0.27	+ 0.26	11.67
1992	- 0.60	+ 0.08	11.58	1998	- 0.13	- 0,34	11,46
1993	- 1.64	- 0.99	12.23	1999	+0.81	+0.66	11.31
1994	- 0.89	- 0.97	12.15	2000	+0.04	-0.22	11.05
				2001	+0.25	+0.64	11.44

Source: own calculations based on data from Demographic Yearbook of Latvia 2002, Riga, CSB, 2002, 120.

Table 2. Annual increase of life expectancy at birth in transition countries from a year, when its level reached minimum during the 1990s, till the latest year available (years)

Countries	Period	Males	Females
Estonia	1994-2000	0.72	0.53
Latvia	1994-2000	0.62	0.58
Lithuania	1994-2000	0.78	0.47
Belarus	1995-2000	0.10	0.06
Bulgaria	1994-2000	0.03	0.08[1]
Czech Republic	1990-2000	0.41	0.29
Hungary	1992-2000	0.35	0.26
Macedonia	1992-1999	0.17	0.14
Moldova	1995-2000	0.42	0.30
Poland	1991-2000	0.40	0.29
Romania	1996-2000	0.65	0.48
Russia	1994-2000	0.23	0.17
Slovak Republic	1990-2000	0.25	0.19
Slovenia	1993-2000	0.41	0.25[1]
Ukraine	1995-1998	0.67	0.33
Yugoslavia	1991-2000	0.14	0.11[2]
Baltic countries, average	1994-2000	0.71	0.53
All mentioned countries, average	1990s	0.40	0.28

[1] 1991-2000; [2] 1993-2000.

Source: own calculation based on a country data published in: Recent Demographic Developments in Europe, Council of Europe Publishing.

The annual increase of life expectancy at birth from the year when it reached the lowest level in the 1990s until the latest year available, for women in Latvia is the highest between transition countries, and for men among the highest. In 1996 life expectancy grew considerably, especially for males. Similar rapid changes took place in the same year in Estonia (+2.7 years for males and +1.2 years for females). A more rapid increase of male life expectancy during advanced stage of transition period is a typical feature of health transition in all transition countries.

Recovery of life expectancy after a decline at the beginning of the 1990s in the three Baltic countries is faster than the transition countries average (Table 2). Nevertheless in 2001 male life expectancy in Latvia was at the level of 1958-1959 and repeated the level of the late 1980s (65.2). The recovery of female life expectancy was vary successful - in 2001 it

reached the highest point in the whole post-war period – 76.6 years (CSB, 2002, 120).

During the 1990s Latvia slightly improved its position among transition countries. The life expectancy of males in four European countries is lower than in Latvia (Belarus, Moldova, Russia and Ukraine). For females the situation is better – female life expectancy in Latvia exceeds the level of fifteen European countries.

The epidemiological pattern of mortality during transition confirms the role of the two main categories of causes of death, namely external causes and diseases of the circulatory system. External causes of death were the main factor in determining the decline in life expectancy at birth for males during 1989-1994, and explained 40 %of the total decline in life expectancy, while deaths due to circulatory diseases explained 31%. Among women, external causes were a relevant factor, although two-thirds of the decline was due to other causes of death (Krumins and Usackis, 2000).

In exactly the same way, from 1994, life expectancy in Latvia started to grow, owing to a decline in the same causes that had thrived during the first half of the 1990s (Vallin *et al.*, 2001, 146).

Since 1989 there has been a significant growth in the number of diagnoses in the category Symptoms and Ill-defined conditions. During 1989-1993 mortality rate from Symptoms and Ill-defined conditions increased for males by a factor of 14, for females by a factor of 18. In 1995 mortality in the category of Symptoms and Ill-defined conditions exceeded mortality in such categories of causes of death as Diseases of the respiratory system, Diseases of the digestive system or Diseases of the genitourinary system.

In 2001 a category "Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified" was the sixth according to mortality rate for males and fourth for females among all categories of causes of death. Changes described above partially influence the results of cause-specific mortality analysis, especially in older age groups, where diseases of circulatory system dominate.

2.2. Sex and urban-rural mortality differentials

Over the last half century the difference in life expectancy between men and women in Latvia has changed considerably. The gap between the sexes grew from 7.4 years in 1961-1962 to 10.6 in 1981-1982. During transition it has reached even 11-12 years (Table 1) as in the other two Baltic States, Russia, Ukraine and Belarus. In 1995 the male excess mortality peaked at the highest value since WW2, which meant 12.3 years of female excess life expectancy. The difference in healthy life expectancy between the two sexes in 2001 in Latvia constituted 9.7 years (WHO, 2002, 199).

In many European countries there has been a marked narrowing of this gap. This reversal of the trend was first noted in the UK in the mid - 1970s, before it spread to the Nordic countries in the early 1980s, followed by Austria, Germany, the Netherlands and Switzerland from the mid - 1980s (Vallin *et al.*, 2001).

The overall change in life expectancy at birth masks divergent trends in child and adult mortality. There has been no increase in the health status of adults, but a slow improvement in infant and child health. The deterioration in the health status of men was more expressed than for women.

Whatever the direction of the changes in life expectancy, the figures for male mortality are always more influential than figures for female mortality (Meslè and Hertrich, 1999). Changes in the male life expectancy mostly affect the variations in the gap between the sexes in Latvia.

In the 1990s excess male mortality over female mortality in Latvia increased in all main categories of causes of death. The growing gap in male and female life expectancy occurred mainly due to increase of mortality from the diseases of the circulatory system and external causes of death, mainly in working ages and for men. In comparison with other WHO region countries, the chances per 1000 births of eventually dying from diseases of circulatory system in Latvia is high, especially for females, but cancer mortality is relatively low.

The level of education for females in Latvia is traditionally higher than for males. A growing gap in male-female life expectancy is partially influenced by differences in level of education.

During the transition period the urban population in Latvia declined faster than the rural, which caused a decrease of the share of urban population to the level which existed in 1983 (67.9%). Life expectancy differences for urban and rural population over the whole post war period, including the 1990s, have no specific trend, fluctuating from one to two years. Over the period 1991-2001 there is no clear excess in rural IMR. In four out of eleven years IMR was higher in towns.

Changes occurred in the pattern of excess age-specific rural mortality. Few decennials ago mortality rates in retirement ages in the countryside were lower than in towns. This advantage has been lost and in 2001 in all age groups, excluding the first year of life, mortality of rural population was higher than urban. Particularly high rural excess mortality is from exogenous causes of death (Table 3).

Table 3. Age-specific excess of rural mortality versus urban mortality by main causes of death, Latvia, 1989-2001 (%)

Age groups	Neoplasms	Circulatory diseases	Respiratory diseases	Digestive diseases	External causes
		1989			
0-19	114	151	136	125	219
20-39	112	133	158	97	147
40-59	105	120	147	122	148
60-79	81	124	146	96	109
80+	54	121	132	42	60
		1995			
0-19	89	94	320	567	193
20-39	125	90	87	30	130
40-59	112	113	94	75	122
60-79	90	113	142	76	85
80+	54	108	158	67	65
		2001			
0-19	174	87	278	522	131
20-39	87	107	53	41	211
40-59	116	111	88	68	135
60-79	108	120	114	113	117
80+	68	109	171	78	73

Source: calculated from Demographic Yearbook of Latvia, respective years.

The residual excess of rural mortality could be explained by differences in the level of education and standards of hygiene, by poorer medical services and higher alcohol consumption in countryside.

3. Self-assessed health

Shifts in health status are also gauged by changes in other measures of health status such as the prevalence/incidence of certain diseases, and a self-reported health assessment. Due to a reorganisation of the health care system, changes in morbidity rates, based on visits to health institutions, during the first half of 1990s need to be evaluated carefully. With the exception of infectious diseases, incidence trends are not very reliable.

A higher adequacy is observed between mortality trends and changes in the subjective health status of population. The results from sample survey carried out by the Institute of Economy of the Latvian Academy of Sciences and Norbalt living conditions survey, using the same wording for self assessed health status of the population of Riga, indicated a considerable increase in those individuals who reported a negative assessment of their health over a period from 1992 to 1994 (Krumins and Usackis, 2000, 291).

Due to lack of data on socio-economic mortality differentials during the period between censuses (1989-2000), surveys provide necessary information to evaluate differentials in health status from self-assessments of health (Table 4).

In Latvia, as well as in the other two Baltic countries persons of Russian ethnicity produce health self-evaluations slightly lower than titular ethnicities, which repeat the situation from mortality and life expectancy data. A very clear regularity comes out of the data on level of education. Education is among key determinants affecting health (subjective and objective). As the education level of respondents rises, health tends to be rated less and less as bad or very bad.

Employment status and income level are between two major contributors to the health status. 61% of persons seeking work along with negative health evaluation note the existence of a chronic illness. Persons living without a partner tend to rate their health status as bad or very bad more

frequently in comparison with those married or cohabiting, although the results differ by age and sex groups.

Table 4. Self-assessment of health by demographic and socio-economic groups (% of population 18 years of age and older), Latvia, 1999*

	How would you characterise your health in general?		
	Very good and good	Fair/average	Bad and very bad
	By place of residence		
Urban	25.9	50.2	23.9
Rural	28.2	45.2	26.5
	By sex		
Male	32.5	49.5	18.2
Females	21.8	48.1	30.2
	By ethnicity		
Latvians	28.7	47.9	23.5
Russians	23.1	50.6	26.4
	By level of education		
Basic or less	17.8	42.8	39.4
Secondary	31.5	49.6	18.9
Higher	29.9	54.5	15.6
	By employment status		
Employee: white collar	33.0	56.2	10.8
Employee: blue collar	33.6	55.7	10.6
Unemployed	27.6	50.6	21.8
	By marital status		
Married/cohabiting	24.6	53.2	22.2
Living without partner	29.3	42.6	28.1
	By income quintiles		
1st quintile	23.8	51.6	24.5
3rd quintile	16.2	44.9	38.9
5th quintile	40.2	49.0	10.8

* The total of figures may be not equal to 100 %due to rounding during a data processing by CSB and due to fact that some respondents did not answered all questions. Figures in Table 4 are calculated from (CSB and FAFO, 2000, 119-121).

Poverty and poor subjective health status are inseparable. There are seven main risk factors identified in Latvia that increase an individual's risk of being poor: 1) household of four or more members of which at least two are adults, 2) one adult a household with two or more children, 3) the age of breadwinner is less than 35 years, 4) the completed level of education of the breadwinner is primary education or less, 5) the main source of

income is agriculture or social transfers (excluding pensions), 6) the household is in a rural area, 7) the breadwinner is currently looking for a job (Gassman, 2000, 39).

4. Discussion and conclusions

Latvia's population was affected by economic shock in 1991, when control over consumer prices was abolished and real wages and salaries fell approximately by one third. The crisis deepened in 1992-1993. Decline of income brought about significant decrease in consumption of the main food products. The total consumption of calories during 1989-1994 declined by 13%.

The predominance of initial mortality conditions in the pre-transition period also was discovered and proved to be relevant. A higher mortality level in the pre-transition years smaller increase of mortality during transition. Therefore, radical mortality changes occurred among population groups with better health indicators before the transition (people living in large cities and urban areas).

Several studies involving an epidemiological cross-section of the most prevalent chronic non-infectious diseases revealed that not only objective statistical data, but also the psychological attitude of the population towards health is negative. The psychological attitude of the population towards health also has changed. According to survey data from 1995, people of working age put the highest value on money, then career, and only then in third or fourth place comes health.

Decline in income and an increase of commercial health care services caused a fall in the number of patients attending health care institutions. The share of household expenditure accounted for by expenses for health services started to increase. It became more and more difficult for socially vulnerable groups to pay for health services.

Psychosocial stress was a mortality increase-generating factor during the first half of the 1990s. It brought about changes in male mortality more than in female mortality.

The main causes of the sudden increase in mortality are related to two typical stress-related variables: diseases of the circulatory system and external causes of death, mostly amongst middle-aged men. Urban males, during radical socio-economic changes, were more affected by stress factors than other groups of population, which resulted in a sharp increase of mortality from external causes of death in cities and towns. This conclusion corresponds to the results of mortality analysis performed by Russian demographers. They concluded that the urban population in Russia has experienced the most hardship in adapting to the new circumstances (Shkolnikov *et al.*, 2000, 102).

Excessively high rates of cardiovascular mortality and mortality from external causes were attributable to the high prevalence of risk factors such as smoking, alcohol consumption, inappropriate nutrition, etc. Prevention programs to combat risk factors for adult health were poorly developed. It is stressed that research concentrated exclusively on shorter periods in the countries of transitional economies could give us misleading conclusions in comparison with long term analysis of mortality stagnation (Katus, 2000, 21).

A large proportion of Latvia's population lives in poverty. It slows down human development because without appropriate income it is impossible to care about balanced nutrition, health and education. In such a situation there is a danger widening of alcoholism and crime.

Growing consumption of alcoholic beverages plays an important role in the rise of mortality from external causes of death. The differences in the frequency of alcohol consumption between men and women are statistically significant, but relatively small in the youngest age groups. Some of the main risk factors for disease, such as hypertension, smoking, unbalanced nourishment, obesity, and environmental pollution are clearly prevalent in Latvia.

1995 was a turning point in many socio-economic indicators. From 1995 increase of GDP per capita, there was a private sector started to dominant in national and the economy. From 1997 the share of job seekers in the economically active population significantly declined and the real wage index exceeded 3 %and more per year. The situation slightly deteriorated in 1998 when the Latvian economy was affected by the crisis in Russia.

Reform of the health care system has lasted for more than ten years. The year 1992 might be considered as beginning of the reform, when the Ministry of Welfare started to develop norms for changing the health care financing philosophy. Until the mid -1990s minor changes occurred.

In 1996 the government approved the "Strategy for the Development of Health Care in Latvia" which identified one priority – primary health care. For the first time used the idea of "patient's fee" and voluntary health insurance started. The compulsory health insurance base was defined as part of personal income tax and the grant of the national central government budget. Since 1997 registration of there has been patients with family doctors and the State Sickness Fund has been receiving the whole amount of the resources allocated for health care.

Visits to doctors (except dentists) per capita stabilised during the second half of the 1990s at the level of 4-5, but the number of hospitalised patients per 10,000 residents was at the level of 21-22 (CSB, 1998, 84). The main obstacle for further development of health care was insufficient funding and ineffective administration. At the end of the1990s health care expenditure as a percentage of GDP in Latvia was reported as the second lowest (4.4%) in comparison with the EU average – 8.6% (WHO, 2001, 38).

Respondents of the Social Assessment study performed in 1998 raised the following concerns: cost of health care, poor quality of public medical services, lack of preventive care, inability to maintain good nutrition, health implications of alcoholism and smoking, and the impact of poverty on mental health (Trapenciere *et al.*, 2000, 100).

According to different criteria poverty is more widespread in rural than urban areas of country. Such a situation affects people's health. Mortality in rural areas still is higher than in towns. Curtailing the rise in income inequality is frequently mentioned among first policy recommendations to overcome the health crisis (Paniccià, 1997).

The health situation can be improved by a radical revision of the whole system of measures aimed at providing normal functions in activities in all spheres of life. A radical change in the system of health care and

social security is necessary. General economic growth, social welfare, and security may play a much more important role in health than medicine ever can.

References

Aasland A. (ed.), 1996, *Latvia: The Impact of the Transition. The Norbalt Living Conditions Project. FAFO Report 188.* Oslo.

Baltins M., 2000, *Parskats par sabiedribas veselibu Latvija (Review of Public Health in Latvia),* Riga.

Brigis G., 1995, "Social and Economic Requirements for Encouraging Interest in Health Care", *Humanities and Social Sciences. Latvia* 7.

Brigis G., 2001, Health, in: E.Vaskis (ed.), *Living conditions in Latvia. Norbalt II project. Analytical report,* Riga, 156-179.

Central Statistical Bureau (CSB), 1998, *Socialie procesi Latvija (Social processes in Latvia. Analytical overview),* E. Vaskis (ed.). Riga.

Central Statistical Bureau and FAFO (Norway), 2000, *The Survey of Living conditions in Latvia in 1999. Informative Bulletin,* Riga.

Central Statistical Bureau, 2002, *Results of the 2000 Population and Housing Census in Latvia,* Riga.

Central Statistical Bureau, 2002, *Demographic Yearbook of Latvia 2002*, Riga.

Council of Europe, 2002, *Recent Demographic Developments in Europe 2002.* Strasbourg: Council of Europe Publishing.

Eglite P. (ed.), 1997, *Spatial Differences of Health and Mortality in Latvia. Population Projection up to 2015*. Riga: Institute of Economics of the LASc. (In Latvian, English Summary).

Eglite P. (ed.), 2000, *Health Habits of Pupils and Effects of Health Classes.* Riga: Institute of Economics of the LASc. (In Latvian, English Summary).

Gassman F., 2000, *Who and Where are Poor in Latvia?,* Riga: Ministry of Welfare and UNDP.

Gosa Z., 1999, "Women's health at the turn of the 21st century", *Humanities and Social Sciences. Latvia* 24, 114-124.

Ministry of Welfare, 2001, *Medical Aspects of Death. 2nd edition*. Riga: Latvian Health Statistics and Medical Technology Agency.

Katus K., 2000, *Long-term Mortality Trend in the Baltic Countries.* RU Series B. No.46. Tallinn.

Krumina I., 1996, Health, in P.Zvidrins ed.), *Latvijas iedzivotaju paaudzu nomaina (Population Replacement in Latvia).* Riga, 50-60. (In Latvian, English Summary)

Krumins J., Valkonen T. and P.Zvidrins, 1991, "Mortality Trends in Finland and Latvia since the 1920s.", *Yearbook of Population Research in Finland* XXIX, 61-72.

Krumins J., 1993, *Iedzivotaju muza ilgums - tendences un palielinasanas problemas (Length of life – trends and problems of increase).* Riga: University of Latvia.

Krumins J., 1993, "Suicide mortality in Latvia: current trends and differentiation", *Proceedings of the Latvian Academy of Sciences. A.* 546, 9-12.

Krumins J. and P.Zvidrins, 1993, "Morbidity and Mortality in Estonia, Latvia and Lithuania in the 1980's", *Scandinavian Journal of Social Medicine* 21, 150-158.

Krumins J., 1994, Changing Mortality Patterns in Latvia, Lithuania, and Estonia, in: W.Lutz, S.Scherbov, A.Volkov (eds.), *Demographic Trends*

and Patterns in the Soviet Union Before 1991. IIASA Laxenburg (Austria), Routledge, London and NY, 403-419.

Krumins J. and I.Krumina, 1995, "Changes of the length of working life in Latvia", *Humanities and Social Sciences. Latvia* 7, 71-81.

Krumins J., 1995, Socio-Economic Differentiation of Infant and Adult Mortality: Experience of Soviet Registration System and Problems of Comparability, in: *Collecte et comparabilité des données demographiques et sociales en Europe*, Chaire Quetelet 1991. Institut de Demographie, UCL, Louvain-la-Neuve. Academia, 433-449.

Krumins J., 1997, "Health and mortality during a transition to a market economy: case of Latvia", *Revue Baltique* 10, 114-129.

Krumins J. and I.Krumina, 1999, "Life expectancy trends and projections in Latvia", *Humanities and Social Sciences. Latvia* 24, 69-82.

Krumins J. and U.Usackis, 2000, The Mortality Consequences of the Transition to Market Economy in Latvia, 1991-1995, in: G.A..Cornia and R. Paniccia (eds), *The Mortality Crisis in Transitional Economies*. Oxford University Press, New York, 280-302.

Meslè F. and V.Hertrich, 1999, "Sex mortality differences in the Baltic countries", *Revue Baltique* 14, 37-67.

Ministry of Health Care, 1991, *Order No.15 – Calculation of IMR according to methodology of the WHO*. Riga.

Ministry of Welfare, 1995, *Health in Latvia. Yearbook of Latvian Health Statistics 1994. 5th edition.* Riga: Medical Statistics Bureau.

Ministry of Welfare, 2001, *Social Report 2001.* F.Rajevska (ed). Riga.

Paniccià R., 1997, *Economic Shocks, Impoverishment and Poverty-Related Mortality During the Eastern European Transition*. The UN University, WIDER. Working Papers No.126. Helsinki.

Shkolnikov V., Andreev E. and T.Maleva (editors), 2000. *Inequality and Mortality in Russia.* Moscow. (In Russian)

Stankuniene V., D.Jasilionis and J.Krumins, 1999, "Social differences in mortality, morbidity, and health-related behaviour during transition: research findings in the three Baltic countries", *Revue Baltique* 14, 9-36.

Trapenciere I. *et al.*, 2000, *Listening to the Poor: Social Assessment of Powerty in Latvia*, Riga: Ministry of Welfare and UNDP.

UNDP, Latvia Human Development Reports 1995-2001. Riga.

UNICEF, 1994. Crisis in Mortality, Health and Nutrition. Economies in Transition Studies. Regional Monitoring Report. International Child Development Centre. Florence (Italy).

UNICEF, 1997. Children at Risk in Central and Eastern Europe: Perils and Promises. Economies in Transition Studies. Regional Monitoring Report. International Child Development Centre. Florence (Italy).

Vallin J. and F.Meslè, T.Valkonen, 2001, *Trends in mortality and differential mortality*, Strasbourg: Council of Europe Publishing.

Vishnevsky A. and V.Shkolnikov, 1997, *Mortality in Russia: Main Risk Groups and Priorities of Action.* Moscow. (In Russian).

Vjatere D., 1998, *Reproductive Health of the Population of Latvia. Evaluation and Recommendations.* Riga: Ministry of Welfare and UNDP.

WHO (Regional Office for Europe), 1996, *Health Care Systems in Transition. Latvia.* Copenhagen.

WHO (Regional Office for Europe), 1996, *European Health Care Reforms Analysis of Current Strategies. Summary.* Copenhagen.

WHO (Regional Office for Europe), 2001, *Highlights on Health in Latvia.* Copenhagen.

WHO, 2002, *The World Health Report: 2002: Reducing Risks, Promoting Healthy Life.* Geneva.

Zaborskis A., I.Ranka and M.Maser, 1995, "Infant and Child Mortality in Lithuania, Latvia and Estonia", *Journal of Baltic Studies* XXVI

Zvidrins P. (ed.), 1999, *Latvijas demografiskas attistibas prognozes (Demographic Projections for Latvia: 1998-2025).* Riga: University of Latvia (English Summary).

Causes of death in Russia: assessing trends since the 1950s[1]

France Meslé, Jacques Vallin, Véronique Hertrich
Evgueni Andreev, Vladimir Shkolnikov

1. Introduction

The health situation in the former USSR, especially Russia, has deteriorated significantly since the mid-1960s. This long-term decline was partially concealed in the late 1980s and early 1990s by very wide fluctuations in life expectancy related to Gorbachev's anti-alcoholism campaign, its abandonment and the socio-economic crisis which came to a head in 1992-1993. Many studies are available on these recent mortality developments in Russia (Andreev, 2001; Gavrilova *et al.*, 2001, 2002; Leon *et al*., 1997; Shkolnikov and Nemtsov, 1997; Vichnevski, 2000; Waldberg *et al.*, 1998) but few address long-term trends. Even after this unsettled period, however, the most recent evidence is of a continuing long-term decline.

A proper understanding of the present situation depends on identifying the main determinants of the mid-1960s about-turn. Was it due to a reversal in trends for specific causes of death, or did it reflect a change in cause-of-death weights? Until recently, it was impossible to say, because of the lack of cause-of-death data for the 1950s, 1960s and 1970s. At that time, the Soviet authorities published no data on deaths by cause and in 1974 even discontinued publication of information on total mortality. However, death-by-cause statistics were regularly collected and carefully archived by Goskomstat[2].

[1] This paper results from collaborative work undertaken in the framework of the INTAS project n° 1722 "expectation of life and causes of death in different republics of the ex-USSR: long term trends and recent changes".

[2] Not only were mortality and cause-of-death statistics kept secret, some parts were more secret than others. A series of "hidden causes", in particular, were mixed with ill-defined causes in the general table, and a special table of them was kept in a more secrete place. It was particularly difficult to gather all these specific tables together, and especially so for particular years or Republics.

In the post-1985 Gorbachev era, archives were progressively opened up. In the frame of a collaborative project between CDHE (Moscow) and INED (Paris), it was then possible to access unpublished data from Goskomstat's archives since 1959. Deaths by sex, 5-year age groups and cause were systematically collected for the 15 Republics of the USSR. Deaths were classified according to successive Soviet Classifications, which differed from the International Classification of Diseases (ICD). Before hardly any analysis could be undertaken, painstaking reconstruction was necessary to obtain continuous series of deaths by cause undisrupted by classification changes. That was done incrementally by reclassifying data from one classification to the next[3], until the entire series was re-classified into the last classification, using a method devised for an earlier project on French data (Vallin and Meslé, 1988; Meslé and Vallin, 1996). Long-term series were thus successively computed for the whole USSR (Meslé *et al.*, 1992) and then for individual countries of the former Soviet Union. Analyses of results by countries were first published for Russia (Meslé *et al*., 1996, 1998; Shkolnikov *et al.*, 1996), then for Ukraine (Meslé and Vallin, in press), and finally for the three Baltic countries (Hertrich and Meslé, 1997, 1999) for which a collective book is in the works. More recently, a new phase of analysis has been undertaken on the three Caucasian countries (Yeganyan *et al.*, 2001).

In the most recent publications on Russia, only data for the period 1965-2000 (Meslé, 2002) could be used since the transition between the 1952 Soviet cause-of-death classifications, which was in use till 1964, and that of 1965 was not yet completed. Because the mid-1960s was the precise point at which life expectancy began to decline, it was very important to complete that part of the reconstruction that could portray how the country slipped from the dramatic progress of the post-war period into the health crisis that onset in the 1960s. In the case of Russia, we managed to retrieve cause-of-death data from 1933. However, these data covered only a part of the Russian population (first only urban one, then urban and partially rural), and did not extend to the whole population till 1956 onwards. Final solution to the problem of the transition between the 1952

[3] For two successive classifications, items in the first were systematically associated with every item in the second which had a common content in order to constitute fundamental associations of items of equal contents in both classifications. Then, inside each fundamental association, transition coefficients were calculated to transfer deaths classified according to the first classification into the second one.

and 1965 Soviet Classifications thus gave us continuous series of data regarding deaths by cause from 1956 to 1998, according to the 176 items of the last Soviet Classification. In 1999, Russia adopted an abridged version of the ICD (10^{th} revision) containing 255 items. However, it was possible to extend these series to the years 1999 and 2000 for self-consistent groups of Soviet and abridged ICD-10 items.

The present paper aims to address two main issues on the basis of these data series. First, whether the causes of the decline in life expectancy from the 1960s are the same as those behind its increase up to 1965. Second, whether the wide fluctuation observed around the late 1980s and early 1990s has completely changed the dynamics of Russian epidemiology or whether it is just a blip in the long term downward trends observed since the 1960s. The first imperative, however, is to assess actual life expectancy trends, since crude data are subject to under-registration problems, especially before the year 1965.

2. Assessing trends in Russian life expectancy since the late 1940s

Under-registration of deaths is a problem highlighted by many authors (Anderson and Silver, 1986, 1989, 1990; Andreev *et al.*, 1998; Blum and Monnier, 1989; Ksenofontova, 1994; Velkoff and Miller, 1995). A previous study attempted to take all these problems into account and assess the level of life expectancy for 1958-1959 and the period 1965 to 1993, by correcting both infant mortality rates and mortality rates for elderly (Shkolnikov *et al*., 1996). As part of a general reconstruction of demographic series in Russia from the year 1927 till 1959, estimates of infant mortality and life expectancy were published, that factored in under-registration (Andreev *et al.*, 1998). Here, the complete series for the period 1946-2000 are re-assessed, corrected for both infant mortality and mortality rates of those at age 70+.

2.1. Infant mortality rates (IMRs)

The number of infant deaths is affected by two under-registration factors. One relates to the definition of live birth, and depends on administrative rules and instructions. The other, which is especially important for the past, stems from the fact that some infant deaths go unregistered because

families lack the awareness of the necessity to register deaths of very young children.

The Soviet definition[4] of a live birth was long non-compliant with the WHO international standard[5]. After independence, several former USSR Republics officially switched to the WHO definition, producing an immediate surge in the number of neonatal deaths (EMSB *et al.*, 1993). In Russia, notwithstanding an official change in the statistics in 1993, no particular rise in neonatal deaths was observed (Andreev, 1995). In fact new instructions did not change much the definition, since newborns with low weight or short duration of gestation had to survive several days to be registered, and neonatal deaths are still under-registered[6]. We assumed that a neonatal death under-registration rate is similar to those of the Baltic countries, measured according to the sudden rise observed in these countries in 1991 (Latvia and Lithuania) or 1992 (Estonia). In those countries, early neonatal mortality increased by 50% (EMSB *et al.*, 1993), which in Russia, for the years the statistics are available, resulted in a 40% increase. Thus corrected, all of the series of neonatal mortality rates in Russia were increased by 40%. Furthermore, the data displays an unexpected surge of neonatal deaths in 1984 and 1985. It can be interpreted as a result of an undocumented change in registration practices. Neonatal mortality rates for the preceding years were also corrected by a further 20% before applying the general correction.

For 1983, this double correction produces a 30% increase in total infant deaths. Backcast to preceding years, the total correction progressively diminishes as a consequence of the decreasing share of neonatal deaths. For the year 1964 the total correction makes only 26%. To go further back in the past, however, account must be taken of a more general problem of infant death under-registration. In fact, extending the same

[4] Babies born before 28 weeks of gestation, or weighing less than 1000 g or being less than 35 cm long, were not to be counted as live births or infant deaths if they died before the end of their first seven days of life.

[5] Any sign of life must result in the birth being registered as a live birth, without qualification.

[6] This assumption is supported by WHO, since its Health For All database, shows estimates of neo-natal mortality, built on medical data, which are higher than official Russian rates. These WHO figures are probably themselves under-estimated (Andreev, Kvasha, 2002).

correction back to the years 1938-1939 would have produced only a 7% correction in the IMR, corresponding to a much lower level of under-registration than is generally thought reliable. We therefore chose to keep the rate of correction for total infant mortality constant at its 1965 level so as to allow for the impact of a progressive improvement in infant death registration beyond the specific issue of definition. Such a correction (Table 1) produces infant mortality levels[7] very close to those estimated by Anderson and Silver (Anderson, Silver, 1986) for 1958-1970 and by Andreev *et al.* (1998) for 1946-1959.

Table 1. Uncorrected and corrected infant mortality rates

Year	Crude	Corr.	Year	Crude	Corr.	Year	Crude	Corr.
1946	91.7	107.7	1965	26.5	33.7	1984	20.9	26.2
1947	134.8	160.5	1966	25.5	32.4	1985	20.7	25.1
1948	92.8	111.5	1967	25.2	32.0	1986	19.4	23.8
1949	90.5	109.1	1968	25.4	31.9	1987	19.4	24.0
1950	88.3	106.6	1969	24.6	31.2	1988	18.8	23.1
1951	92.2	111.4	1970	23.1	29.4	1989	17.6	21.8
1952	77.6	93.9	1971	21.3	27.4	1990	17.2	21.5
1953	71.2	86.3	1972	21.7	28.0	1991	17.6	21.8
1954	71.7	87.2	1973	22.2	28.5	1992	17.8	22.1
1955	61.4	75.1	1974	22.9	29.4	1993	19.5	24.1
1956	49.1	60.5	1975	23.7	30.2	1994	18.8	23.6
1957	47.2	58.3	1976	25.0	31.5	1995	18.1	22.5
1958	41.1	50.9	1977	24.3	30.5	1996	17.3	21.6
1959	41.3	51.7	1978	23.6	29.8	1997	17.1	21.3
1960	36.6	46.1	1979	22.6	28.6	1998	16.6	20.7
1961	32.8	41.3	1980	22.1	28.3	1999	16.8	20.6
1962	32.0	40.3	1981	21.6	27.8	2000	15.4	19.1
1963	30.9	38.9	1982	20.4	26.7			
1964	28.7	36.1	1983	20.2	26.5			

[7] Birth numbers for 1946-1959 have also been slightly corrected for under-registration (Andreev *et al.*, 1998).

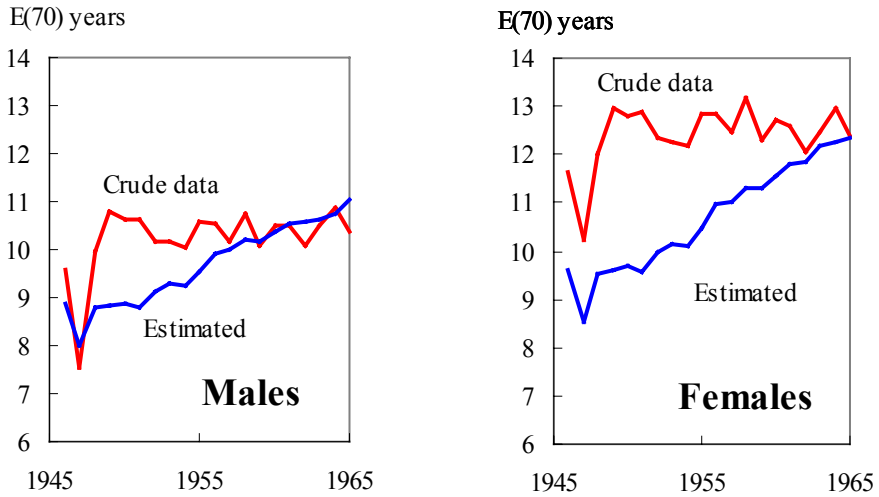
2.2 Mortality rates after age 70

Using registered deaths and estimated population numbers[8] complete life tables by single year of age were computed, resulting in patently unreliable rates at old ages, especially over age 70. For Russia, as for other countries of the former USSR, the standard use of model life tables to adjust mortality rates at old ages is questionable as age structure of mortality is far removed from any model life table due to the exceptionally high mortality at adult ages (Shkolnikov *et al.*, 1996). Using adult mortality to enter model life tables and to estimate old age mortality is very likely to produce misleading results. For that reason, we preferred to use our corrected IMRs to produce new estimates of old age mortality from corresponding model life tables. Year- and sex-specific IMRs were used to select from each of the four sets of Coale and Demeny model life tables a corresponding level of life expectancy at age 70. Their mean value was then compared to the life expectancy computed from crude data (Figure 1). The two curves converge as early as the late 1950s for males and in the mid-1960s for females. As it is usual in countries with incomplete data, the gap is much wider for females than for males. Cultural factors make it more important to register male than female deaths. It was decided to use life expectancies at age 70 extracted from model life tables as an estimate of Russian ones pre-1959 for males and pre-1965 for females.

Then, these estimates were used to compute new age-specific mortality rates above age 70. Coefficients of correction for mortality rates were computed, starting with 1 at age 70 and then interpolating for higher ages between 1 at age 70 and the necessary value at age 98 to produce the required life expectancy at age 70.

[8] For the years before 1959 no official population estimates were available. We used estimates by Andreev *et al*. (1998). For the years 1959-1970, official population estimates were corrected to better take into account migration flows. Finally, for 1994-2000 registered deaths do not include Chechnya and we also excluded Chechnya from population estimates.

Figure 1. Crude and estimated life expectancy at age 70, 1946-1965



The impact of IMR correction is almost identical for both sexes. It produces a life expectancy at birth lower by about one year than indicated by crude data in the late 1940s and early 1950s (with the exception of 1.5 year in the famine year of 1947), after which the correction becomes increasingly less important (Table 2 and Figure 1). In 2000, life expectancy is only lowered by 0.2 year.

As expected, correcting old age mortality induces a bigger change for females than for males. Around 1950, female life expectancy at birth is reduced by almost 2 years by only that correction (3 years if combined with the IMR correction), compared to less then 1 year for males (less then 2 years combined).

Since only infant mortality had to be corrected for recent years, final correction is much more important for the 1940s and 1950s than for the recent decades, but has little effect on the general trends. It mainly heightens the very sharp post-war rise, but neither casts doubt on the 1965 hinge nor the subsequent downtrends.

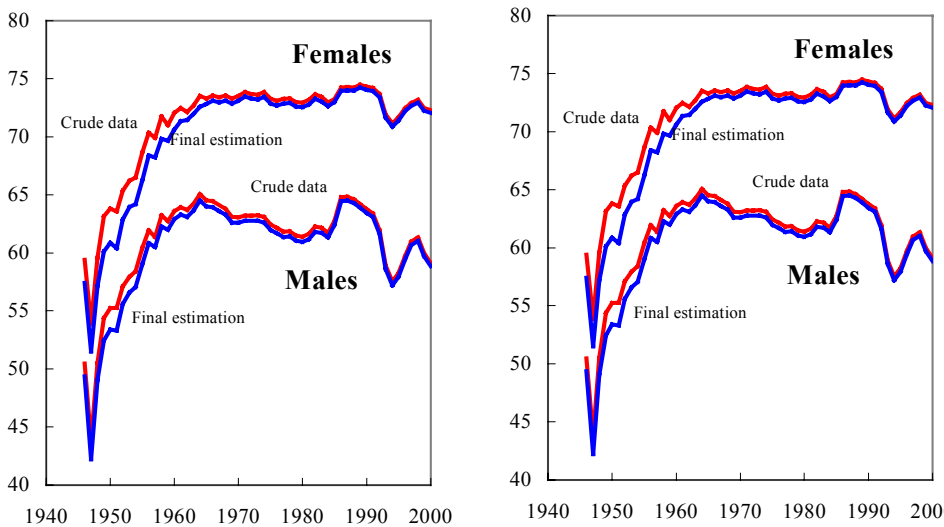
Table 2. Life expectancy at birth (in years) before and after corrections of infant mortality rate (m_0) and life expectancy at age 70 (e_{70})

Year	Males						Females					
	Crude data	After correction of		Effect of the correction of			Crude data	After correction of		Effect of the correction of		
		m_0	m_0 and e_{70}	m_0	e_{70}	Both		m_0	m_0 and e_{70}	m_0	e_{70}	Both
1946	50.5	49.5	49.3	-0.9	-0.2	-1.1	59.4	58.4	57.4	-1.0	-1.0	-2.0
1947	43.7	42.4	42.2	-1.4	-0.1	-1.5	53.9	52.4	51.5	-1.5	-0.9	-2.3
1948	50.5	49.4	49.0	-1.1	-0.4	-1.5	59.6	58.5	57.1	-1.1	-1.3	-2.4
1949	54.4	53.2	52.5	-1.2	-0.7	-1.9	63.2	62.0	60.1	-1.2	-1.9	-3.0
1950	55.2	54.0	53.4	-1.2	-0.6	-1.8	63.8	62.7	60.9	-1.2	-1.8	-2.9
1951	55.3	54.0	53.3	-1.3	-0.7	-1.9	63.6	62.3	60.4	-1.2	-1.9	-3.2
1952	57.1	56.0	55.6	-1.1	-0.4	-1.5	65.3	64.3	62.9	-1.0	-1.4	-2.5
1953	57.9	56.9	56.6	-1.0	-0.3	-1.3	66.2	65.2	63.9	-1.0	-1.3	-2.3
1954	58.4	57.4	57.1	-1.0	-0.3	-1.3	66.5	65.5	64.2	-1.0	-1.3	-2.3
1955	60.4	59.5	59.0	-0.9	-0.5	-1.4	68.6	67.7	66.2	-0.9	-1.5	-2.4
1956	61.9	61.1	60.8	-0.8	-0.3	-1.1	70.3	69.6	68.4	-0.7	-1.2	-2.0
1957	61.4	60.6	60.5	-0.8	-0.1	-0.9	69.9	69.2	68.2	-0.7	-1.0	-1.7
1958	63.2	62.5	62.3	-0.7	-0.3	-1.0	71.8	71.1	69.8	-0.7	-1.3	-1.9
1959	62.7	62.0	62.0	-0.8		-0.8	71.0	70.3	69.7	-0.7	-0.7	-1.3
1960	63.6	62.9	62.9	-0.7		-0.7	72.1	71.4	70.6	-0.6	-0.8	-1.4
1961	63.9	63.3	63.3	-0.6		-0.6	72.4	71.9	71.3	-0.6	-0.5	-1.1
1962	63.7	63.1	63.1	-0.6		-0.6	72.1	71.6	71.4	-0.5	-0.1	-0.7
1963	64.2	63.6	63.6	-0.6		-0.6	72.7	72.2	72.0	-0.5	-0.2	-0.7
1964	65.1	64.5	64.5	-0.6		-0.6	73.5	73.0	72.6	-0.5	-0.5	-0.9
1965	64.5	64.0	64.0	-0.5		-0.5	73.3	72.8	72.8	-0.5		-0.5
1970	63.1	62.6	62.6	-0.5		-0.5	73.5	73.1	73.1	-0.4		-0.4
1975	62.4	62.0	62.0	-0.5		-0.5	73.3	72.9	72.9	-0.4		-0.4
1980	61.4	60.9	60.9	-0.4		-0.4	72.9	72.5	72.5	-0.4		-0.4
1985	62.7	62.4	62.4	-0.3		-0.3	73.2	73.0	73.0	-0.3		-0.3
1990	63.8	63.4	63.4	-0.3		-0.3	74.3	74.0	74.0	-0.3		-0.3
1995	58.2	57.9	57.9	-0.3		-0.3	71.7	71.4	71.4	-0.3		-0.3
2000	59.1	58.8	58.8	-0.2		-0.2	72.3	72.1	72.1	-0.2		-0.2

Disregarding the famine year of 1947, Russian life expectancy from 1946 to 1964 rose from 49.3 to 64.5 years for males and from 57.4 to 72.6 for females, reflecting extraordinary gains of 15-plus years in less then 20 years. From 1964 to 2000, by contrast, life expectancy dropped by 5.7 years for males and 0.5 for females to the levels of 58.8 and 72.1, respectively. Thereby males returned in 2000 to their 1955 life expectancy level.

A cause-of-death analysis of these trends must be restricted to the years after 1956. This will omit some of the past progress, but still it is the very first time that cause-of-death data are shown for any part of the former-USSR. It will be of great interest to compare the cause-of-death dynamics of that halcyon period to those of the dark days which followed.

Figure 2. Life expectancy at birth after correction of infant mortality and life expectancy at age 70



3. Causes of death around the 1965 turning point

Before analysing causes of death, it was necessary to correct the numbers of deaths by cause to take in account adjustments to total mortality rates.

3.1. Correcting numbers of death by cause and redistributing ill-defined causes

Infant deaths added to registered deaths to correct under-registration were redistributed among causes particularly affecting the first month of age: perinatal deaths, congenital malformations, etc. (items 145 to 157 of the Soviet Classification).

At old ages, adjusted age-specific mortality rates were applied to estimated population to calculate numbers of deaths added to each single year of age. Additional deaths were then distributed to 5-year age groups and added inside each group to item 159 of the Soviet Classification (ill defined causes).

The next step was to deal with ill-defined causes. Achieving compliance with the WHO categories involves two items of the Soviet Classification: “ill defined“ (n° 159) and “senility” (n° 158). In previous studies (Meslé *et al*., 1996, 1998), we simply redistributed this group of causes among all other items proportionally. For the longer series involved here, two new aspects must be considered. One is that the “senility” item was subject to an important change in coding practices in 1989, when a new directive ordered that any death occurring above age 80, except where evidence of a violent death or a very specific medical cause of death was given in a medical file or autopsy report should be classified as “senility”. As already documented for Ukraine (Meslé and Vallin, in press), that new directive resulted in a dramatic increase in deaths from senility at the expense of cardiovascular items. Since the "senility" item was almost nil until the year 1989, to avoid discontinuity in historical series, "senility" deaths in the years since 1989 were redistributed among cardiovascular items, while “ill-defined” deaths were redistributed proportionally among all items. Second, while the proportion of all ill-defined causes (items-158 and 159) was fairly negligible in the 1970s and 1980s, fully justifying the proportional redistribution, that proportion was somewhat more important in the 1950s and early 1960s, and actually increased after correction for under-registered deaths. For example, the total number of deaths from ill-defined causes accounted for 18% of total deaths in 1956, compared to just 0.8% in 1970. It is well established that where the proportion of ill-defined causes is high, it would be better to take into account the fact that the probability of one death being of an unknown or ill-defined cause

partly depends on the actual cause of death. For France, for example, it has been possible to study inter-relations between actual causes and proportions of ill-defined causes and to infer non-proportional coefficients of redistribution (Vallin and Meslé, 1988). Because of insufficient available data, it was not possible to do the same in this study. Moreover, however significant they were in the late 50s, the proportion of ill-defined causes is not as high in Russia as in France. It was then decided that proportional redistribution could be used, and in any case it would produce better results than no redistribution.

3.2. One level, two structures

It was stated earlier that the level of male life expectancy was almost the same in 2000 and in 1955. Unfortunately, cause-of-death structures in 1955 are unknown, and 1956 male life expectancy is already 2 years higher than that of 1955. However, the 1956 and 2000 cause-of-death structures, which produce about the same level of life expectancy, are quite different.

As shown in Table 3, which gives standardised mortality rates[9] for 7 broad groups of causes and the corresponding proportion of each group in total mortality, 20% of male mortality in 1956 was due to infectious or respiratory diseases while both groups of causes accounted for only 8% in 2000. The fall is particularly steep for infectious diseases (from 9% to 2%), respiratory diseases combining both acute and chronic diseases. More generally, all acute diseases have fallen dramatically between the old and new structures. This change is even more important than it seems to be, since at the beginning of the period, deaths by respiratory diseases were mainly infant deaths by acute diseases while at the end of the period they included increasing number of deaths at old age by chronic diseases.

Cardiovascular and violent deaths, by contrast, rose sharply. Notwithstanding its already high initial level, the share of cardiovascular mortality increased by one-third, from 40% to 53%, while that of violent death almost doubled (from 9% to 16%).

[9] Based on WHO (1992) European model population.

Table 3. Changes in cause-of-death structure of mortality from 1956 to 2000

Causes of death	Males		Females	
	1956	2000	1956	2000
Life expectancy at birth (years)				
All	60.8	58.8	68.4	72.1
Age-standardised* mortality rate (per 1000)				
Infectious diseases	1.59	0.45	0.78	0.09
Respiratory diseases	2.11	1.45	1.27	0.36
Neoplasms	4.15	3.48	2.84	1.70
Cardiovascular diseases	7.53	12.45	7.10	7.87
Digestive diseases	0.71	0.67	0.42	0.32
Other diseases	0.95	1.02	0.77	0.96
Violent deaths	1.70	3.81	0.46	0.89
Total	18.74	23.34	13.64	12.19
Proportion in total mortality (%)				
Infectious diseases	8.5	1.9	5.7	0.7
Respiratory diseases	11.3	6.2	9.3	3.0
Neoplasms	22.1	14.9	20.8	14.0
Cardiovascular diseases	40.2	53.4	52.0	64.6
Digestive diseases	3.8	2.9	3.1	2.6
Other diseases	5.1	4.4	5.7	7.9
Violent deaths	9.1	16.3	3.4	7.3
Total	100.0	100.0	100.0	100.0

*Based on WHO (1992) European model population.

These two types of changes clearly indicate that while the level of life expectancy did not change (disregarding actual historical developments), there was a dramatic shift between declining acute diseases and increasing chronic or violent deaths. Paradoxically, this displays the classical scheme of epidemiological transition but with no improvement in life expectancy. However, the picture is complicated somewhat by the striking positive change in the case of cancer. In the classical scheme even if cancer mortality increases only slightly, its share in total mortality increases sharply. There is a possibility that cancer is not always clearly identified as the cause of death, especially at old ages, which could produce an under-estimation of cancer mortality (Shkolnikov *et al.*, 1999). But it would be very difficult to argue that the ability to identify cancer could have deteriorated at a time when it was becoming increasingly familiar to doctors. Indeed, part of the decreasing share of Russian cancer mortality

is due to the stagnation in total mortality. A sharp rise in that share in Western countries is mainly due to a decline in other causes, especially cardiovascular mortality. But that explanation does not provide the whole answer, as Russian cancer mortality rates are themselves decreasing.

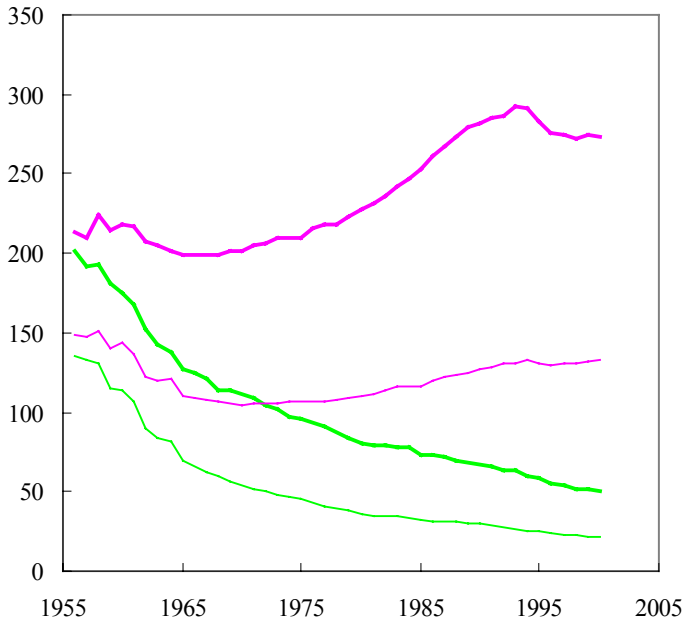
In fact, not all cancers present decreasing mortality trends. To the contrary, only stomach cancer mortality declined over the period, while all other cancers caused a long-term increase in the mortality[10] (Figure 3). Stomach cancer is typical of under-developed economies (Leon, 2001) and the incidence fell dramatically in Russia in the 1950s and 1960s, as it did in most industrialised countries, while other forms of cancer increased (especially lung cancer). Of course, it may be that other cancers are underestimated in Russia. Equally, it may also be that levels for other cancers are still low because Russia has not yet reached the stage at which they began to take more and more share in Western countries. In spite of its already unfavourable general trends Russia could still be at serious risk in that matter in the future (Meslé and Hertrich, 1997).

Beyond the specific case of cancer, the main difference between the 1956 and 2000 cause-of-death structures of mortality is the balance between infectious/ respiratory diseases and cardiovascular/ violent mortality which cancelled each other out in terms of male life expectancy. These opposite movements in causes of death are also associated with a similar contrast in terms of age structure of mortality: while in 1956, infant and child mortality still had an important impact on life expectancy, by 2000 the impact of adult mortality is of much more significance. Implementing Andreev's method (Andreev, 1982)[11] to break down the differences between two life expectancies, we measured the weighting factor of each broad group of causes at each age group in the difference (or absence of difference) between Russian life expectancy in 1956 and 2000 (Figure 3).

[10] The most recent years are however marked by some decline in mortality by all other cancers, the reasons of which were discussed in a recent paper (Shkolnikov *et al.*, 1999) : under-registration, cohort effect and possible decrease in the incidence of lung cancer.

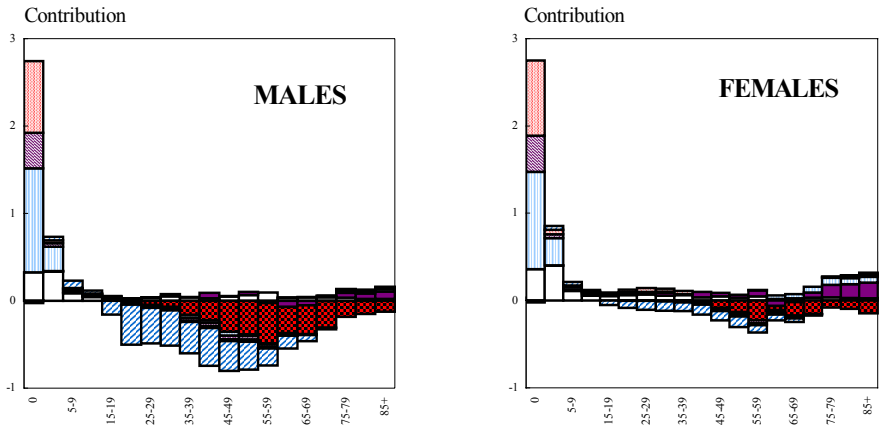
[11] As shown in a recent paper (Shkolnikov *et al.*, 2001) Andreev's method is very close to those developed later by Arriaga (Arriaga, 1984) and Pressat (Pressat, 1985) and also rather similar to that of Pollard (Pollard, 1982).

Figure 3. Trends in male standardised mortality rates for stomach cancers and for all other cancers 1956-2000



Had infant mortality improvements been the only cause of change between 1956 and 2000, Russian life expectancy would have gained almost 3 years for both sexes, and nearly an extra full year would have been added with the decline of child mortality. Conversely, changes in adult mortality (ages 15+) alone would have shortened male life expectancy by 6 years and female one by 0.3 year. So, the reversal in adult mortality trends negated male gains at the younger ages, while among females, these young-age gains alone accounted for the overall improvement observed between 1956 and 2000. Likewise, the reduction in infectious and respiratory diseases is responsible for a gain of almost 3 years in male and 3.5 years in female life expectancy, while the increase in cardiovascular mortality and violent deaths causes a loss of 6.2 years in males and 1.9 years in females. The close age-cause correlation operating here is shown very clearly in Figure 4.

Figure 4. Age and cause-of-death contributions to the change in Russian life expectancy between 1956 and 2000



3.3. The 1965 turning point

However, that broad view of mortality dynamics in the past four decades must be interpreted through the timing of its various components. As shown in Figure 2, a major turning point in life expectancy occurred in 1965 when the rapid improvement of the 1940s and 1950s turned into a downtrend for males and a stagnation for females.

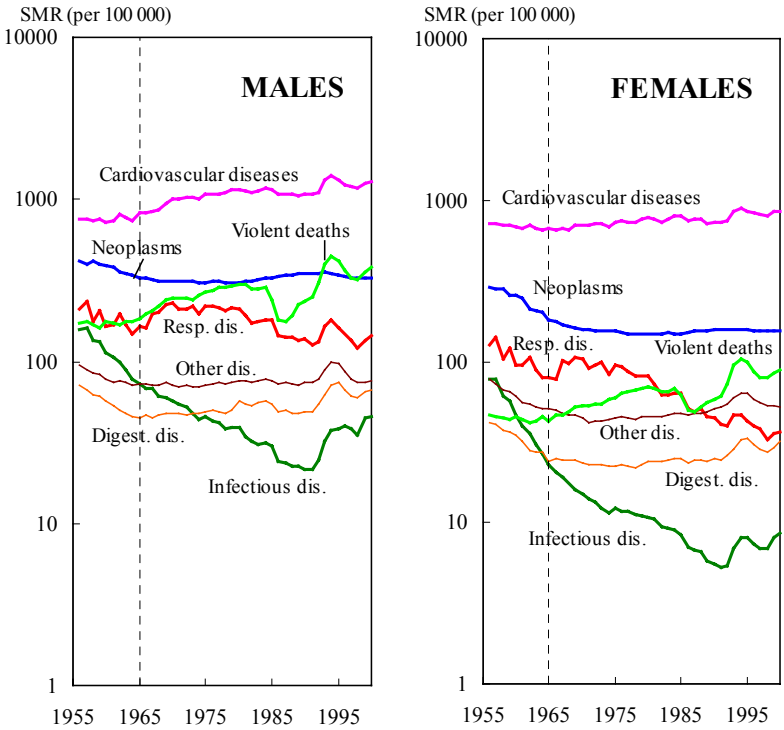
Surprisingly, when looking at the standardised mortality rate (SMR) trends for 7 broad groups of causes, this turning point seems to vanish. Groups of causes trend differently: some rise while others fall or stagnate, with or without fluctuations in the recent decades. Only the combination of these contrasting trends results in the general trends of total mortality, with a turning point in 1965. Prior to 1965, in fact, mortality by most groups of causes (not only infectious diseases but also digestive diseases, respiratory diseases, and "other diseases", and even neoplasms) was declining[12]. Neoplasms apart, all these groups of causes are mainly

[12] Violent deaths are the only group for which a slight increase is observed, among males, not females (see Annex I). For cardiovascular diseases, if total age-standardized mortality rate was decreasing for both sexes from 1956 to 1964 (Annex I) but it was mainly due to the sharp decrease of the group "other heart diseases" that includes rheumatic cardiopathies (of infectious origin), while ischaemic heart diseases and cerebrovascular diseases were already increasing.

influenced by acute infectious diseases. For neoplasms, as shown above, the major role is played by stomach cancer. Up to that point, Russian mortality actually mirrors the epidemiological transition experienced by Western countries. Infectious diseases and stomach cancer underlie a downtrend in total mortality, while no other group of causes produces a clear reversal. On the contrary, since 1965 only infectious diseases continue to decline. And infectious mortality falls to such a low point as to have an increasingly less significant impact on life expectancy. At the same time, mortality due to respiratory diseases, violent deaths and cardiovascular diseases begins to rise, while the decline in other groups (especially cancer) is halted. In fact, around 1965, Russia attained a situation quite similar to that experienced by many Western countries five or ten years previously, when decreasing mortality from infectious diseases and other diseases associated with socio-economic under-development is no longer sufficient to sustain favourable trends in life expectancy, and triumph in new fronts of the fight against disease and death becomes necessary. Unlike Western countries, however, Russia failed to reach that new step of the health transition: cardiovascular and violent death mortality, in particular, continued to increase up to the mid-1980s.

At this point, Russian mortality enters a ten-year fluctuation that for long confounds the general trends. The role of Gorbachev's anti-alcoholism campaign (Meslé *et al*., 1994; Shkolnikov, Nemtsov, 1997; Leon *et al.*, 1997) and then that of the social and economic crisis in the wake of the transition to the market economy (Shkolnikov *et al.*, 1998, Meslé *et al.*, 1998; Gavrilova *et al.*, 2001) is well-known, but until recently it was hard to say whether that fluctuation was also a seismic shift heralding a sustainable change in the long-term trends or merely a blip on the screen (Meslé, Shkolnikov, 1999, 2000).

Figure 5. Trends in standardised mortality rates (per 100 000) according to 7 broad cause-of-death groups, 1956-2000



4. Trends beyond the wide fluctuation

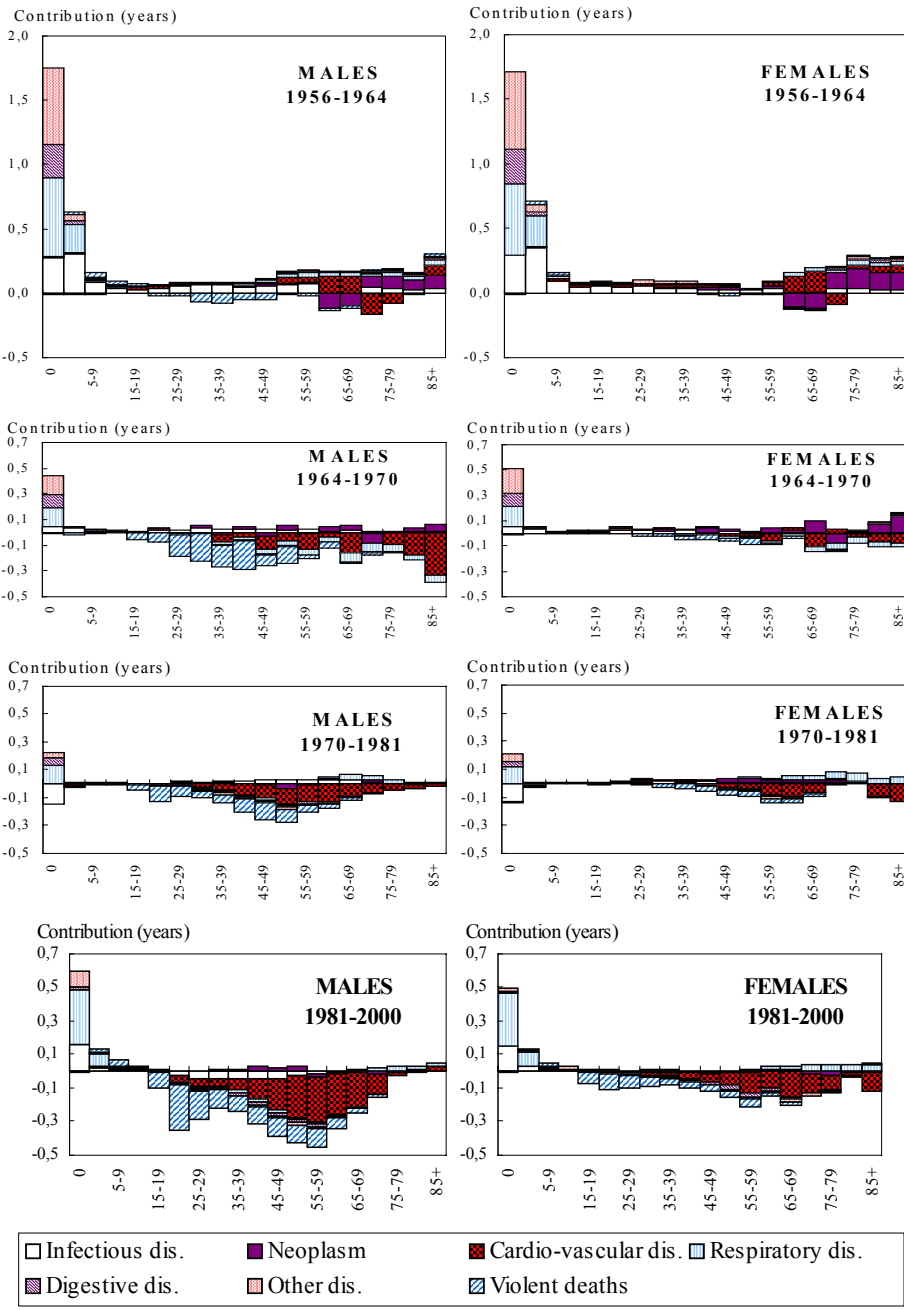
This can most usefully be addressed by breaking down the cause-of-death components of the life expectancy dynamics as illustrated above (Figure 4) into four sub-periods. The period 1956-1964 clearly stands for past time of huge improvement, as shown in Figure 2. The period 1964-1970 is then isolated to take into account the sharp fall observed in life expectancy (at least for males, Figure 2) and the specific features of some cause-of-death dynamics shown in Figure 5. Post-1970, finally, two broad periods were distinguished to characterise the steady decline (1970-1981) and the overall results of the period of widest fluctuation (1981-2000). More detailed results are also shown in Annexe I in terms of age-standardised mortality rates for the hinge years 1956, 1964, 1970, 1981 and 2000.

As expected, the first period (1956-1964) contrasts sharply with the three successive ones with positive contributions of all age-specific trends and almost all cause-of-death dynamics and a particularly high positive contribution of infant and child mortality decline which is much less marked for the following three periods where age- and cause-of-death-specific mortality trends are almost all negative after age 15 (Figure 6).

The second, quite short, period had to be isolated as being arguably still subject to data quality issues. Here, the inception of a deterioration is already clear for males, mainly due to a sharp rise in violent deaths among young adults, while the reversal in cardiovascular mortality trends is not yet significant except at the very old ages. But the observed rise in very old age cardiovascular mortality may be an artefact, since no correction was made for male old age mortality after 1959 while life expectancy at age 70 was corrected for females until 1964. That data quality issues aside, the evidence points to these first few years of deterioration being a transition period with only one main cause of deterioration (violent deaths) and only males involved (females still experiencing more positive than negative contributions).

A comparison of the last two periods is of the greatest interest here: 1970-1981 and 1981-2000. At first glance, they look very similar. In both cases, infant mortality decline still has a positive impact on life expectancy, related less to infectious diseases than to respiratory diseases or to the so-called “other diseases” that here are mainly perinatal diseases. In both cases, too, and this is what is most striking, adult mortality dynamics (above age 15) systematically produce negative effects that are almost entirely attributable to two groups of causes: cardiovascular diseases and violent deaths. In both periods, violence has the greater impact on adults (from 20 to 60), while cardiovascular mortality has the more marked impact on mature adults (from 45 to 75). Clearly, all these negative effects are much more pronounced in males than in females, since female life expectancy declines more slowly than male life expectancy.

Figure 6. Age and cause-of-death contributions to the change in Russian life expectancy within three specific periods



Such a similarity between the steady decline (1970-1981) and wide fluctuation (1981-2000) periods clearly suggests that the fluctuations due to the Gorbachev anti-alcoholism campaign followed by the 1992-1993 socio-economic crisis were only a blip that did not break the general trends towards deterioration operating since the mid-1960s.

Beyond that general result, there are even some signs of worsening. Two at least should be mentioned. On one hand, for the first time, infectious diseases at adult ages began to contribute to losses in male life expectancy in the most recent period. The contribution *per se* is not great, but stems from a very sharp increase in the standardised mortality rate since 1992, which is also seen among females (Figure 5). That increase is continuing in the most recent years, and cannot easily be explained away as a consequence of the 1992-1993 crisis. In fact, the effects of that crisis have been seconded by the emergence of AIDS. On the other hand, the impact of violent deaths has risen sharply at very young adult ages among males and females alike. This cannot be attributed to a rise in road traffic accidents alone. It has been shown that suicide, homicide and alcohol abuse are increasingly important at these ages (Chervyakov *et al*., 2002; Meslé, 2002).

5. Conclusion

The analysis of reconstructed cause-of-death trends sheds new light on the determinants of the health crisis. It appears that the year 1965 is not a real turning point for any cause of death. The reversal in mortality trends results much more from a change in the weights of the main causes of death. At that time, almost a textbook example of Omran's theory of epidemiologic transition, infectious mortality had declined to an extent where any further decrease could no longer compensate for the steady increase in circulatory diseases. At the same time Russia experienced a dramatic rise in "man-made diseases", especially violence and conditions related to alcoholism, which contributed to the decrease in life expectancy, especially for males.

Disregarding the particular period in which life expectancy experienced wide fluctuations due to Gorbachev's anti-alcoholism campaign and the 1992-1993 socio-economic crisis, the same general trends observed during the period of steady deterioration (1970-1981) are still at work

today. Not only Russia has not yet achieved the position where it will be able to reduce cardiovascular mortality, it is also facing a huge and still growing problem of alcohol abuse and violent deaths.

References

Anderson B. and B. Silver, 1986, "Infant mortality in the Soviet Union: regional differences and measurement issues", *Population and Development Review* 12 (4), 705-738.

Anderson B. and B. Silver, 1989, "The changing shape of Soviet mortality, 1958-1985: an evaluation of old and new evidence", *Population Studies* 43, 243-265.

Anderson B. and B. Silver, 1990, "Trends in mortality of the Soviet population", *Soviet Economy* 6 (3), 191-251.

Andreev E., 1982, "Метод компонент в анализе продолжительности жизни " (Life expectancy analysis by component method), *Vestnik Statistiki* 3, 42-47.

Andreev E*.,* 2001, *Did the economic crisis cause the mortality fluctuation in Russia in the nineties?,* Moscow, Center of Demography and Human Ecology, paper presented at the 24th IUSSP General Conference, Salvador, Brazil, 18-24 August 2001.

Andreev E.M., L.E.Darskij and T.L.Khar'kova, 1998, *Демографическая история России: 1927-1959* (Demographic history of Russia: 1927-1959), Informatika, Moscow.

Andreev E., 1995, "*Младенческая смертност в России* (Infant mortality in Russia)", *Вопросы Статистики* (Statistical issues) 5, 66-71.

Andreev E.M. and E.A.Kvasha, 2002, "Особенности снижения младенческой смертности в России" (Some characteristics of the infant mortality decline in Russia), *Проблемы социальной гигиены, здравоохранения и истории медицины* (Problems of Social Hygiene, Health Services and History of Medicine) 4, 15-20.

Arriaga E.A., 1984, "Measuring and explaining the change in life expectancies", *Demography* 21 (1), 83-96.

Blum A. and A. Monnier, 1989, "Recent mortality trends in the USSR: new evidence", *Population Studies* 43 (2), 211-241.

EMSB (Estonian Medical Statistics Bureau), Latvian Medical Statistics Bureau and Lithuanian Statistics Bureau, 1993, *Health in the Baltic Countries,* Tallinn, Riga, Vilnius.

Chervyakov V.V., V. M. Shkolnikov, W. A. Pridemore, M. McKee, 2002, "The changing nature of murder in Russia", *Social Science and Medicine* 55 (10), 1713-1724.

Gavrilova N.S., G.N.Evdokushkina, V.G. Semyonova and L.A. Gavrilov, 2001, Economic crises, stress and mortality in Russia, paper presented at the 2001 PAA meeting, Washington, Center on Aging, University of Chicago, Chicago.

Gavrilova N.S., V.G.Semyonova and G.N.Evdokushkina, 2002, Mortality crisis in Russia: new health threats, paper presented at the 2002 PAA meeting, Atlanta, Center on Aging, University of Chicago, Chicago.

Hertrich V. and F. Meslé, 1997, "Mortality by cause in the Baltic countries since 1970: a method for reconstructing time series", *Revue Baltique* 10, 145-164.

Hertrich V. and F. Meslé, 1999, The health crisis in the Baltic countries: a common and varied experience, paper at European Population Conference, The Hague 30 August-3 September 1999, INED, Paris.

Ksenofontova N.Yu, 1994, Trends in Infant Mortality in the USSR, in: W. Lutz, A. Volkov and S. Scherbov (eds.), *Demographic Trends and Patterns in the Soviet Union before 1991*, Routledge, New York, 359-378.

Leon D.A., 2001, Common Threads: Underlying Components of Inequalities in Mortality Between and Within Countries, in: D.A. Leon

and G. Walt (eds.), *Poverty, Inequality and Health*, Oxford University Press, London, 58-87.

Leon D. A., L. Chenet, V. M. Shkolnikov, S. Zakharov, J. Shapiro, G. Rakhmanova, S. Vassin and M. McKee, 1997, "Huge variation in Russian mortality rates 1984-94: artefact, alcohol, or what?", *The Lancet* 350, 383-388.

Meslé F., 2002, Mortality in Eastern Europe and the former Soviet Union: long-term trends and recent upturns, paper at the IUSSP-MPIDR Seminar on "Determinants of diverging trends in mortality", Rostock, 19-21 June 2002, INED, Paris.

Meslé F. and V. Hertrich, 1997, Évolution de la mortalité en Europe: la divergence s'accentue entre l'Est et l'Ouest, in: *Congrès international de la population. Beijing 1997,* Liège, UIESP, 479-508.

Meslé F. and V.Shkolnikov, 1999, "Smertnost v Rossii: zatyanouvcheyecya otstavanye" (Mortality in Russia: an insistant latness), *Mir Rossii* 4, 138-162.

Meslé F. and V.Shkolnikov, 2000, "Russie: une crise sanitaire sans précédents", *Espace, Populations, Sociétés* 2, 253-272.

Meslé F., V.Shkolnikov, V.Hertrich and J.Vallin, 1996, *Tendances récentes de la mortalité par cause en Russie, 1965-1994,* + 2 floppy disks (Données statistiques n°2), INED, Paris.

Meslé F., V. Shkolnikov and J. Vallin, 1992, "Mortality by cause in the USSR in 1970-1987: the reconstruction of time series", *European Journal of Demography* 8, 281-308.

Meslé F., V. Shkolnikov and J. Vallin, 1994, "Brusque montée des morts violentes en Russie", *Population* 49 (3), 780-790.

Meslé F. and J.Vallin, 1996, "Reconstructing long-term series of causes of death", *Historical Methods* 29 (2), 72-87.

Meslé F. and J.Vallin, in press. *Mortalité et causes de décès en Ukraine au XXe siècle,* (With contributions of V.Shkolnikov, S. Pyrozhkov and S. Adamets), INED, Paris.

Meslé F., J.Vallin and V.Shkolnikov, 1998, "Reversal of mortality decline: the case of contemporary Russia", *World Health Statistics Quarterly/Rapport trimestriel de statistiques sanitaires* 51 (2-3-4), 191-206, ("Historical epidemiology: mortality decline, and old and new transitions in health", special issue edited by O.Frank).

Pollard J.H., 1982, "The expectation of life and its relationship to mortality", *Journal of the Institute of Actuaries* 109 (442), 225-240.

Pressat R., 1985, "Contribution des écarts de mortalité par âge à la différence des vies moyennes", *Population* 40 (4-5), 766-770.

Shkolnikov V., G.Cornia, D.Leon and F.Meslé, 1998, "Causes of the Russian mortality crisis: evidence and interpretations", *World Development* 26 (11), 1995-2011.

Shkolnikov V., M. McKee, D.Leon, L.Chenet, 1999, "Why is the death rate from lung cancer falling in the Russian Federation?", *European Journal of Epidemiology* 15 (3), 203-206.

Shkolnikov V., M. McKee, J. Vallin, E. Aksel, D. Leon, L. Chenet and F. Meslé, 1999, "Cancer mortality in Russia and in Ukraine: validity, competing risks, and cohort effects", *International Journal of Epidemiology* 28, 19-29.

Shkolnikov V., F. Meslé and J. Vallin, 1996, "Health crisis in Russia. I. Recent trends in life expectancy and causes of death from 1970 to 1993, II. Changes in causes of death: a comparison with France and England and Wales (1970 to 1993)", *Population 8 (An English Selection)*, 123-190.

Shkolnikov V. and A. Nemtsov, 1997, The Anti-alcohol Campaign and Variations in Russian Mortality, in: J. L. Bobadilla, C. A. Costello and F. Mitchell (eds.)*, Premature Death in the New Independent States,* National Academy Press, Washington D.C, 239-261.

Shkolnikov V., T.Valkonen, A. Begun, E. Andreev, 2001, "Measuring inter-group inequalities in length of life", *Genus* 57 (3-4), 33-62.

Vallin J. and F. Meslé, 1988, *Les causes de décès en France de 1925 à 1978,* INED, PUF, Paris.

Velkoff V.A. and J.E.Miller, 1995, "Trends and differentials in infant mortality in the Soviet Union, 1970-90: how much is due to misreporting?", *Population Studies* 49(2), 241-258.

Vichnevski A.G., 2000, "Подъем смертности в 90-е годы: факт или артефакт?" (Increasing mortality in the 1990s: fact or artefact ?), *Население и общество* (Population and Societies) 45, 1-4.

Waldberg P., V. Shkolnikov, L. Chenet and D. Leon, 1998, "Economic change, crime and mortality crisis in Russia: regional analysis", *British Medical Journal* 312-318.

WHO, 1992, *World Health Statistic Annual, 1992,* World Health Organisation, Genève.

Yeganyan R., I. Badurashvili, E. Andreev, F. Meslé, V. Shkolnikov and J. Vallin, 2001, "Life expectancy in two Caucasian countries: how much due to overestimated population?", *Demographic Research* 5 (7), 217-243.

Annex I. Age-standardised mortality rates (per 1000) by cause of death for the years 1956, 1964, 1970, 1981 and 2000

Groups of causes	Males					Females				
	1956	**1964**	**1970**	**1981**	**2000**	**1956**	**1964**	**1970**	**1981**	**2000**
Infectious diseases	**1.59**	**0.78**	**0.57**	**0.34**	**0.45**	**0.78**	**0.27**	**0.15**	**0.11**	**0.09**
Neoplasms	**4.15**	**3.40**	**3.13**	**3.11**	**3.24**	**2.84**	**2.02**	**1.58**	**1.47**	**1.54**
Cancer of stomach	2.01	1.38	1.11	0.79	0.50	1.36	0.81	0.54	0.35	0.21
Cancer of the intestine, rectum and anus	0.17	0.15	0.16	0.26	0.34	0.17	0.14	0.13	0.19	0.23
Cancer of larynx, lung and bronchus	0.69	0.79	0.83	1.00	1.06	0.13	0.11	0.10	0.11	0.10
Cancer of breast	0.00	0.00	0.01	0.00	0.01	0.08	0.09	0.10	0.15	0.26
Cancer of prostates / Cancer of the uterus	0.07	0.07	0.09	0.10	0.16	0.32	0.23	0.18	0.16	0.14
Other cancers	1.20	1.01	0.93	0.95	1.16	0.79	0.64	0.53	0.52	0.60
Cardio-vascular diseases	**7.53**	**7.32**	**9.98**	**11.23**	**12.96**	**7.10**	**6.57**	**6.96**	**7.55**	**8.48**
Ischaemic heart diseases	2.82	3.59	5.42	6.33	6.58	2.39	2.89	3.50	3.85	3.62
Other heart diseases	2.30	0.78	0.65	0.53	1.11	2.29	0.77	0.48	0.37	0.61
Cerebrovascular diseases	1.79	2.34	3.33	3.69	4.45	1.85	2.35	2.60	2.84	3.60
Other diseases of the circulatory system	0.63	0.61	0.59	0.68	0.82	0.57	0.56	0.38	0.49	0.65
Diseases of the respiratory system	**2.11**	**1.46**	**2.28**	**1.91**	**1.45**	**1.27**	**0.79**	**1.04**	**0.73**	**0.36**
Acute respiratory diseases	0.64	0.31	0.45	0.33	0.46	0.50	0.22	0.27	0.17	0.13
Other respiratory diseases	1.47	1.15	1.83	1.58	0.99	0.77	0.56	0.78	0.56	0.23
Diseases of the digestive system	**0.71**	**0.46**	**0.48**	**0.54**	**0.67**	**0.42**	**0.27**	**0.23**	**0.24**	**0.32**
Cirrhosis of lever	0.12	0.10	0.14	0.19	0.26	0.09	0.07	0.07	0.07	0.13
Other diseases of the digestive system	0.59	0.36	0.34	0.35	0.41	0.33	0.20	0.17	0.17	0.19
Other diseases	**0.95**	**0.71**	**0.71**	**0.76**	**0.75**	**0.77**	**0.51**	**0.44**	**0.46**	**0.52**
Psychosis and neurosis	0.03	0.04	0.05	0.07	0.09	0.02	0.03	0.01	0.02	0.03
Other	0.92	0.67	0.66	0.70	0.66	0.75	0.48	0.43	0.44	0.49
Injury and poisoning	**1.70**	**1.77**	**2.45**	**2.97**	**3.81**	**0.46**	**0.46**	**0.53**	**0.68**	**0.89**
Motor vehicle accidents	0.18	0.17	0.29	0.38	0.44	0.04	0.04	0.06	0.09	0.13
Accidental poisoning	0.24	0.24	0.41	0.53	0.69	0.07	0.07	0.09	0.13	0.17
Suicide	0.30	0.43	0.63	0.66	0.74	0.08	0.11	0.12	0.13	0.11
Homicide	0.11	0.10	0.11	0.20	0.46	0.03	0.03	0.05	0.07	0.13
Other accidents	0.86	0.83	1.01	1.20	1.47	0.23	0.21	0.21	0.26	0.33
Total all causes	**18.74**	**15.89**	**19.59**	**20.87**	**23.34**	**13.64**	**10.88**	**10.93**	**11.24**	**12.19**

*Based on WHO (1992) European model population.

PART IV POPULATION AND ECONOMY

Central and Eastern European countries and the new reality of European international migration

Corrado Bonifazi

1. Introduction

The processes that started with the fall of the Berlin Wall in 1989 have been an epochal event for the history of our continent and have been considered as the conclusion of what has been defined as the "Short Century" (Hobsbawn, 1995). Even without attributing to these events the meaning of an early end of a century full of important events, 1989 certainly marked (and this is not an insignificant event) as the end of a period characterised by the division of the world, and of Europe in particular, into two opposing blocs. The fall and rapid collapse of all the regimes based on real socialism have begun a new phase in European history, imposing radical changes in the policies of governments and supranational bodies, and in the action of economic and social actors. What had been heralded as the end of history has actually proved to be a new beginning, rich in potentials and opportunities, but also in contradictions and problems, many of which the Europeans had thought to have definitely left behind. The ethnic conflicts in the former Yugoslavia and the former USSR are the most significant examples with their tragic legacy of death and destruction that have revived in our continent the horrors of the Second World War.

The 1990s were a period of a sharp acceleration in the process of building a united Europe, not only from the economic but also from the political point of view. The process of European integration, which started in 1957 with the Treaty of Rome, has, in fact, achieved major success in recent years, of which the single currency is undoubtedly the most significant from the practical and symbolic point of view. Moreover, this process is far from the end, taking into account the now imminent extension to ten other countries and the decision to endow the European Union with political instruments suited for a situation which has now gone far beyond the initial objective of creating a common economic market.

The end of the Cold War and the process of extension and consolidation of the European Union have already had profound effects on the international migrations of the continent and will probably continue in the coming years. The end of the political division between East and West has, in fact, rekindled European migration dynamics throughout the part of the continent that was almost completely excluded from it for forty years. The increase in the areas of jurisdiction of the European Union has, on the other hand, contributed to strengthening the trend towards the consolidation of a migration system centred on the countries of Western Europe. The oncoming enlargement of the European Union to Central and Eastern Europe countries of the communist past experience, will necessarily lead to its gradual geographical expansion. These two political factors have thus had a decisive influence in characterising the most recent developments of the European migration dynamics, confirming the increasing importance of these elements in the evolution of the phenomenon of international mobility.

Likewise, the tendency towards the formation of a continental migration system already clearly appeared in the dynamics and processes characterising mobility phenomena over the past thirty years (Bonifazi and Strozza, 2002). In fact, as far back as the mid-1970s, when stop policies were introduced in the main receiving countries, differentiating factors within the countries of Western Europe were still prevalent. The European migration scenario was definitely more fragmented and divided than it appears today. While all the attraction factors could already be derived from a group of elements that are basically similar, there were significant differences in the functioning and the characteristics of the migratory process from one country to another.

In the first place, there was still a clear division between receiving and sending countries within the area, which today forms the European Union. Italy, Spain, Greece and Portugal were, in fact, the main sources of supply to the labour markets of North-Central Europe. Secondly, there was still a sharp differentiation of policies between the countries aiming at strengthening the temporary character of the flows, more or less openly discouraging the stabilisation of immigrants and the arrival of their families, and those more willing to exploit this immigration for work purposes in order to favour demographic rebalancing. Thirdly, the areas

of origin were closely linked to the particular experiences of each destination, with colonial links and geographical proximity forming the decisive factors for the start-up and maintenance of flows.

All three elements have changed profoundly over the past thirty years. The Mediterranean countries of the European Union have now become receiving countries, and in some cases and at some moments experiencing foreign population growth rates similar to and sometimes greater than those of traditional host countries. Migration policies have tended to become standardised and there are greater efforts to reach an effective integration at the community level. Together with these processes, the area of attraction has extended considerably, so that the composition by country of origin of new immigration is increasingly less dependent on the country of arrival and not always linked to geographical proximity and past colonial ties.

In this context, the migratory processes recently characterising the countries of Central and Eastern Europe play a key role in the overall continental dynamics of the phenomenon and in determining what the main lines of development will be in the near future. In the following pages, we shall try to reconstruct the international migration flows in this part of the European continent, starting from the period between the end of the Second World War and 1990 and then looking more closely at recent trends. The second part of the paper will be dedicated to an overall evaluation of the current main problems and the evolutionary prospects of international migrations in Central and Eastern Europe within the continental context.

2. International migration in Central and Eastern Europe

Central and Eastern Europe (CEE) is the only part of our continent which has had a net out-migration for the entire second half of the last century (Münz, 1995; Bonifazi and Strozza, 2002). And it is also the part of the continent with the greatest changes of borders at the end of the Second World War. After the conflict, the peace treaties outlined the new geography of the area, an operation accompanied by gigantic "ethnic cleansing" aimed at homogenising the population of the various countries. It is estimated that between 1945 and 1950, 15.4 million people moved from East to West; 4.7 million moved in the opposite direction and if we

also considered the flows inside the countries of the area, we would probably reach an overall figure of 30 million people (Fassmann and Münz, 1995). Among these flows, the most important were those from Poland to East and West Germany (7 million), from the former Czechoslovakia to the two Germanys and Austria (3.2 million), while an estimated 1.5 million people went from the former Soviet Union to the two Germanys and from the Soviet Union to Poland (Fassmann and Münz, 1995).

Migrations between East and West over the 1950-1993 period are estimated at 14 million people, also including 5.3 million who went from East to West Germany (Fassmann and Münz, 1995). Over 75% of these moves are classified by Fassmann and Münz in the category of ethnic migration, above all including populations of German origin, endowed with the privileged status of *Aussiedler*, first in West Germany and then in the united Germany. Also important from the quantity point of view are the migrations of Soviet Jews to the United States and Israel. Approximately 10% of the East-West flows of this period are instead classified by the Fassman and Münz as movements of refugees and asylum-seekers. The greatest flows of the latter group are those caused by the invasion of Hungary in 1956 and of Czechoslovakia in 1968, by the Polish crisis in the early 1980s, the Albanian crisis in the early 1990s and the nearly 700,000 people who fled to the Western countries from the conflicts in the former Yugoslavia between 1991 and 1993. Less than 15% of the figure concerns labour migration, above all from Yugoslavia, since this was the only Eastern country allowing emigration for economic reasons.

The more recent migration dynamics in the countries of Central and Eastern Europe was placed by Okólski (1998) in a classification that still seems to effectively describe the phenomenon (Salt, 2001). This Polish researcher identified three main types of the flows in the region: transit movements towards the West, flows of people seeking protection and migrations between the countries that came into existence after the collapse of the Soviet Union. Besides these three flows, some more specific and smaller categories are taken into account: temporary labour migration towards the West (coming mostly from Albania, Bulgaria, Czech Republic, Estonia, Hungary, Poland, Romania and Russia); the intra-regional flows of workers (towards the Czech Republic, Hungary

and Poland originating in the Ukraine, Belarus, Romania and Russia); the flows of workers from some developing countries (especially the Chinese and Vietnamese towards the Czech Republic, Poland and Hungary); high-skill migration from Western countries to the Czech Republic, Poland and Hungary; return migrations towards Poland, Bulgaria and Romania; ethnic migration from Poland, Romania and former USSR towards Germany, the United States, Israel and Hungary.

Besides these more traditional flows, Okólski (1998 and 2001) also considered a category of mobility with partly 'incomplete migration', generally not taken into consideration in the analysis of migrations, but which due to its size and economic relevance in the countries of Central and Eastern Europe has become a characteristic feature of migration in the area. It is "a complex mosaic of relatively short-term movements based on 'labour tourism', and petty trading, and comprising a highly intensive shuttling back and forth across international boundaries in order to make a living. [….] Characterised by a 'loose' social status and/or flexible occupational position in the country of origin; irregularity of stay or work in the country of destination; while maintaining a steady residence and household links in the country of origin" (Salt 2001, 13).

This set of elements has led Okólski (1998) to identify many specific factors of an independent migration system in the countries of the area. More recently, Salt (2001) has further developed this interpretation, identifying three different sub-systems in the European scenario, closely related but characterised by flows with different types and sizes. In particular, Salt suggests a migration system centred on the countries of Western Europe, one on the countries of the Community of Independent States (CIS) and the other on the region between these two geographical areas. Moreover, according to Romaniszyn (1997) a number of quasi-systems has appeared, contributing to larger intra-regional diversification in Europe. These are evidently overall syntheses, referring to rapidly changing processes with often little known features; however, it enables us to highlight the sharp differences still characterising European migrations. On the other hand, the identification of a migration system, besides regarding the self-containment of the flows, is also based on political and economic links and constraints between the countries and on comparable levels of development (Zlotnik, 1992). In this sense, the gap between the countries in transition and those in the Western half of the

continent is still considerable in many cases, above all with regard to the economic and social structural factors. The trends in international migrations in the countries of Central and Eastern Europe are the direct result of these differences. In the future, the enlargement of the European Union will lead to a reduction of the gap and thus enhance the standardisation of behaviour also in the migration sector; this effect will evidently be stronger in the countries directly concerned in this process.

Despite the undoubted improvement characterising the international migration statistics in recent years, above all as a result of the efforts of international organisations, the situation is far from being fully satisfactory. Besides the well-known limitations and difficulties of measuring geographical moves of population, in the case of the countries of Central and Eastern Europe, there are also specific problems. These problems appear, in the first place, to be linked to the difficulty in organising and implementing complex recording systems in an economic situation which is generally far from positive and for a phenomenon which up to a few years ago hardly existed. Secondly, the problems arise from the characteristics of the migratory processes that, as we have seen, often have an informal, irregular or illegal aspect. Thus, the statistics available describe though not always fully, the legal component of immigration, providing scarce and limited data on the flows along different paths.

The greater attention in recent years paid to migration in Central and Eastern Europe has produced important results, also from the statistical point of view, owing to the insertion of a part of or all these countries in the data compiled by the Eurostat, OECD and the Council of Europe. Despite these efforts, the data published and made available by the various international bodies do not always coincide or allow for a clear vision of the real dimension of the legal component of immigration and its trends. This situation also applies to the data on the stock of foreign population coming from this geographical area and present in the countries of Western Europe (Table 1). Comparisons made on a spatial and temporal basis are, in fact, often affected by changes in the CEE

Table 1. Stock of foreign population from Central and Eastern Europe [(a)] in selected Western European countries, absolute values in thousands and percentage of total foreign population (as on 1st January)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Austria (b)	263.2	..	..	317.4	326.8	332.4	335.1	335.1	337.9	340.5
% foreigners	50.8	..	..	44.9	45.3	45.8	45.8	45.6	45.7	45.2
Belgium (c)	12.7	12.5	14.7	14.3	20.0	19.8	14.0	14.9	16.2	21.5
% foreigners	1.4	1.4	1.6	1.6	2.2	2.2	1.5	1.7	1.9	2.5
Denmark	16.7	18.0	18.6	19.8	20.1	37.4	42.3	44.9	46.1	..
% foreigners	10.4	10.6	10.3	10.5	10.2	16.8	17.8	18.0	18.0	..
Finland (d)	5.5	12.3	17.6	24.0	27.3	30.3	32.9	36.1	38.9	41.1
% foreigners	21.0	32.6	38.1	43.2	44.0	44.3	45.1	45.2	45.7	46.8
Germany (e)	1069	1326.9	1552.7	1900.5	1926.2	1988.8	2013.1	1949.0	1881.9	1930.4
% foreigners	20.0	22.6	23.9	27.6	27.6	27.7	27.5	26.5	25.7	26.3
Greece	..	..	..	35.9	39.0	41.8	47.3	53.4	..	..
% foreigners	..	..	..	24.1	25.6	26.9	29.3	..	..	..
Italy (f)	72.8	82.6	88.1	123.6	138.8	145.5	216.2	221.9	255.6	357.0
% foreigners	9.3	12.7	15.0	19.0	20.5	19.9	21.9	21.7	23.4	26.6
Norway (g)	8.5	9.0	11.1	18.3	21.4	23.1	23.4	23.5	..	31.3
% foreigners	5.9	6.1	7.2	11.3	13.0	14.4	14.9	..	..	17.5
Netherlands(h)	21.4	25.3	29.3	38.6	43.3	47.2	46.0	43.5	39.0	32.5
% foreigners	3.1	3.5	3.9	5.0	5.7	6.5	6.8	6.4	5.9	5.0
Spain (i)	2.1	3.6	6.2	7.4	7.8	8.3	9.1	16.7	21.0	25.7
% foreigners	0.5	0.7	1.6	1.7	1.7	1.7	1.7	2.7	2.9	3.2
Sweden	70.0	72.8	69.8	86.0	123.4	129.2	129.8	127.6	111.9	99.4
% foreigners	14.5	14.7	14.0	17.0	23.0	24.3	24.7	24.4	22.4	20.4
Switzerland	163.1	194.9	241.4	268.6	297.1	319.4	330.1	339.6	348.7	362.6
% foreigners	14.5	16.4	19.4	20.8	22.3	23.4	24.1	24.7	25.2	25.8
UK (j)	..	58.0	..	75.0	..	75.0	84.0	..	118.4	..
% foreigners	..	2.9	..	3.7	..	3.8	4.0	..	5.2	..

Notes: (a) Albania, Belarus, Bulgaria, Former Czechoslovakia, Estonia, Hungary, Latvia, Lithuania, Rep. of Moldova, Poland, Romania, Russian Fed., Ukraine, Former Yugoslavia. Where data for the previously considered Former Soviet Union countries were not available, data for Former USSR were considered. (b) In 1994-2000 only Former Yugoslavia. (c) In 1991-1994 Former Czechoslovakia, Hungary, Poland, Former Yugoslavia and Former Soviet Union (excluded in 1992). In 1995-98 also Bulgaria and Romania. In 1999-2000 Bulgaria, Hungary, Poland, Romania and Former Yugoslavia. (d) In 1991, 1992, 1994 Albania was excluded. (e) In 1991-1993 Albania was excluded. In 1993 Former USSR was excluded. Data for 1991-1993 are drawn from OECD (1995). (f) Until 1995 non-European countries of Former Soviet Union included. (g) In 1991 Albania was excluded. (h) In 1991-1994 Albania was excluded. In 1993 Bulgaria and Former Czechoslovakia were also excluded. In 1996-1997 Estonia, Latvia, Rep. of Moldova were excluded. In 1998 Rep. of Moldova was excluded. (i) In 1993 Albania, Former Czechoslovakia and Hungary were excluded. In 1994 only Rep. of Moldova was excluded. (j) In 1992 Romania was excluded. Albania has been included since 1997.

Source: Eurostat (2002); for Italy National Statistical Office data on stay permits

countries taken into consideration, but these limits do not prevent us from highlighting some important aspects of the phenomenon. The country where immigration from the CEE countries is the highest is Germany, where in early 2000 these migrants numbered over 1.9 million.

On the whole, this figure represents 26.3% of the entire foreign population in the country and has not changed much in recent years either in absolute terms or in percentage terms. The greatest increase, in fact, occurred between 1991 and 1994, when the size almost doubled from 1.1 to 1.9 million people. In Germany, moreover, the Yugoslav community was already the second largest in the early 1980s after the Turks, reaching 663,000 in 1991. At that time, Polish immigration was also important (242,000) after rising considerably over the previous decade.

The stock of CEE immigrants in Sweden is about 100,000 (20.4% of the total) and almost 120,000 in the United Kingdom. There has been a significant decrease of figures in Sweden over recent years, after reaching nearly 130,000 people in 1996-97. This trend seems above all attributable to the large number of citizenships acquired by people from the former Yugoslavia and totalled 19,700 in 1998 and 15,300 in 1999 (OECD, 2001). On the other hand, the presence of immigrants from the CEE countries in Greece seems underestimated by the official sources. The approximately 53,000 people shown by official statistics in 1998 are, in fact, quite far from the estimates available on the Albanian emigration in Greece with figures ranging between 350,000 and 500,000 people (Gjonca, 2000; UNDP, 2000). In the other countries examined, immigration from the CEE countries is even lower. It ranges from 46,000 in Denmark, 41,000 in Finland, approximately 30,000 in Norway and the Netherlands to 26,000 in Spain and 21,000 in Belgium. In percentage terms, this presence is most important in Finland, where it reaches 46.8% of the total and shows the highest increase in relative terms in Western Europe.

Trying to draw some conclusions from the previous material, we can note how the stock of CEE immigrants in the Western part of the continent rose during the 1990s, although the size of this growth appears lower than expected and feared at the beginning of the decade. In particular, the increase tended to decline significantly in the second half of the period examined, mostly concentrating in the 1991-94 span and thus also being closely linked with the effects of the wars in the former Yugoslavia. The weight of the CEE immigration is considerable in Austria and Finland and with all probability also in Greece; it seems to be important in Germany, Switzerland, Italy, Sweden, Denmark and Norway; it is quite modest in

Belgium, the Netherlands, Spain and the United Kingdom. Up to now, it is mostly the bordering and the Scandinavian countries have been involved in immigration flows from the CEE. This situation cannot be blamed only on geographical proximity, but is also connected with the attraction function of the many communities, above all from the former Yugoslavia, already present in some countries, and the greater willingness shown by some states to accept refugees and asylum-seekers.

The main communities of immigrants from the CEE countries in Western Europe come mostly from the countries of the former Yugoslavia (Table 2). In Germany, where the values are much higher, the Yugoslav community is first (737,000), followed by the Poles (292,000), Croatians (214,000), Bosnia-Herzegovians (168,000) and Russians, who number no more than 100,000 people. In Sweden, compared to Germany, besides the obvious smaller size of the communities, there are changes in the order of size, with Bosnia- Herzegovina in first place, followed by Yugoslavia, Poland, Croatia and Russia. The changes in Switzerland, always compared to Germany, regard only the replacement of Poland by Macedonia in second place. On the other hand, the situation in Italy is quite different, with the most numerous communities being the Albanians (133,000), followed by the Romanians, Yugoslavs, Poles and Macedonians.

The picture is substantially the same when we pass from stocks to immigration flows (Table 3). The country with the greatest volume of immigration from the CEE countries is obviously Germany, with a maximum figure of 663,000 in 1992. This migration flow was at its highest between 1990 and 1993, accounting for 56.9% of the entire foreign immigration flow of the country. It subsequently fell to 225,000 in 1997, rising again in the next two years with 311,000 in 1999, *i.e.* 46.2% of the total. In the other countries, the flows were much smaller. In Austria, there was a peak of 38,000 people in 1999, although the lack of data on flows between 1990 and 1995 does not allow for a complete comparison with German data. The phenomenon seems to be increasing in Italy, where in 1999 these figures reached 60,000. In this case, we should however consider that the values of the single years reflect the effects of the various measures for regularisation more than the actual time of entry in the country, and that between 1990 and 1995, the data refer to a smaller number of countries. In any case, we can see a

significant increase in the figures, also because in 1999 the flow from the CEE countries represented almost 40% of legal immigration.

Table 2. Top nationalities from Central and Eastern Europe in some Western European countries, absolute values in thousands and percentage of total foreign population, 2000 (as on 1st January)

Austria		**Germany**		**Italy**	
Former Yugosl.	340.5	Yugoslavia	737.2	Albania	133.0
		Poland	291.7	Romania	61.2
		Croatia	214.0	Yugoslavia (a)	41.2
		Bosnia Herz.	167.7	Poland	29.5
		Russian Fed.	98.4	FYROM	19.8
Total foreign population	753.5	Total foreign population	7343.6	Total foreign population	1340.7
Above countries (% of total foreign population)	45.2	Above countries (% of total foreign population)	20.5	Above countries (% of total foreign population)	21.2
Sweden		**Switzerland**			
Bosnia Herz.	34.2	Yugoslavia	193.7		
Yugoslavia	22.7	FYROM	54.0		
Poland	16.3	Croatia	43.8		
Croatia	7.2	Bosnia Herz.	42.7		
Russian Fed.	5.1	Russian Fed.	5.4		
Total foreign population	487.1	Total foreign population	1406.6		
Above countries (% of total foreign population)	17.5	Above countries (% of total foreign population)	24.1		

(a) Including a not specified quota of persons from other countries of Former Yugoslavia.
Source: Eurostat (2002); for Italy National Statistical Office data on stay permits

Table 3. Foreign immigrants from CEE[(a)] in selected Western European countries, 1990-1999 (absolute values in thousands, percentage of total immigration flows and absolute values in thousands of the top three nationalities in 1999)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Austria	..	..	..	..	..	..	29.7	29.1	30.4	38.0
% of	..	..	..	..	..	..	52.1	51.2	..	52.5
of which										
Form. Yu.	..	..	..	..	..	..	15.8	15.1	17.1	23.3
Poland	..	..	..	..	..	..	5.8	5.5	4.9	5.0
Form. Cech.	..	..	..	..	..	..	2.8	3.0	3.0	3.2
Germany	426.8	518.0	663.2	563.7	375.4	357.4	266.9	225.5	252.8	311.4
% of	50.7	56.0	54.8	56.9	48.3	45.1	37.7	36.6	..	46.2
of which										
Poland	200.6	128.4	131.8	75.2	78.7	87.3	77.5	71.3	66.3	72.4
Russ. Fed. (b)	36.8	38.9	26.3	31.1	37.7	35.3	33.7	28.9	26.4	32.8
Yugoslav. (c)	65.6	221.3	280.5	156.3	67.6	56.4	44.5	32.7	61.9	90.5
Italy (d)	5.6	3.8	4.5	9.0(e)	11.6	20.4	45.2	36.2	41.8(e)	60.2(e)
% of	5.7	5.4	7.7	17.5	22.0	29.9	31.5	27.3	32.9	39.4
of which										
Albania	..	..	..	..	..	3.4	20.5	15.0	19.8	28.6
Romania	..	..	..	..	..	2.3	6.7	6.8	6.8	10.6
Yugoslavia	..	..	..	..	..	11.9(f)	5.4	2.9	3.4	6.6
Sweden(g)	7.6	7.2	5.5	27.0	46.0	11.2	5.2	8.2	7.1	5.5
% of	14.2	16.4	13.8	49.2	61.5	31.2	17.6	24.5	..	15.8
Yugoslav. (h)	2.2	2.0	1.8	3.3	15.8	2.4	0.8	2.9	1.9	1.2
Russ. Fed. (b)	0.6	1.3	0.5	0.6	1.1	1.0	0.8	0.7	0.8	1.0
Bosnia Herz.	..	..	..	20.7	25.7	5.3	1.5	1.8	1.3	1.0
Switzerland (i)	30.3	37.1	43.1	43.6	35.0	25.8	17.7	14.4	13.8	16.5
% of	24.7	27.9	32.6	35.6	32.5	28.4	23.8	20.6	..	19.7
of which										
Yugoslav. (h)	27.6	34.1	39.5	33.0	18.9	13.9	9.4	6.9	6.4	8.1
FYROM	..	..	..	0.8	4.4	3.8	2.5	2.0	1.9	2.3
Russ. Fed. (b)	0.7	0.8	0.6	1.4	1.3	1.3	1.1	1.1	1.1	1.2

Notes: (a) See note (a) in Table 1. (b) In 1990 and 1991 Former Soviet Union. (c) In 1990-92 Former Yugoslavia. (d) In 1990-1994 only Former Yugoslavia and Former Soviet Union were included. In 1995 Bulgaria, Former Czechoslovakia and Hungary were excluded. (e) National Statistical Office data. (f) Former Yugoslavia. (g) In 1990-1991 data refer to Former Yugoslavia. In 1992 only Croatia, Slovenia and Yugoslavia of the Former Yugoslav republics were included. In 1993 data for Bosnia Herzegovina and total are drawn from OECD (2001). (h) In 1990-91 Former Yugoslavia. (i) In 1992 Rep. of Moldova and FYROM were excluded.

Source: Eurostat, 2002.

In Sweden, on the other hand, there was a peak in 1994 with a flow of 46,000 people (61.5% of the total) and a considerable fall in subsequent years. In Switzerland, immigration showed trends similar to Swedish ones, with a maximum of 43,000 people in 1992 and 1993 and a significant fall in subsequent years, stabilising at a value of approximately 15,000 people in the last three-year period.

In the other countries of Western Europe, where data are available on immigration flows, but which cannot be shown in Table 3 for lack of space, figures rarely exceed 10,000. This is the case in 1999 for Belgium, in 1995 for Denmark[1], in 1996 and 1997 for Greece and in the two-year period 1993-94 for the Netherlands. In these countries, immigration flows from the CEE countries seem important in relative terms in Finland, where in the period examined they reached a proportion between 37.1% and 59.9% of the total, though never exceeding 7,000 people, and in Greece where the rate rose from 29.2% to 50.1%. Generally, it is under 10%, except for Denmark where, up to 1994, the percentage was basically at this rate, rising to 47.9% in 1995[2] and falling back to 22.9 and 16.9% in the following two years.

The Italian situation deserves a more detailed analysis (Table 4). We have, in fact, seen that Italy was a major target in these years for emigration flows from the CEE countries in contrast to the other countries of Western Europe, showing a tendency to growth. It should likewise be considered that in Italy, a new immigration country, these flows have developed without the existence of stable and numerous communities from CEE. If we add to this the geographical proximity and the limited percentage impact hitherto deriving from agreements with countries of origin in determining the size of the flows, the Italian situation is an interesting and significant example of migration dynamics between the Eastern and Western part of our continent.

The citizens of a CEE country living in Italy with a regular residence permit rose from 82,600 in 1992 to 357,000 in 2000, leading to a growth rate significantly higher than the overall immigration rate. Thus, there was an increase of almost 14 percentage points in the proportion of the

[1]The value of this year includes 16,000 former Yugoslavs recognised as refugees after 3 years of legal residence in Denmark as war refugees (OECD, 2001).
[2]See previous note.

CEE immigration in the total. The largest communities include the Albanians, with 133,000 people, followed by the Romanian, Yugoslav and Polish communities. Among the largest groups, the Albanians and Romanians have recorded the highest percentage increases. Between 1996 and 2000, both communities actually quadrupled. The growth rate of the Yugoslavs and Poles, on the other hand, was much lower. It is interesting to note the small size and substantial stability of the Slovenian community. This is all much more significant if we consider that the territory of the former Yugoslavia borders with a part of Italy, forming one of the richest and most dynamic areas of the entire European Union, thus confirming that migration flows are not just a result of the differentials in income and how in some CEE countries a tendency towards a substantial stabilisation of emigration flows is occurring.

From the structural point of view, the main tendency is towards a gradual normalisation of the three major communities. On the whole, the gender structure of CEE immigrants over these years has shown the growth of the female share, rising from 37.2% in 1992 to 45.3% in 2000. In general, the rebalancing of the gender structure of the immigrant populations should be interpreted as an important step in the process of stabilisation in the country of arrival. Among the Albanians, women still account for only 34% of the total, but in eight years they have increased by 20 percentage points. This is a factor that, together with other characteristics of the recent development of this community, shows how on the whole the insertion of the Albanians in Italian society in recent years has advanced much more than generally believed (Bonifazi and Sabatino, 2002). Some communities continue, however, to show imbalanced gender structures. Among the Poles, for example, women increased by almost 15 points, rising from 55.7% to 70.5% of the total. An even higher presence of women is recorded among the Russians (75.7%), Ukrainians (78.8%) and Hungarians (72.7%).

On the other hand, the Macedonians and Slovenians are mainly male communities. Immigration to Italy from the CEE countries is above all for work purposes, as shown by 63.2% of permits issued for this reason. This percentage exceeds 65% in the case of the Albanians, Romanians, Macedonians, Bosnians and Slovenians.

Another aspect highlighted by the statistics is the presence of foreigners in the CEE countries (Table 5). The maximum number is recorded in the Czech Republic, which in 1999 had 229,000 foreigners. This was followed by Hungary with 127,000 foreigners, Bulgaria with 102,000, Romania with 62,000, Poland with 43,000 and Slovakia with 25,000. These figures underestimate the real size of the phenomenon, since, for example, the Polish Ministry of Labour and Social Affairs estimates unofficial employment of foreigners in the country between 100,000 and 150,000 (OECD Secretariat, 2001). The composition by country of origin confirms the existence of numerous immigration flows towards the CEE countries. Besides the foreigners coming from other countries in the region, who form the largest component of this migration, there are also people from the countries of Western Europe and also from countries of the Far East. The Vietnamese in the Czech Republic, for example, number almost 25,000 and represent the third foreign community in the country. There are 7,700 Chinese immigrants in Hungary and 6,700 in Romania, where only the Moldavians are more numerous.

Table 4. Stay permits of citizens of Central Eastern European countries in Italy, 1992-2000 (in thousands at the beginning of the year)

COUNTRIES	1992	1993	1994	1995	1996	1997	1998	1999	2000	Index numbers 1996 (1992=100)	Index numbers 2000 (1996=100)	% females 1992	% females 2000	% labour reason 2000
Central Eastern Europe (a)	82.6	88.1	123.6	138.8	145.5	216.2	221.9	255.6	357.0	176.0	245.4	37.2 (e)	45.3	63.2 (g)
Albania	24.9	22.5	23.7	25.2	30.2	66.6	72.6	87.6	133.0	121.3	440.7	14.1	34.0	65.1
Romania	8.3	8.4	9.8	12.0	14.2	26.9	28.8	33.8	61.2	172.3	430.7	58.0	48.9	67.8
Yugoslavia (b)	25.8	23.9	36.8	36.9	33.9	33.0	31.7	36.1	41.2	131.2	121.6	37.0	41.4	57.7
Poland	12.1	10.5	11.7	12.4	14.0	23.2	22.9	23.3	29.5	115.0	211.2	55.7	70.5	56.5
TFYR Macedonia	-	0.7	6.0	10.9	13.5	13.8	14.2	17.0	19.8	1,989.4 (c)	146.7	14.7 (f)	28.7	69.4
Croatia	0.4	5.9	12.5	14.3	14.4	15.3	15.2	15.5	16.5	243.3 (c)	114.8	49.6	46.1	64.2
Russian Federation	3.6	4.2	4.9	5.5	5.7	7.3	8.6	10.1	13.4	158.9	234.2	73.2	75.7	36.9
Bosnia and Herzegovina	-	2.1	5.8	7.8	8.3	9.1	8.9	10.0	11.5	398.7 (c)	139.2	48.3 (f)	43.0	69.8
Bulgaria	2.5	2.5	2.7	3.1	3.3	4.4	4.8	5.3	7.4	128.7	226.6	55.7	57.6	..
Ukraine	-	-	-	-	-	1.3	1.9	3.1	6.5	-	498.2 (d)	-	78.8	..
Slovenia	0.4	2.4	3.5	3.6	3.5	3.6	3.5	3.5	3.7	782.2	106.9	39.3	36.6	68.8
Hungary	2.3	2.3	2.5	2.7	2.8	3.4	3.3	3.6	3.7	123.6	131.1	61.4 (f)	72.7	..

(a) Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia, Slovenia, TFYR Macedonia, Ukraine and Yugoslavia; until 1995 non-European countries of Former Soviet Union are included. 1996 Czech Republic and Slovakia were excluded. (b) Including a not specified quota of persons from other countries of Former Yugoslavia. (c) 1993=100. (d) 1997=100. (e) Czech Republic, Hungary and Slovakia were excluded. (f) 1993. (g) Only listed countries. (h) Including CEE and LD countries.

Source: National Statistical Office data.

Table 4. Stay permits of citizens of Central Eastern European countries in Italy, 1992-2000 (in thousands at the beginning of the year), continued

COUNTRIES	1992	1993	1994	1995	1996	1997	1998	1999	2000	Index numbers 1996 (1992=100)	Index numbers 2000 (1996=100)	% females 1992	% females 2000	% labour reason 2000
Total	648.9	589.5	649.1	677.8	729.2	986.0	1,022.9	1,090.8	1,340.7	112.4	183.9	39.9	45.3	61.7
Total strong migration pressure countries (h)	474.9	412.7	466.9	487.2	528.4	779.7	809.3	867.7	1,112.2	111.3	210.5	32.9	42.2	67.5
Central Eastern Europe on total (%)	12.7	15.0	19.0	20.5	19.9	21.9	21.7	23.4	26.6	156.7	133.5			
Central Eastern Europe on total strong migration pressure countries (%)	17.4	21.4	26.5	28.5	27.5	27.7	27.4	29.5	32.1	158.2	116.6			

Source: National Statistical Office data.

Table 5. Foreign population in some Central and Eastern European countries, absolute values in thousands and percentage on total foreign population, 1999.

Bulgaria		**Czech Rep.**		**Hungary**	
CIS	35.2	Ukraine	65.9	Romania	48.6
EU	18.4	Slovak Rep.	40.4	Form. Yugosl.	15.3
Europe (Other)	10.7	Vietnam	24.8	Germany	8.5
Middle East	10.3	Poland	18.3	China	7.7
Asia	6.2	Russ. Fed.	16.9	Ukraine	7.6
Total foreign population	102.3	Total foreign population	228.9	Total foreign population	127.0
Above countries (% total foreign population)	79.0	Above countries (% total foreign population)	72.7	Above countries (% total foreign population)	69.1
Poland		**Romania**		**Slovak Rep. (a)**	
Ukraine	7.0	Rep. Moldova	6.9	Czech Rep.	5.8
Russ. Fed.	4.4	China	6.7	Ukraine	3.5
Vietnam	3.3	Turkey	5.2	Poland	2.8
Belarus	2.3	Greece	5.1	Form. Yugosl.	2.0
Germany	1.9	Italy	4.6		
Total foreign population	42.8	Total foreign population	61.9	Total foreign population	24.8
Above countries (% total foreign population)	44.2	Above countries (% total foreign population)	46.0	Above countries (% total foreign population)	56.9

Note: (a) 1997.
Source: OECD (2001).

3. Problems and perspectives

Though with all the limitations deriving from the extraordinary difficulties encountered by the statistical systems in describing the current dynamics of international migrations in the CEE countries, we have observed how the knowledge available enables us to highlight some important and interesting aspects of the phenomenon. The first point deserving attention is the considerable complexity of migration flows occurring in the area in the last ten years (Wallace and Stola, 2001). At the time of the fall of the communist regimes, the prospects for international migration were interpreted almost exclusively in relation to the possible future East-West flows. In reality, however, international migrations have also developed along totally new and unexpected evolutionary lines, such as transit migration, incomplete migrations and

flows within the region. Some countries of the area, for example, are experiencing immigration flows from both their neighbours, Western countries and developing countries. In the 1990s, the number of CEE countries with net in-migration have also increased, a situation occurring in 1999 in Slovenia, Hungary, the Czech Republic, Slovakia and Lithuania (OECD, 2001). These changes could herald, at least in some cases, an evolution similar to that characterising the countries of Southern Europe twenty years ago, if the improvement of the economic and social conditions will lead to the stabilisation and growth of attraction factors.

In this respect, it will also be interesting to verify how all the mobility flows falling within the category of 'incomplete migration' proposed by Okólski will develop in the coming years. These are forms of mobility that seem to respond to the needs determined by the difficulties inherent in the transition process. These migrations show great capacity for social adaptation and for enhancing scarce resources and opportunities available, in situations involving considerable problems for migrants on both sides of the migration process. These migrations are outside traditional categories and models of interpretation, but show the extraordinary flexibility and adaptability of the current migration flows (Wallace, 2001a).

The same background factors determining the incomplete migration can be related with the persistence of transit migration. These flows also show significant flexibility in modifying the paths in relation to stricter border controls and in the relationships with various forms of the informal economy. In general, "transit migration is favouring the development of illegal immigration and undocumented employment in many of the CEE countries. (…) The undocumented employment of immigrants in an irregular situation tends to be the most prevalent in those countries with an already flourishing informal economy. Only a fraction of the transit migrants succeed in reaching the West (…); others remain in the transit country or return to their country of origin. This circular migration, as well as contributing to the development of irregular migration and to undocumented employment, also gives rise to commercial activity and to regional trade" (OECD Secretariat, 2001, 40).

This complexity of the migration scenario, a result of the underlying complexity of the social and economic situation occurring in recent years

in the CEE countries, makes it very difficult to formulate any hypotheses on the forthcoming trends in migration, developing in so many directions in recent years. This migration has undergone, for example, a much lower increase in flows with Western Europe than might have been expected. An important element in this situation is undoubtedly the planned enlargement of the European Union in 2004 to include Poland, Hungary, Czech Republic, Slovakia, Slovenia, Estonia, Latvia and Lithuania, and in 2007 to include Romania and Bulgaria. For some years the planned enlargement has been a major element in the characterisation of migration flows. The measures in most of the countries have, in fact, tended to standardise migration policies to those of the European Union (Laczko, 2002; Mitsilegas, 2002; Jileva, 2002), thus virtually transforming these countries into a sort of buffer zone protecting their Western neighbours (Collinson, 1996; Wallace, 2001b). Even if the free circulation of persons and workers between the new and old members of the European Union is not immediately enacted, it is hard to see that this function can still persist on the current terms.

A topic analysed with great attention in recent research studies regards the effects of EU enlargement on migration flows (Fassmann and Münz, 2002; Kunz, 2002; European Commission, 2001; Straubhaar, 2001; Delisle, 2002; Hille and Straubhaar, 2001). The results of these studies obviously depend on the type of model used, the forecasting models adopted and the timing of the convergence of the economic systems. Referring to the results of these studies on this occasion we should just consider one aspect of the demographic context of the international migrations between East and West in the coming years. The working-age population is certainly the main demographic base of the migration flows and in particular the age group between 20 and 39, in which the propensity to migrate is the highest. On the whole, the future evolution of the working-age population in the CEE countries and the countries now forming the EU does not seem to be wholly favourable to the increase of migration flows on the continent (Table 6). Between 2000 and 2010, the basic stability of the working-age population in the EU, the result of a decline of almost 1.4 million people per year aged between 20 and 39 and an increase of 1.3 million per year of those aged between 40 and 59, faces an overall growth of 866,000 people per year in the CEE, of which 308,000 are in the younger and 558,000 in the older age groups. In the next decade, the situation should, however, change radically. Both areas

of the continent should, in fact, undergo a loss of working-age population that in the CEE countries will be almost double that of the EU. While in the current decade the demographic situation is basically favourable to international migrations, it will no longer be so in the subsequent ten years.

Table 6. Working age population changes in Europe, 2000-2020 (annual averages in thousands)

Countries	20-39		40-59		Total (20-59)	
	2000-2010	2010-2020	2000-2010	2010-2020	2000-2010	2010-2020
European Union	**-1,382.4**	**-795.3**	**1,295.4**	**-152.3**	**-87.0**	**-947.6**
of which:						
Germany	-394.2	-64.4	385.6	-210.5	-8.6	-275.0
Italy	-334.4	-258.3	185.2	29.5	-149.2	-228.8
United Kingdom	-169.8	10.4	204.1	-29.9	34.3	-19.5
France	-88.1	-72.7	143.8	-47.7	55.7	-120.4
Spain	-172.5	-271.4	171.3	114.5	-1.2	-157.0
Central Eastern Europe (a)	**308.0**	**-1,524.2**	**558.4**	**-369.4**	**866.4**	**-1,893.7**
of which:						
Russian Federation	163.4	-663.5	314.3	-338.1	477.7	-1,001.6
Ukraine	-6.0	-232.3	46.5	-59.9	40.4	-292.1
Poland	109.0	-159.6	40.4	-35.3	149.4	-195.0
Romania	17.8	-142.1	39.5	47.0	57.3	-95.1
Czech Republic	-1.1	-65.7	-12.6	24.3	-13.7	-41.4
Hungary	-5.1	-52.7	-14.8	7.4	-19.9	-45.2

An important new aspect in the recent political debate in the EU is the opening up to immigration. These developments take into account the positive aspects of the phenomenon and its necessity in relation to the concrete needs of the receiving countries. These are new major aspects in a debate that, for over twenty years, have been merely limited to considering the need to limit migration flows and control the growth of foreigners. It is not easy to say what role these positions will have in determining the migration policies of the single states and of the European Union, considering above all that the electorate of almost all the countries consider immigration to be a difficult issue. It is in any case a factor that could prove favourable to a more rapid insertion of the new member states in the mechanisms of the free circulation of the workers within the EU.

Underlying factors still include concern for the political instability of the area. Forced migrations were a major element of the migrations in the last decade and ethnic migrations have, on more than one occasion, been connected with real or presumed discrimination against minorities. The latest available data show how in 2002 in a European country asylum applications of people from the CEE countries totalled almost 70,000: 30,900 from Yugoslavia, 17,800 from Russia, 7,900 from Bosnia, 6,500 from Ukraine and 6,200 from Romania (UNHCR, 2003). In any case, in 2001 the population of concern to the UNHCR in the CEE countries totalled 2.9 million[3] (UNHCR, 2002). On the other hand, while most of the conflicts occurring in the area are now under control, we must unfortunately recognise that a fully satisfactory and lasting solution has not been reached in all cases. This remains the necessary condition for preventing future forced migrations.

Acknowledgements

I would like to thank Antonella Guarneri and Marija Mamolo for their collaboration in the collection of the statistical and bibliographical material and in the preparation of the tables.

References

Bonifazi C. and D. Sabatino, 2002, Albanian Migration to Italy: What Official Data and Survey Results Can Reveal, paper presented at the Conference Albanian Migration and New Transnationalisms, Brighton, 6-7 September.

Bonifazi C. and S. Strozza, 2002, International Migration in Europe in the Last Fifty Years, in: C. Bonifazi and G. Gesano (eds.), *Contributions to International Migration Studies*, Roma: IRP-CNR, 33-105.

Collinson S., 1996, "Visa requirements, carrier sanctions, 'safe third countries' and 'readmission': the development of an asylum 'buffer zone' in Europe", *Transactions of the Institute of British Geographer* 21(1), 76-90.

[3] This value also includes the people receiving assistance in the countries of the Caucasian area of the former Soviet Union.

Delisle P., 2002, *The Challenge of Labour Mobility in an Enlarged European Union*, Cahiers Européens de Sciences Po, 2; http://www.portedeurope.org/publications/cahiers/cahier_2_2002.pdf on 3 February 2003.

European Commission, 2001, *The Free Movement of Workers in the Context of Enlargement*, Information Note; http://europa.eu.int/comm/ enlargement/docs/pdf/migration_enl.pdf on 3 February 2003.

Eurostat, 2002, *New Cronos 2002 CD-ROM (Extraction date: January 2002)*, Luxembourg, Eurostat.

Fassmann H. and R. Münz, 1995, European East-West Migration, 1945-1992, in: R. Cohen (ed.), *The Cambridge Survey of World Migration*, Cambridge University Press, Cambridge, 470-480.

Fassmann H. and R. Münz, 2002, EU Enlargement and Future East-West Migration, in: IOM, *New Challenges for Migration Policy in Central and Eastern Europe*, Geneve.

IOM-Icmpd,http://www.demographie.de/info/epub/pdfdateien/EU/ Enlargement/Future/East-West/Migration.pdf on 3 February 2003.

Gjonça A., 2000, Albanian emigration in the 1990s, paper presented at the International Conference *Changes in the 1990s and the demographic future of the Balkans*, Sarajevo, 10-13 May.

Hille H., and T. Straubhaar, 2001, The impact of EU-Enlargement on Migration Movements and Economic Integration: Results of Recent Studies, in: OECD, *Migration Policies and EU Enlargement. The Case of Central and Eastern Europe*, OECD, Paris, 79-100.

Hobsbawn E.J., 1995, *Il secolo breve. 1914-1991: l'era dei grandi cataclismi*, Milano: Rizzoli; in: *Age of Extremes. The Short Twentieth Century 1914-1991*, Pantheon Books - Random House, New York, 1994.

Jileva E., 2002, "Visa and Free Movement of Labour the Uneven Imposition of the EU *Acquis* on the Accession states", *Journal of Ethnic and Migration Studies* 28 (4), 683-700.

Kunz J., 2002, *Labour Mobility and EU Enlargement. A Review of Current Trends and Debates*, Dwp; available at http://www.etuc.org/ ETUI/Publications/DWP/02Kunz.pdf on 3 February 2003.

Laczko, F., 2002, Introduction, in: IOM, *New Challenges for Migration Policy in Central and Eastern Europe*, Geneve: Iom-Icmpd; available at www.iom.int//DOCUMENTS/ PUBLICATION/ EN/Chapter1.pdf on 3 February 2003.

Mitsilegas V., 2002, "The Implementation of the EU *Acquis* on Illegal Immigration by the Candidate Countries of Central and Eastern Europe: Challenges and Contradictions", *Journal of Ethnic and Migration Studies* 28 (4), 665-682.

Münz R., 1995, Where Did They All Come From? Typology and Geography of European Mass Migration in the Twentieth Century, in: EAPS/IUSSP, *Evolution or Revolution in European Population*, European Population Conference, Milano, 1995, Vol. 1, Plenary sessions, F. Angeli, Milano, 95-154.

OECD, 1995, *Sopemi Trends in International Migration. Annual Report 1994*, OECD, Paris.

OECD, 2001, *Sopemi Trends in International Migration. Annual Report 2001 Edition,* OECD, Paris.

OECD Secretariat, 2001, Trends in Migration Flows in Central and Eastern Europe, in: OECD, *Migration Policies and EU Enlargement. The Case of Central and Eastern Europe*, OECD, Paris, 33-50.

Okólski M., 1998, "Regional Dimension of International Migration in Central and Eastern Europe", *Genus* 44 (1-2), 11-36.

Okólski M., 2001, Incomplete Migration: a New Form of Mobility in Central and Eastern Europe. The Case of Polish and Ukrainian Migrants,

in: C. Wallace and D. Stola (eds.), *Patterns of Migration in Central Europe*, New York: Palgrave, 105-128.

Romaniszyn K., 1997, *Current Migration in Central and Eastern Europe*, Prace Migracyjne, 15; available at http://www.iss.uw.edu.pl/osrodki/cmr/wpapers/pdf/015.pdf on 3 February 2003.

Salt J., 2001, *Current Trends in International Migration in Europe*, Strasbourg: Council of Europe; available at http://www.coe.int/T/E/Social_Cohesion/Migration/Documentation/Publications/reports/

Straubhaar T., 2001, "Migration Policies and EU Enlargement", *Intereconomics*, July-August, 167-170; available at http://www.hwwa.de/Publikationen/Intereconomics/2001/ie_docs2001/ie0104-straubhaar.pdf on 3 February 2003.

United Nations, 2001, *World Population Prospects: the 2000 Revision*, New York: United Nations.

United Nations Development Programme, 2000, *Albanian human development report 2000*, Tiranë, UNDP.
available at http://www.al.undp.org.

United Nations High Commissioner for Refugees, 2002, *Statistical Yearbook 2001*, Geneva.

United Nations High Commissioner for Refugees, 2003, *Asylum Applications Lodged in Europe, North America, New Zealand and Japan: January-December 2002*, Geneva; available at www.unhcr.org on 15 February 2003.

Wallace C. and D. Stola, 2001, Introduction: Patterns of Migration in Central Europe, in: C. Wallace and D. Stola (eds.), *Patterns of Migration in Central Europe*, Palgrave, New York, 3-44.

Wallace C., 2001a, Conceptual Challenges from the New Migration Space, in: C. Wallace and D. Stola (eds.), *Patterns of Migration in Central Europe*, Palgrave, New York, 45-71.

Wallace C., 2001b, The New Migration Space as a Buffer Zone?, in: C. Wallace and D. Stola (eds.), *Patterns of Migration in Central Europe*, Palgrave, New York, 72-83.

Zlotnik H., 1992, Empirical Identification of International Migration Systems, in: M.M.Kritz, L.L.Lim and H.Zlotnik (eds.), *International Migration Systems. A Global Approach*, Clarendon Press, Oxford, 19-40.

The labour market and demographic processes: some remarks on new perspective needed [1]

Irena E.Kotowska

1. Introduction

Recent three decades brought up remarkable changes in the labour market. An increase of women in employment, declining economic activity of the youngest persons as well as older workers can be mentioned as main changes in the labour market participation in developed economies. The later entrance in the labour market and early exit affect the individual time spent in employment. It has been shortening despite rising life duration.

Another fundamental change in the labour market refers to rapid organisational and technological restructuring processes, globalisation of economies and increasing competition in international markets. The labour market has become highly dynamic and unstable. Technological progress provokes rapid and unstable changes in the demand for labour. Quantity mismatch between labour supply and labour demand is increasingly replaced by quality mismatch. Labour supply adjustments to these demand-oriented changes result, *inter alia*, in high and persistent unemployment and changing work patterns, that is more temporary jobs, and part-time work, *etc*. Moreover, on average employment tenure is becoming more precarious.

Simultaneously, over recent decades so deep changes in reproduction of population took place that we can refer to the new demographic regime in Europe, *i.e*. to the demographic situation resulting from the second demographic transition, not only in post-industralised European countries but also in countries of Central and Eastern Europe.

[1] That text is mainly based on research carried under the Network on Intergrated European Population Studies (NIEPS), funded by the European Commission, and the project of the Council of Europe on "The Economically Active Population in Europe: Trends, Perspectives and Policies"

Two issues will be addressed in the paper: how these labour market developments could be considered from the perspective of future demographic processes, especially population ageing, the decline in the labour force and its ageing. These changes in the age structure are the unavoidable future of Europe according to recent population projections by the UN (2001)[2] and labour force projections by Eurostat (Statistics in Focus, 2001). Here, the main focus will on declining labour market participation of the older workers, *i.e.* persons aged 55 and more and relevant policies. The second topic refers to one of the most critical issues when discussing on family changes and participation in the labour market *i.e.* combination and compatibility of gainful employment and family duties. Since that issue is broadly discussed in the literature, for the limited size of the paper I will only refer to policy questions taken from the perspective of relation between the family and the state.

Despite cross-country differences in terms of the intensity of past changes in the labour market and demographic processes and their reasons, these issues are a common concern in both developed and transition economies and create a challenge for European societies.

2. Changes in the labour force participation in the recent three decades

A discussion on developments in labour force participation in the EU countries covers the period since the 1970s. Data available for a few candidate countries for the years up to 1990 cannot be compared with date for the 1990s. Therefore, for that region only the last decade is considered. Major changes in economic activity, illustrated by the age-sex -specific labour force participation rates (LFPR), can be summarised as follows (Kotowska, 2003):

- the LFPRs for males, especially for the age 55-64, reveal a general decrease in economic activity. The rates for males aged 25-49 being around the 90% level are homogenous across countries. Country differences increase within the age. These changes cannot be

[2] See also the paper by Strzelecki in this volume, and reports for Council of Europe by Avramov and Mašková (2002) and Kotowska (2003).

associated only with economic cycles (for example an increase in the 1970s and a decline in the 1980s);

- on the contrary, the economic activity of females has been continuously rising for those aged 25-54, especially aged 25-44. For the remaining age groups the changes did not show such a uniform picture. The increase can also be observed for females at age 55-59 (except for Austria) while the rates of females aged 60-64 declined (except for Sweden and Greece). The activity of females aged 65 was low and declined;

- the level of the female LFPRs is differentiated across countries. In 1970 the lowest rates were found in Italy, Greece, Belgium (around 30% for age 25-44) while the highest ones in Denmark, Austria and Sweden (around 50% for age 25-44). The differences still existed in the 1990s, but at the significantly higher level of economic activity: Italy and Greece are still at the bottom of the ranking list (61% and 66% for age 25-44), while Scandinavian countries and France are at the top (81%-85%);

- the general downward trend in the LFPRs of persons aged 55 and more is markedly differentiated by countries. Despite the fact that in most countries the standard age of retirement for males, being at least 65 years, (France, Greece and Italy are exceptions), was relatively stable over time, economic activity rates of males aged 55-59 range from 54% (Italy) to 89% (Sweden) and those of males aged 60-64 from 5% (Spain) to 84% (Sweden).

Centrally planned economies had, by European standards, a high economic activity for both males and females. These countries were almost uniform in terms of LFPRs of males and slightly differentiated in terms of females' rates[3]. Labour market participation changed drastically in the 1990s. In most of the transition countries economic reforms brought a sharp contraction in output and employment accompanied by a rise in unemployment. Despite the recovery, which started in around 1993, employment has continued to decline or stagnate. The LFPRs,

[3] In fact, that measure can be compared with employment rates for the developed market economies, given the full-employment principle and a lack of open unemployment before the 1990s.

available from labour force surveys, declined in all countries, most visibly in Bulgaria, Hungary and Poland. In 2001 the EU-15 employment rate was higher than in the candidate countries for the persons aged 15-64 as well as for youngest and the oldest groups of the labour force (Table 1)[4].

The contraction in demand for labour along with the growing working age population has put strong pressure upon the labour market and has been reflected in high unemployment in most of Central and Eastern European countries. In 2000, unemployment rates below 10% were observed only in the Czech Republic, Romania, Hungary and Slovenia. Youth and female unemployment in the candidate countries are far above the EU average (Table 1).

To deal with rising unemployment governments of transition countries liberalised disability and early retirement provision. As a result, economic activity of persons aged 55-64 dropped considerably. The relatively rapid changes of employment of older workers in transition countries led to the employment rate of males being considerably lower when compared to the developed economies. However, it should be noted that the standard age of retirement is, for both males and females, lower than in the EU countries – on average 60 years for males and 57 for females. It is important to remember also, that in the EU countries the trend results mainly from declining economic activity of males, while in transition countries declines in both male and female economic activity contributed to the observed change.

Data in Table 1 show that under-utilisation of labour force is widespread across Europe, however, declines in economic activity in the candidate countries over the 1990s led to stronger labour market imbalances than in the EU member. Even employment rate of females, being at a high level in the centrally planned economies, is now visibly lower.

The rigidity of labour markets in transition countries is often mentioned as their specific feature, which contributes to high unemployment and long-term unemployment (see *e.g.* Witkowski in this volume) and to increasing difficulties in combining the family tasks and paid work (see

[4] The national labour force surveys were introduced in transition countries in the first half of 1990s, according to international recommendations on definitions and methods. They have become the main source of data on labour market developments.

also Sobotka in this volume). Selected indicators of unemployment, presented in Table 2, confirmed that part-time job is not frequently searched by both short- and long-term unemployed. There is a remarkable difference in part-time job preferences among females in both groups of countries. Females more often look for that work in developed economies[5].

Table 1. Employment status of persons aged 15 years and more, European Union (EU-15) and candidate countries (CC-11), 2001

Population category	EU – 15	CC-11
Population in households aged 15 years and more (in million)	**310.4**	**85.2**
Percentage of females	51.6	52.4
Percentage of persons below 25 years	14.5	18.2
Percentage of persons 65 years and more	19.6	14.9
Persons in employment (in million)	**161.3**	**42.7**
Percentage of females	42.8	46.1
percentage of persons below 25 years	11.3	9.8
employment rate (15-64)	63.9	57.8
employment rate (15-24)	40.4	27.0
employment rate (55-64)	38.2	34.6
employment rate of females (15-64)	54.8	52.5
employment rate of females (15-24)	36.9	24.7
employment rate of females (55-64)	28.6	26.6
Persons in unemployment (in million)	**12.7**	**6.4**
Percentage of females	50.3	47.6
Percentage of persons below 25 years	23.2	26.4
Unemployment rate	7.3	13
Unemployment rate of females	8.5	13.4
youth unemployment rate (15-24)	14	28.8
unemployment rate of females (15-24)	14.9	28.3
percentage of long-term unemployed	44	52.4
Non-active persons (in million)	**136.3**	**36.1**
Percentage of females	62.2	60.7
Percentage of persons below 25 years	17.5	26.7

Source: Franco and Jouhette (2002); Franco, Blöndal (2002).

[5] One can also explain the low preference for the part-time job by household welfare, employers' attitudes towards more flexible employment, infavourable regulations about non-standard forms of employment, *etc*., which do not encourage to take up part-time jobs.

Table 2. Unemployed persons by selected characteristics, EU-15 and CC-11, 2001

Selected indicators of unemployment	EU – 15	CC-11
Unemployed less than one year (in million)	7.0	3.0
Percentage of females	49.7	45.5
Percentage of persons below 25 years	28.9	32.4
Of which: searching for a full-time job	4.9	2.0
Percentage of females	43.4	46.5
Percentage of persons below 25 years	28.8	32.2
Of which: searching for a part-time job	1.0	0.2
Percentage of females	81.5	57.4
Percentage of persons below 25 years	26.2	30.3
Unemployed one year and more (in million)	5.7	3.4
Percentage of females	51.1	49.4
Percentage of persons below 25 years	15.5	21.0
Of which: searching for a full-time job	3.9	2.0
Percentage of females	45.6	49.9
Percentage of persons below 25 years	15.2	22.2
Of which: searching for a part-time job	0.7	0.2
Percentage of females	84.2	61.4
Percentage of persons below 25 years	7.9	9.7

Source: Franco and Jouhette (2002); Franco, Blöndal (2002).

Both employment and unemployment aggregate data illustrate differences between labour markets in both groups of countries, affected by different patterns of economic activity up to 1989 and changes which occurred in the 1990s, especially in the CEE countries. Despite these differences, both developed and transition economies share a common concern about the financial viability of pension systems.

3. Older workers and retirement policies

The clearly visible declining labour force participation of older workers is attributed mainly to labour market related effects and institutional factors. Empirical studies for developed economies show that both the demand effect (structure of the economy, high and persistent unemployment,

technological progress) and the supply effect (the size and age composition of the labour force, old-age pensions and other non-employment related benefits) contribute to these developments. For instance, the study on determinants of changes in the LFPRs of older men by Blöndal and Scarpetta (1999a), based on data about fifteen OECD countries from the years 1971-1995, confirms a close correlation between the average effective retirement age and continued work. Pension wealth accrual and unemployment-related benefits have a strong impact on decisions to retire. The availability of generous non-employment benefits seems to be a prerequisite for labour market variables to influence activity rates of older workers. Also, the labour market variables play a significant role in explaining cross-country and time variations in the economic activity of older men: the increase in the prime-age unemployment rate influences the drop in the labour force participation rate, changes in the size and the age composition of the working-age population seem to exert strong pressure for early withdrawal on older male workers. In general, labour market factors and institutional factors (*e.g.* different bargaining systems and the degree of unionisation (the share of trade union members) explain a great deal of the cross-country and time-series differences in the labour force participation rates, however a large part of the cross-country variation remains unexplained.

The analysis of LFPRs of both females and males aged 55-74 by Vlasblom and Nekkers (2001) refers to the European Union countries at the national and regional (NUTS-II) levels and covers the period 1992-1997. The labour supply factors were represented by age, gender and education, while labour demand factors by employment variables: employment structure (agriculture, industry, services), employment status (employees, self-employed), and full-time and part-time workers. Institutional factors like the pension systems, including the standard age of retirement, a possibility to defer pension, a possibility to retire early, partial pension arrangements were reflected in a set of dummy variables. The main empirical results can be synthesised as follows:

- more higher educated persons tend to stay longer in the labour market;
- the higher the pension age, the higher the activity rates;
- the possibility to defer pensions increases the activity rates;
- the possibility of early retirement lowers the activity rates of males younger than 65 and increases the rates of males older than 65;

- a similar effect has been noted regarding the possibility to use a partial pension.

Both studies confirm that the majority of the differences in the labour force participation rates between countries stem from differences in the country-specific labour force behaviour (behaviour and work attitudes) and institutional and policy factors affecting labour supply decisions. Moreover, attempts by Vlasblom and Nekkers (2001) at finding groups of countries with similar patterns of interrelations between the economic activity of older workers and variables related to demographic, educational and economic structures show that there is no clear subdivision in countries where either demographics or educational and economic structures has the greatest influence.

The decline in economic activity of persons aged 55 and over in the countries of Central and Eastern Europe could also be related to both the demand and supply sides. The demand for labour has been strongly influenced by the transformation processes: institutional changes linked to the establishment of a labour market and the restructuring of the economy and employment structures. Economic reforms imposed a fundamental reconstruction of labour market control mechanisms aimed at the more effective management of the workforce, a rise in labour productivity and an improvement in the quality of work. Demand for labour changed drastically in quantitative and qualitative terms. On the supply side the increase in the size of the working-age population, its ageing and declining spatial mobility have been observed. Moreover, the fact that the overwhelming majority of older workers were low-skilled significantly reduced their capacity to avoid skill mismatches. Demand-supply imbalances led to rising unemployment in most countries on a large and unanticipated scale. Moreover, the strategy to re-allocate some groups of the population from work to outside the labour market was frequently used to limit the labour supply (for example liberalising entitlements to early retirement and implementing non-employment related benefits). However, these changes have not been as well documented in empirical studies as those in developed economies.

The early withdrawal of older workers from the labour market results in declining of the effective retirement age, which is on average five years lower. Possible main reasons behind early retirement developments are: the population's increased living standards (increased affluence and

higher incomes could have increased the demand for leisure), the incentives embedded in social security systems (the expansion of occupational pension schemes, voluntarily negotiated between employers and employees, financial incentives for early retirement embedded in public social security systems, including old-age pensions and other non-employment benefits) and imbalances in the labour market which put older workers at a disadvantage in competitions for jobs (*e.g.* Blöndal and Scarpetta, 1999b; Disney and Whitehouse, 1999; Gruber and Wise, 1999). Under the increasing dynamics of the labour market, inadequate flexibility of the old labour force might be considered as a factor of increasing relevance.

These labour market developments along with the predicted changes in the size and age composition of population and labour force show unfavourable shifts between the working-age population and the elderly population. Taking additionally into account that effective dependency ratios, based on the relation between inactive and active populations, are considerably higher than demographic dependency ratios, one can justify concerns about the financial viability of public pension systems and increasing interest in pension system reforms. Irrespectively of their logic (parametric vs. paradigmatic reforms after Rutkowski, 2002), they are dealing with incentives to stay longer in the labour market. However, under existing labour market structures, reduced opportunities in early retirement could lead to a rise in disability incidence and unemployment. Moreover, the removal of disincentives to work longer would significantly increase the supply of older workers in the labour market. It might be difficult to absorb this increase in countries with high structural unemployment (see *e.g.* van Dalen and Henkens, 2002). Therefore, changes in the old-age pension system need to be combined with other income-support programmes and to be included into more broad-based reforms of the labour and product markets (see *e.g.* Blöndal and Scarpetta, 1999b; Taylor, 2002; van Dalen and Henkens, 2002).

In fact, declining economic activity of older workers has been predominantly perceived from the perspective of threats put on pension and welfare systems. Considerations on comprehensive or strategic approaches, which aim at integrating older workers in the labour market, as well as at closing down options to early exits, have been implemented only in a few countries (Austria, Finland and United Kingdom, see

Taylor, 2002). Furthermore, existing employers' attitudes towards older workers would limit the effects of measures stimulating their higher labour market participation[6].

Additionally, older workers might be negatively affected by technological progress, which erodes their technology's specific human capital. They could also have some difficulties in adapting to new work patterns. To sum up, new policies to encourage older workers to stay in employment often do not coincide with reforms aimed at improving working conditions for older workers and increasing their employment prospects (Taylor, 2001, from van Dalen and Henkens, 2002).

4. Family and work

Another principal labour market change, being of high relevance for population reproduction, is increasing employment of females. Despite cross-country differentials female labour force participation has been on the rise, especially in countries where it was low. But existing labour market inequalities by sex (in respect to wages, occupational segregation, job security and unemployment threat) confirm that women are facing remarkable difficulties in the process of labour market integration. Women's weaker position of women in the labour market does not result from differences in human capital between men and women. It can be attributed to the existing cultural and structural contexts *(e.g.* Palomba, 2002; Pinelli, 2001; Leira, 2002; Liefbroer, Corijn, 1999). Women's participation in paid job results in their dual roles – as workers and as care providers in the family. Different patterns of labour force participation, especially of women aged 25-34, reflect the possibilities to combine work and family duties, first of all after childbirth, which are strongly related to labour market and social policies.

[6] Research among employers carried out in several European countries has shown that they still do not consider older workers a force to be reckoned with. Few employers are inclined to recruit older workers due to a perceived lack of appropriate skills, a truncated payback period on training, and rules governing company/occupational pension schemes. On the contrary, many employers prefer laying off older workers first when firms downsize their labour force instead of implementing programmes to retain and retrain them (Taylor, 2002). Moreover, employers perceive increasing labour costs as one of the most important effects of labour force ageing, due to the fact that wages increase more with age than productivity.

Irrespective of different patterns of an evolution of women's participation in the labour market of the EU and CEE countries up to 1989, combining family duties and labour force participation is difficult in majority of European countries. It is not only related to implementation of policies aimed directly or indirectly at reconciling work and the family (development of services substituting home work, provision of domestic services, flexibility of working hours, the system of leaves, the availability of pre-school childcare services, etc.). It is also affected by the perception of men's and women's societal roles (e.g. Pinelli, 2001; Palomba, 2002; Leira, 2002). Despite increasing involvement in employment, childcare and housework are still mostly women's duties. Under the gender inequalities women experience, the weak legal protection against of women's discrimination and changes in the labour market which are not in favour of the family and childbearing (increasing competition, pressures on labour market flexibility, destandarisation of jobs and career paths) one can expect that women would adjust to these labour market requirements by giving priority to their professional commitments. Declining propensity to marriage and especially declining fertility may be also regarded as effects of women's startegies to cope with the structural difficulties related to the labour market (see also Sobotka in this volume).

The issue of increasing women's involvement in paid job has been yet predominantly discussed in terms of combining family and work by women, mainly due to norms and stereotypes on men's and women's social roles women and also to existing labour market structures which support a double role of women to different extent (*e.g.* Palomba, 2002, Liefbroer, Corijn, 1999, Leira, 2002). There is increasing evidence that more 'family friendly' labour market regulations, which concern working parents rather than working mothers, weaker structural and cultural conflicts coexist with higher fertility (*e.g.* Pinelli, 2001; Knudsen, 2002; Palomba 2002; Leira, 2002; Muszyńska 2003). Since, female labour participation appears to be an irreversible phenomenon, and the increasing competition and uncertainty in the labour market require much more effort to participate in paid job, reconciliation of family and work for both men and women under the reformulated framework of the state-family duties seems to be a crucial issue in debates on social policies under new economic performance and demographic regime.

The renewed emphasis on children and the family, considered as an issue of high importance for the demographic perspectives in Europe, depends on changing perception on a value of the family for self-realisation (van de Kaa, this volume). However, it is also conditioned upon the support the family could receive. It seems that without deep changes in structural context one cannot expect that younger generations of females will change their attitudes towards combining family and employment obligations. On one hand, profound shifts in work patterns (temporary jobs, part-time jobs, fragmentation of work and timing of work) could facilitate family and work. On the other, the changing nature of employment from a structured work-life and work-environment to a self-managed, more flexible and personal career under increasing uncertainty needs more effort to be invested in the labour market by both men and women. So, the professional and family life become more incompatible and - in result - affect family related decisions not only of females but also of males.

Existing family policies and policies aimed at reconciliation of the family and work reflect the different models of the welfare state and different views on the family. Even the social- democratic model of the welfare state, with the state interventions aiming at substitution of the provisions of the free market and guarantees of equal access to the same services, employs the concept of the weak male breadwinner regime (Leira, 2002). Increasing women's involvement in paid work coupled with existing and anticipated changes in the labour market justify needs not only for policies encouraging changes in gender relations but also for reformulating of the work-family issue within a framework of the welfare state, in which a focus on double role of women will be shifted to consider women and men as both breadwinners and carers and sharing societal roles (Leira, 2002, 22). Reconceptualisation of that issue needs, however, a change of a concept of the welfare state. The arrangements between the welfare state and the family in respect to responsibilities for care should be based on the family with working parents instead of the family with working mothers.

The structural adaptation to new demographic regime and labour market developments is also important from the view of the care provision for different population groups. Increasing demand for care for elderly is related also to sharing responsibilities between men and women, between

the state and the society. Defamilisation of care, suggested in the reformulated welfare state model, means the reconceptualisation of the care provision being largely a family and private obligation to becoming an important public responsibility (Leira, 2002, 36).

5. Conclusion

The discussion presented is in the line with some opinions expressed while debating these subjects. Both population and labour force ageing require adaptations in economic and social structures, and also in the labour market (see *e.g.* Avramov and Mašková, 2002; Hoskins, 2002; van Dalen and Henkens, 2002). It is, among others, related to the labour market behaviour of the older workers and pension system reforms.

Declining economic activity of older workers and its effects on pension and welfare systems is up to now perceived primarily as the macro level problem. However without strategic approaches, which aim at integrating older workers in the labour market by increasing their adaptability to labour market requirements and stimulating employers to employ older workers, one cannot expect that measures taken up to keep them in the labour market policies will be effective.

Policies stimulating labour market participation of older workers should be considered within a framework of the broad economic and social policy reforms needed to adapt to population ageing, the labour force decline and the ageing labour force. All relevant actors from different levels should be involved.

Also reconciliation of work and family should be placed within a broader framework of sharing responsibilities between the state and the family, based on the family with working parents and taking into account the life-course perspective. That perspective refers to a lifecycle approach to labour market participation, both men and women, in order to identify the underlying trends, recognise the changing needs of people as they age, form the family and care for children, the elderly and family members in needs.

Both issues discussed in the paper require deep structural and cultural adaptations. The labour market developments lead to the ‘work-life

challenge', which is becoming increasingly important in debates on economic performance, labour market policies, population changes and social policy. From that perspective not only ageing seems to be a challenging social and economic issue. Also reconciliation of work and family including gender relations might be considered as a challenge the European societies are facing with.

References

Avramov D. and M. Mašková, 2002, *Active Ageing in Europe,* Strasbourg: Council of Europe.

Blöndal S. and S. Scarpetta, 1999a, The retirement decisions in OECD countries, Eonomics department working paper no. 202, OECD, Paris.

Blöndal S. and S. Scarpetta, 1999b, Early retirement in OECD countries: the role of social security systems, OECD Economic studies no. 29, 1997/II, Paris.
Disney R.F. and E.R. Whitehouse, 1999, Pensions plans and retirement incentives, Social protection discussion paper, World Bank, Washington D.C.

Eurostat, 2001, Regional labour force in the EU: recent patterns and future perspectives", Statistics in Focus. General Statistics, Theme 1-2/ 2001.

Franco A., S.Jouhette, 2002, Labour Force Survey. Principal Results 2001, EU and EFTA Countries, Statistics in Focus, Population and Social Conditions, Theme 3 –19/2002, Eurostat.

Franco A., L.Blöndal, 2002, Labour Force Survey. Principal results 2001. Candidate Countries, Statistics in Focus, Population and Social Conditions, Theme 3 –20/2002, Eurostat.

Gruber J. and D.A. Wise, 1999, *Social Security Programs and Retirement around The World,* University of Chicago Press for National Bureau of Economic Research.

Hoskins I., Active ageing and health: from the evidence to policy and practice, paper presented the 2nd workshop on "Ageing, Intergenerational Solidarity, and Age-specific Vulnerabilities" under the NIEPS project, September 27-28, The Hague, 2002.

Jacobs T. (ed.), 2002, The Impact of Policies on Family Formation and on Division of Labour, report from the 2nd workshop on "Gender Relations, Family Building and Patterns of Work" under the NIEPS project, November-December 2001, Oudenaarde, Belgium, CBGS-Werk-document 2/2002.

Kuijsten A. and K.P. Strohmeier, 1997, Ten Countries in Europe: an Overwiev, in: F.X. Kaufman, A. Kuijsten, H-J. Schulze, and K.P. Strohmeier, *Family Life and Family Policies in Europe, volume I: Structures and Trends in the 1980s*, Claredon Press, Oxford.

Knudsen L., 2002, Input of Policy on the Timing of Child Birth and the Number of Children per Woman, in: Jacobs T. (ed.), The Impact of Policies on Family Formation and on Division of Labour, report from the 2nd workshop on "Gender Relations, Family Building and Patterns of Work" under the NIEPS project, November-December, Oudenaarde, Belgium, 2001, CBGS-Werk-document 2/2002.

Kotowska I.E., 2003, Older Workers in the Labour Market and Retirement Policies, Working Papers no. 9, Strasbourg: Council of Europe.

Leira A. , 2002, *Working Parents and the Welfare State. Family Change and Policy Reform in Scandinavia*, Cambridge.

Liefbroer A.C., M. Corijn, 1999, "Who, What, Where, and When? Specifying the Impact of Educational Attainment and Labour Force Participation on Family Formation", *European Journal of Population* 15 (1), 45-75.

Muszyńska M., 2003, Zróżnicowanie modeli rodziny w krajach europejskich w kontekście statusu kobiety w społeczeństwie (Different family models and women's social status), research report, Institute of Statistics and Demography, Warsaw School of Economics, Warsaw.

Palomba R., 2002, Reconciliation of Work and Family, Working Papers no.10, Strasbourg: Council of Europe.

Pinelli A., 2001, Determinants of Fertility in Europe: New Family Forms, Context and Individual Characteristics, in: A.Pinelli, H-J.Hoffman-Nowotny and B.Fux, *Fertility and New Types of Households and Family Formation in Europe,* Population Studies no. 35, Strasbourg: Council of Europe Publishing, 47-110.

Rutkowski M., 2002, The future of pensions in Europe: paradigmatic and parametric reforms in EU accession countries in the context of EU pension systems changes, paper presented at the 2nd workshop on "Ageing, Intergenerational Solidarity and Age-specific Vulnerabilities" under the NIEPS project, September 27-28, 2002, The Hague.

Taylor P., 2002, European Union Policy for Older Workers, paper presented at the 2nd workshop on "Ageing, Intergenerational Solidarity and Age-specific Vulnerabilities" under the NIEPS project, September 27-28, 2002, The Hague.

Van Dalen H.P and K.Henkens, 2002, "Early retirement reform: can it and will it work?", *Ageing and Society* 22, 209-231.

United Nations, *World Population Prospects. The 2000 Revision*. Vol.II: Sex and age distribution of the world population, New York, 2001.

Fertility behaviour in a period of economic pressures and growing opportunities: Hungary in the 1990s[1]

Zsolt Spéder

1. Starting points

It is in a social and economic context that individuals and/or couples decide to have children or not, and if so, how many and when. In the 1990s such far-reaching and rapid changes in institutions, structures and mentality occurred in Hungary and Central and Eastern Europe that they created a new system of conditions for individual and social action (Adamski *et al.*, 2003). Even if there is a certain temporal inertia in demographic behaviour, the radically new circumstances – as the various action theories hold – almost inevitably modified the earlier practice of childbearing (Leibeinstein 1976, cited in Andorka 1987, 63). There was a sharp decline in fertility in all countries of Central and Eastern Europe (Rychtařiková, 2001; Kamarás, 2003) and although the direction of this decline coincided with the European trends (Lesthaeghe and Moors, 2000), it is worth examining the particular circumstances characterising that region of Europe.

The countries of Central and Eastern Europe in transformation look on the industrial societies of Western Europe as an 'ideal' model to be followed; they want to catch up to them by adopting their institutions and integrating into their economy (Zapf, 1996). We can speak with justification of pattern following in the case of the institutional solutions and the manner of social integration, but there is also good reason to suppose that as the circumstances become more similar individual practice will also follow a comparable pattern. Perhaps this hypothesis can be extended to childbearing behaviour, but at first it is worth to have a closer look at the changing circumstances.

This study concentrates on a few characteristics of the transformation, particularly the economic one, which could play a role in modifying childbearing behaviour. The phenomena to be discussed can be linked to

[1] The research was supported by National Research and Development Fond (NKFP) No. 5/128/2001 on "The socio-economic context of demographic processes".

the period when the transition had not been yet completed and demographic behaviour was also in the process of change. For this reason, although certain aspects of the new relations emerging as a result of the transformation are indicated, it is not possible here to answer the question of what pattern Hungary and the countries of Central and Eastern Europe will follow.

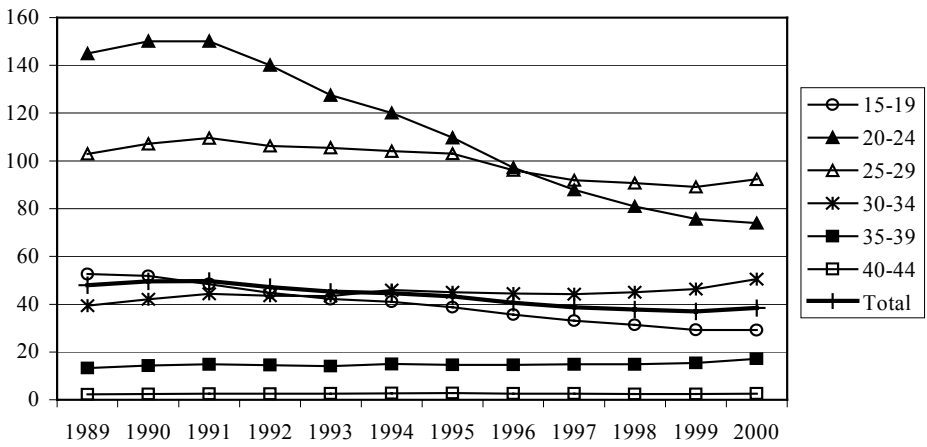
According to theoreticians, one of the most essential characteristics of the transition from socialism to capitalism in Central and Eastern Europe is the simultaneity, the fact that the transformation processes took place in parallel at the different levels of the system and in its various aspects (Offe, 1991; Zapf, 1994). This circumstance makes it very difficult to explore the mechanisms by which these changes operated. We are obliged to limit ourselves to one particular area. The paper deals with the transformation of the economic system and its intention is to stress a few aspects, which may be connected with the sharp drop in the number of births. Naturally, it is not thought that the structural relations in general and the system of economic conditions in particular directly determine demographic behaviour. However, it is assumed that they do have a supporting or inhibiting effect.

The decline in economic performance (recession), the growth of inequalities, the structural transformation of the labour market and its possible consequences will be examined in detail. Although the transformation of the system of family support or the housing system, not to mention such processes as the expansion of education, are important and relevant issues, they cannot be discussed in detail here. However, although greater emphasis will be placed on an analysis of the structural circumstances, a few phenomena of mentality related to the economic change will also be considered. The author is in agreement with those who consider that the modification of childbearing practice has been affected by the structural circumstances as well as changes in the system of norms and/or preferences (Lesthaeghe, 1998; Easterlin, 1987; Hobcraft and Kiernan, 1995).

The interpretation of the economic structural transformation influencing the practice of childbearing has been based on Kornai's theory of markets in disequilibrium (Kornai, 1980), and a number of references are made also to Easterlin's train of thought, concentrating on the circumstances of

the transformation (Easterlin, 1987). Kornai regarded the redistributive economies operating in socialism as market economies, but ones in which the market asymmetry is reversed. For example, while in Western Europe there was a surplus of labour and so employees competed for the favours of the employers, in socialism there was a shortage of labour (= full employment), meaning that the employers competed for the favours of the employees. *Mutatis mutandis,* this also applies to the goods market. Following Kornai, the transformation could be described as the transition from one state of disequilibrium of the market to the other state of disequilibrium. The new environment, as we shall see, means entirely different conditions for decisions on whether to have children.

Figure 1. Live births per 1000 women aged 15–44, Hungary, 1989–2000



Before examining the connections, it is worth considering a few characteristics of the trend in fertility in Hungary.[2] The decline in fertility began in 1992 and lasted until 1999. As the figure shows, cohorts contributed to the changes to different degree: the willingness to have children fell by half among those aged 20–24 years and clearly declined also among the 25–29 years group. However, an improvement could be observed in the propensity to have children among those over 30 years,

[2] This is shown in precise detail in a study by Ferenc Kamarás in this volume.

especially in the second half of the decade. The total fertility rate fell from 1.78 in 1989 to 1.33 in 2000.

2. Diminishing resources and growing aspirations

One of the most essential and generally observed phenomena of the transformation[3] is the deterioration of the material situation. The "transformational recession" (the decline in economic performance and the reduction of disposable income as a consequence of the transformation) afflicted all countries of Central and Eastern Europe alike. In Hungary it was not until 2000 that economic performance reached the level of 1989 and in the mid-1990s it was still only at barely over four-fifths of that level (see Table 1).

Table 1. Economic performance and the trend in inequalities in Hungary, 1989-2000

Year	GDP, 1989=100	Per capita Consumption, 1989=100	Decile ratio, 1/10
1987	-	-	4.6
1989	100	100	-
1990	96	96	-
1991	85	90	-
1992	82	90	6.0
1993	82	93	-
1994	84	93	-
1995	85	86	7.4
1996	86	83	7.5
1997	90	85	-
1998	95	89	-
1999	99	93	7.2
2000	104	98	7.6

Source: Statistical Yearbook of Hungary, Tóth, 2002.

On top of this, inequalities grew at the same time and the inflation rate was very high. This means that according to all conceptions in which material circumstances in the wider sense play a substantial part (Easterlin, 1987; Hobcraft and Kiernan, 1985; Lesthaeghe 1998; Macura *et al.*, 2000), more frequent deferment of childbearing must be

[3] The literature on the transformation from socialist to capitalist society uses the category of transition, but this is a central concept in the theory of demography. In this paper the social change occurring in the 1990s is called "transformation", while the term transition is reserved for demographic changes.

anticipated. In the period of transformation even without children it was very difficult for those concerned to maintain their standard of well-being and in many cases the arrival of children compounded (or would have compounded) these difficulties. Studies formulating the 'crisis hypothesis' emphasised the overriding nature of this factor (Macura *et al.*, 2000).

In taking stock of the forces acting against having children– following Easterlin's train of thought– it is worth taking into account not only the worsening living conditions but also the aspirations of well-being of the generations of childbearing age, their ideas of the 'good life'. In this context the important thing is not that women entering childbearing age in the 1990s had been socialised in 'consumer socialism'[4], but that by then a very large mass of unsatisfied consumer demand had 'accumulated'.[5] As Kornai has described so precisely, the goods market of the shortage economy was characterised by poor quality products, a limited range and unsatisfied consumer demand (Kornai, 1980). It is not by chance that according to a survey conducted in 1988, immediately before the change of direction (Andorka, 1990) the great majority of Hungarians (76%) considered that reform of the economic system was essential, while far fewer (39%) thought the same about the political system. Another survey found that in connection with the change of system 57% of the population expected an improvement in the economic situation, 50% expected growing equality and 48% less unemployment (Róbert, 1999). Following the transformation pent-up unsatisfied demand encountered an oversupply and abundance of goods. Although it appears to be contrary to the logic of economic recession, it is not surprising in view of the constellation that the level of saturation of consumer goods in the households grew despite the diminishing resources (Bukodi, 2000).[6] An examination of the transformation in the structure of consumption also throws light on the details. This shows that the share of spending on consumer durables grew at the expense of food (Harcsa and Vukovich, 2000). Clearly, further consideration needs to be given to these phenomena. Can it be assumed

[4] Meaning that they had ever higher consumer aspirations.

[5] This characterised the less consumer-oriented Czech or Polish economic systems even more than the Hungarian one.

[6] While, for example, in 1987 27% of households had an automatic washing machine, in 1999 this figure was 54%; the corresponding figures for VCRs were 1% and 43%, and for colour TV sets 25% and 89% (Bukodi, 2000).

that, in line with these conceptions giving priority to economic considerations (see for example Crimmins *et al.*, 1991), this spending on consumption and accumulation competed with the costs involved in bringing up children? Is it not possible that those concerned wanted to attain their goals of consumption and accumulation first, to make possible future childbearing? If we accept Easterlin's hypothesis that young people have children if their economic outlooks are suitable and the material conditions correspond to their aspirations, then we cannot be greatly mistaken in regarding unfavourable objective (recession) and subjective (aspirations) circumstances as causes of discussed phenomena. It is our hypothesis that the differentiated oversupply on the goods market that arose in the wake of the economic change raised aspirations, and did so at a time of diminishing opportunities. The logical consequence can be a growth in consumer tensions. The findings of our earlier research comparing the determinants of individual happiness and satisfaction with the level of living point in this direction (Spéder and Kapitány, 2002). According to this, general and material satisfaction is very substantially and significantly influenced[7] by so-called status tension arising from the difference between the actual situation and that considered eligible.

Unfortunately, we do not have suitable data on the change in preference system and so we must forego an analysis of the type made, for example, by Crimmins *et al.* (1991). However, the results of the Rokeach test used in general value studies show a change indicating a shift in the society's criteria of success. According to this research tradition, the emergence of values characteristic of the modern industrial societies began during the period of socialism, even if in a lop-sided way (Hankiss *at al.*, 1983). A smaller but perceptible shift occurred in the early 1990s (Füstös *et al.*, 1994). It is highly significant for our theme that the aim of 'material well-being' and a 'comfortable life' became more important within the system of preferences (Table 2). The shifts measured by the Rokeach test– like the objective criteria– indicate an increase in the significance of consumption and material prosperity.[8]

[7] The effect of "status tension" was more marked in linear regression than the effect of possessions or the income situation (Spéder and Kapitány, 2002, pp.168-169).

[8] Although we cannot give an answer in this paper, the question must definitely be raised of how these processes fit into the trends in materialist and post-materialist values. The processes in Hungary in the 1990s are very mixed but they seem to point rather towards the strengthening and continued existence of materialist values. We do not know whether this is because in socialism the change in values foreshadowed a later stage and

Table 2. Change in value preferences: change in the average ranking of selected elements of the Rokeach test between 1978 and 1993

Value orientation	1978	1982	1990	1993
Family security	5.2	5.3	3.9	4.6
A comfortable life, material well-being	8.2	8.7	6.8	6.5
A sense of accomplishment	7.7	8.2	8.7	9.6
Social recognition	8.8	9.2	11.1	10.5

Source: Füstös *et al.*, 1994.

All things considered, it can be concluded that in the majority of families the economic transformation brought a material shock, while at the same time the rise in material aspirations generated consumer tensions, creating unfavourable circumstances for having children. Other researchers have also pointed to the negative influence of the economic conditions which plays an important part in the argument of those who elaborated the 'crisis hypothesis' (Macura *et al.,* 2000).

3. Differentiation in the well-being

The 1990s brought not only economic recession and stagnation but also differentiation in material and well-being positions, a growth in social inequalities. It is an indication of how rapidly the latter process occurred that while in the early 1980s the income differences between the lowest and the highest deciles of society were four-fold, ten years later they were close to eight-fold[9] (see Table 1). Relative poverty spread at a similar pace and absolute poverty grew even more rapidly. Did and could all this have an influence on fertility behaviour? Unfortunately, any answer given to this question must be based largely on assumptions. Let us take as our starting point the thesis outlined above that the growth of inequality was also reflected in the changes in the financial position of families: the situation of families becoming more impoverished than average was more critical than could be deduced from the macro data, while these disorders (perhaps) did not appear at the other pole. In other words, if our assumptions are correct, the diminishing material resources affected the population in a differentiated way and could have acted also to differentiate fertility behaviour. *Ceteris paribus*, more children must have

with the attainment of the consumer society the match was restored, or whether it is an indication that, as in other European countries, here too there has been an increase in the number of persons with "mixed" values (Hradil, 2002, p.36).

[9] On the trend in income inequalities, see the study by Tóth (2002).

been born among the more prosperous, while the groups in a disadvantaged position must have had fewer children. We have no proof to show that the material differentiation had such an effect. In fact, a few known data seem to contradict this.

If we examine the different cohorts between the ages of 18–49 by their material situation, we find that those in the lowest income quintile have far more children than those in the highest quintile (Table 3).[10] However, it can also be seen from the data that with advancing age differences in the income situation have less influence on the number of children, although the effect does not disappear. Unfortunately, our data is *ex post* and so we cannot know the material status of the families were before (*ex ante*) a child was born. It must also be taken into account that although the birth of children reduces material well being because of the concomitant consumption needs, it can also encourage adaptation, for example by acquiring additional income.

The picture is modified if we examine the average number of children as a function of educational level, which is closely related to income-earning ability (Table 4). This factor has the advantage that under present conditions in Hungary– following a clearly distinct stage of life – it does not change substantially, and it certainly cannot be supposed that any change is the effect of having children;[11] consequently it is rather an *ex ante* type of variable. In the case of women the number of children appears to decline with higher levels of schooling, but in the 40–49 years age group there is no difference between those with secondary and higher education. In the case of men, those with secondary education have fewer children already in the generation in their thirties, while among those

[10] The data has been taken from the investigation on "Turning points of the life-course" conducted in 2001/2002. 16,394 persons aged 18–75 years were questioned about the main components of their demographic behaviour (for more details on the research, see Spéder, 2002b). The present study dealt only with those under 50 years because they are the ones whose childbearing practice has been most affected by the transformation. The differences in the number of units for the various criteria is due to the fact that interviewees did not answer all questions (*e.g.* income). We employed the concept of equivalent income (e=0.73), what is a well used measure for material well-being situation.

[11] Although there are examples of women using child care leave to follow further training.

aged 40–49 years the men with the highest levels of education have the most children.

The influence of the level of schooling can be seen even more clearly if the effect of the change of system is also included in the analysis (Table 5). We selected interviewees from the under 50 age group who did not have children before 1990 and others who had one child. We then examined the ways in which those who after 1990 had children and those who did not. Regarding the level of schooling, it is quite clear that in the case of women the highest level of schooling does not impede childbearing, and those who already had one child before 1990 were more likely than average to have another child in the period of transformation. The positive effect of a higher level of schooling could also be seen among men. Among both men and women who did not have a child, those with a secondary school certificate were present in above average proportion.

Table 3. Average number of children by income quintiles in different age groups and sex

Income quintiles	18–29		30–39		40–49	
	Women	**Men**	**Women**	**Men**	**Women**	**Men**
Lowest	0.94	0.70	2.21	1.80	2.41	1.84
2nd	0.79	0.38	1.85	1.56	1.97	1.67
3rd	0.44	0.23	1.80	1.44	1.84	1.80
4th	0.37	0.13	1.50	1.17	1.70	1.72
Highest	0.17	0.11	1.17	0.83	1.66	1.65
Average	0.54	0.29	1.77	1.36	1.94	1.74
N=	1681	1715	1274	1261	1542	1460

Source: "Turning points of the life-course" 2002, own calculations

Table 4. Average number of children by level of education in different age groups and sex

Education completed	18-29		30-39		40-49	
	Women	**Men**	**Women**	**Men**	**Women**	**Men**
8 grade	0.95	0.52	2.33	1.58	2.27	1.68
Vocational	0.75	0.28	1.83	1.35	1.94	1.71
Secondary	0.27	0.13	1.61	1.16	1.75	1.71
Higher	0.30	0.23	1.34	1.25	1.71	1.90
Average	0.39	0.26	1.74	1.32	1.92	1.73
N=	1987	2068	1412	1430	1709	1626

Source: "Turning points of the life-course" 2002, own calculations

Table 5. Distribution of types of childbearing dynamics by level of education and sex (>50)

	8 grades	Vocational school	Secondary	College/ University	Total (N=100%)
Men					
Had no children before 1990 and after 1990					
had no children	16.9	34,6	39.2	9.2	2415
had 1 child	16.3	41.2	32.5	11.1	505
had 2–3 children	18.9	41.4	23.0	17.1	492
Had a child before 1990 and after 1990					
had no more children	18.7	50.5	23.1	7.8	386
had more children	11.3	48.1	23.9	16.7	318
Total	16.7	38.7	33.7	10.8	4116
Women					
Had no children before 1990 and after 1990					
had no children	13.2	15.1	54.1	17.7	1704
had 1 child	13.0	28.7	39.2	19.0	630
had 2–3 children	21.7	27.5	32.5	18.3	578
Had a child before 1990 and after 1990					
had no more children	22.3	23.2	40.6	13.9	409
had more children	18.0	25.6	35.5	20.9	363
Total	15.9	21.3	44.8	17.9	3684

Source: "Turning points of the life-course" 2002, own calculations

Before formulating a final hypothesis on differentiation, it is worth to consider briefly an aspect that culminated in the 1990s and is characteristic of the whole of Central and Eastern Europe (UNICEF, 2001; Spéder, 2002a). Children were the great losers of the change of social and economic system in the region: their relative material position over the concerned period declined almost continuously, their risk of poverty doubled and rose to twice the average (Table 6). Expressed in broad terms, the loss of value of family support and the decline in work incomes of families with children lie behind this trend. Not only did the propensity to have children decline, but the situation of the children also deteriorated. Although the social groups in the worst position had higher than average fertility rates, the increase in the number of poor children could be derived just as well from the childbearing of adults above the poverty line or in a middle position. If the birth of children leads to poverty in the case of those in a lower middle position in society, could we be right in thinking that when making conscious decisions on having children, the desire to reduce these risks also plays a role, and moreover an inhibiting role?

Table 6. The proportion of poor persons in the different age groups between 1992 and 2000 (in %)
(poverty line: below 50% of the average equivalent income)

Age groups	Proportion of poor persons				
	1992	1994	1996	1997	2000
0–2	15.1	22.8	29.7	33.7	20.7
3–6	13.7	11.7	24.7	26.0	19.2
7–14	12.0	16.4	21.6	22.3	19.5
15–19	13.0	15.9	19.1	18.2	18.9
20–29	11.3	9.5	13.2	15.2	11.1
30–39	7.7	13.4	13.6	12.1	12.2
40–29	7.3	9.3	15.5	12.1	12.5
50–59	7.4	11.3	7.3	8.6	8.8
60–69	10.5	7.4	4.3	2.7	6.1
70+	11.1	9.1	8.9	4.3	5.3
Total	10.1	11.6	14.9	12.3	11.9

Source: own calculations, Hungarian Household Panel waves 1–6 (1992-1997), Szívósand Tóth (2000) op. cit. p. 54

Hopefully, we will have a better possibility for answering the above questions and comparing the *ex ante* and *ex post* income and material well-being situations after the second wave of the Hungarian "Generation and Gender" study, the "Turning points of the life-course". Three hypotheses can be formulated to explain why is it the well-to-do and those in a middle position who have fewer children:

The hypothesis 1:
Those in a relatively advantageous position did not have children or more children because their consumer aspirations[12] grew more than an average and/or the opportunities opening for them (career, accumulation of assets) required a greater than average investment of effort and time.[13] It cannot be excluded, for example, that those in an advantageous situation felt that the opportunity for acquiring wealth and a career is opening 'only now' and so they must postpone other things (including having children) to take advantage of it.

[12] This applies not only to consumption-accumulation spending but also to leisure time consumption.
[13] The research by Utasi on lawyers points in this direction (Utasi, 1999).

The hypothesis 2:
The fertility behaviour of those in a disadvantaged situation may perhaps be less rational[14] and/or the family policy benefits provided on a flat-rate basis may have acted as an incentive for them or may even have functioned as a stable source of livelihood.[15]

The hypothesis 3:
The general connections described as the starting point of this theme may have been the most characteristic of those with a middle level of income. Could they have been those who were able to maintain the two-earner family model without (more) children, who were able to adapt to the changed conditions? At the same time, if they did decide to have children there is a high probability that their children became poor. However, active adaptation intensifying the husband's earning activity cannot be excluded in their case either. It should not be forgotten that a disproportionately high share of the population is massed around the borderline dividing the poor from those with lower middle incomes and even the loss of a relatively small part of income can result in a change of the position.

It can be seen that there are far more questions than answers regarding the possible effects of the differentiation, and further research appears to be indispensable. Whatever the case, it is difficult to imagine that such a strong increase in differences would have had no effect on the relatively stable tendency of earlier decades, namely the homogenisation of the family model.

4. Possible influences of the transformation of the labour market

It is almost a commonplace in the literature of demography, economics and sociology that there is a cause and effect relationship between the declining willingness to have children and the increasing entry of women into employment. The explanation generally argues from women's growing willingness to enter employment, to their abandoning of earlier childbearing practice and the decline in the willingness to have children. But there are also conceptions, which see a common cause behind these

[14] This is suggested by a study made in 1996 of women giving birth outside marriage (Molnár *et al.,* 1998; Pongrácz, 2002).
[15] The latter hypothesis was formulated by Gyenei (1998).

two phenomena: the transformation of values, or the pressure of material circumstances. These approaches cannot be applied directly but only with certain modifications to the former socialist countries. In those countries full employment extended to women before the transformation. After the change of regime women's employment declined but at the same time the number of births also fell. This relationship between the two trends is not in line with the ideas outlined above. In what way did the contraction and structural transformation of the labour market create new conditions for those deciding on whether to have children, and what influences did the labour market transmit to its active or passive actors? Although it is not possible here to discuss the question in detail, I would like to draw attention to a few links.[16]

The labour market is a factor simultaneously integrating the economy and society, playing a central role in the distribution of occupational statuses and material goods among individuals and social groups and in articulation according to the life course. The description of its operation in sociological and economic terms can greatly help in understanding the trend in fertility. Only one approach is considered here, the theory of markets in disequilibrium, which we consider suitable for throwing light on why fertility declined in the countries of Central and Eastern Europe.

Although in limited form, the labour market also functioned as a mechanism of allocation in the redistributive economy based on state ownership, it differed fundamentally from the same institution of the market economy based on private ownership. According to Kornai's interpretation (Kornai, 1971; 1980), the labour market of the socialist system was characterised by such phenomena as 'undersupply', 'overdemand or shortage', and 'suction', while market economies can be characterised by 'underdemand', 'oversupply' and 'pressure'. According to this approach supply and demand are never in full equilibrium. But while in the labour market with an overdemand the supply side, that is, the employee has the upper hand ('the employers are trying to please the employees'), where there is surplus supply the reverse is true. For this reason, in the former case it is easy for the employee to achieve or impose concessions, and in the latter case the employer dictates the terms of employment and can pick the employee he or she wishes to have (Kornai,

[16] For a more detailed examination of certain influences of the labour market, see Spéder (2002b).

1980). Consequently, after the transformation, it was not simply that employees had to keep and protect their position in a drastically shrinking labour market due to the disorders inevitably arising in the period of transformation, but they had to face qualitatively different challenges.

The changes and transformations of the labour market described above could also have a far-reaching effect on people's attitude towards childbearing. Employees who previously had the upper hand found themselves in a defenceless position with less possibility to defend the demands arising from their family and parental roles, beyond the immediate interest of acquiring income. It is therefore very probable that in the labour market of the 1990s, harmonising family and work became much more difficult than it was in the redistributive economy characterised by shortage and intertwined with the second economy in the 1980s. To put it more precisely: there is much less chance that the considerations of the former will prevail. So while in the days of planned economy employees could defend their individual interests within certain limits, employees in the market economy based on private ownership are in a much weaker bargaining position.[17]

The best way to obtain an authentic picture of the influence of the labour market is from investigations comparing the labour market position of women who have children and women who have not (Hoem and Hoem, 1988; Witte and Wagner, 1994). In our analysis we should have use another method.[18] The data on vital statistics give information on the former: we know that between 1990 and 2000 the proportion of women with children among the employed fell from 80% to 60%, while the proportion of housewives rose from 10% to 15% and that of mothers receiving benefits on child-care leave increased from 7 to 12%. Since 1993 the question of unemployed persons with children has also become relevant. In 1993, 9.18% of all births were to unemployed mothers and in 2000 this figure was 6% (Spéder, 2002, 14.). The impact of the transformation of the employment system is most precisely reflected in the indicators that can be formed from joint use of the data on vital statistics and the Labour Force Survey. In this way we can count the

[17] Their position is even weaker than that of their Western colleagues because the trade union movement there is generally broader.

[18] We will have the opportunity to study the causal influences of the labour market for life course events only after the second and subsequent waves of the "Turning points of the life-course" survey.

number of births per thousand women of reproductive age in a particular category. Unfortunately, the criteria for categorisation are not identical in the different surveys. For this reason childbearing women had to be combined into three groups,[19] and the birth rates per thousand women were calculated for these groups (Table 7).

Table 7. Live births per 1000 women in the 15–39 age group by economic status, 1993–2000 (%)

Year	Employed	Child-care allowance and fee	Inactive	Total
1993	76.45	51.35	45.52	63.02
1994	78.37	50.82	43.93	62.21
1995	76.37	48.11	43.64	60.34
1996	73.08	38.74	44.74	56.88
1997	69.37	34.65	46.08	54.53
1998	68.57	36.90	44.26	53.77
1999	66.63	49.01	38.67	53.50
2000	69.34	47.54	40.10	55.39

Source: own calculations

What basic tendencies can be read from the standardised data? The first striking finding is that the number of children born per 1000 women of childbearing age (15–39 years) classified in the same labour market category quite clearly declined for all statuses. Secondly, the timing and extent of the decline differed according to activity statuses.

The fertility of employed woman has slowly but steadily declined. In 1993 there were 76.4 children for every 1000 women in this group and by 2000 this went down to 69.3. The low point of the trend was reached in 1999 with 66.6 children. This means that the proportion of employed women among all childbearing women went down not only because of the high proportion of active women in the labour market, but also because of the decrease in the willingness of employed women to have children. It is interesting to note that this phenomenon was not yet observable between 1993 and 1994. The decrease did not start until 1994, then grew stronger after 1995 and lasted until 1999. In 2000, however, on average three more babies were born to every 1000 employed women than in the previous year.

[19] For a discussion of the methodological difficulties of comparison see Spéder, 2002b.

Because of the limitations of our data system, besides employment positions we could only distinguish two further social statuses: those who stay at home, rear their children and receive some sort of maternity benefit, and that of women in the "other" category. The fertility behaviour of those receiving child-care benefits is drastically different from those in employment (Table 7). Their willingness to give birth did not decline until 1995 but it did not increase either, remaining stable, around 50 children per 1000 women. This means that those women who had begun their careers as mothers by the early nineties then had a second or even a third child. After 1995 this indicator dropped by 5 and reached the lowest point in 1997 at 34.6 live births per 1000 women. The figures for the period 1995–1997 (around 35–38) are different from the figures both in the preceding and the succeeding periods. In 1999 there was a powerful increase (to 49), which seemed to stabilise at around that value in the following year. In 2000, there were 47 live births per 1000 women receiving maternity benefits in the childbearing age group (15–39 years). The changes in the trend can be clearly linked to concurrent changes in family policy. The so-called "Bokros package" of austerity measures introduced in 1995 also included the extensive transformation of the system of family support, which obviously had a negative impact on the willingness to have children, deferring plans to have a second or subsequent child. Following the change of government in 1998 the fertility behaviour of women receiving maternity benefits resembled the practice of the period before 1995. All this gives sound grounds for assuming that those living on maternity benefits respond most sensitively to family policy changes.

The category of women in 'other status' having children is very heterogeneous – unfortunately we had to group together the unemployed, dependants (*e.g.* students), housewives and inactive earners– so we must exercise great caution when stating anything concerning them. The development of the number of live births for 1000 inactive women is rather uneven and seems to be fluctuating. At the same time it can be seen that the maximum variances are below the level measured in the other two economic status groups. But if we take into account the consequence of the expansion of higher education in Hungary which occurred in the same period, namely that the majority of women in their early twenties are involved in formal education, it is not unrealistic to assume that there

was an increase in the number of women having children among housewives and/or the unemployed, opting 'voluntarily' or 'under constraint' for motherhood instead of the role of employee.

Are the above statistical facts (also) reflected in a change of values, whether concerning job security or harmonising roles in the labour market and in the family? Unfortunately, secondary analysis of the available data can serve only as a basis for conjecture or for formulating further questions. The three modules of the ISSP were titled "Family", and among others they dealt with women's possibilities for harmonising their functions as employees, mothers and housewives. In view of the length of the period examined (1988–2002) and the impact of the transformation on practically all aspects of life, it can be assumed that there must have been a (far-reaching) change also in the mentality of those affected. However, the figures in Table 8 indicate only minor shifts. Nevertheless, if we take into consideration that the statements used in the investigation in many respects expressed social roles in a way that has permanent validity and spans different systems, and also that the values and attitudes they imply may become frozen in the life-course, the shifts of 10% can be regarded as substantial. The results indicate that the modern view of roles gained further ground in the period studied. But this process was not even: in the early years of the transformation it was rather the opposite trend, the traditional view of gender roles that strengthened. Although the individual statements may have acquired different emphasis in 1988 when there was still full employment, and in 2002, a time when the labour market was shrinking, there appears to be an increase in the proportion of both men and women who accept women's double role. At the same time there is an unchanged and very high proportion (half of the women and men) of those who regard running the household ("Performing the tasks of the housewife…") as being exclusively the function of women. Meanwhile, it can also be seen quite clearly that women's economic activity is indispensable. A minority of women agrees with the traditional separation of roles. A certain counter-trend could be observed in this respect and also regarding role conflicts in the early 1990s: the traditional view seemed to be spreading among both women and men. For a short period there was increasing acceptance of the view that the family and children suffer from women's employment. But in understanding the figures it must be remembered that 1994 was barely one year after a period of mass unemployment. Could it be that this social experience transformed

attitudes with adaptive purpose? Or can the break in the earlier trend perhaps be attributed to the fact that those for whom women's employment was a constraint imposed by socialism with the change of system turned towards the model they prefer? A more detailed analysis may provide an answer, but it can certainly be noted that the change of system induced processes transforming values and attitudes, although as far as we know at present these have had a temporary effect.

According to the findings of an empirical survey conducted in Hungary in 1998, harmonising work and family involves many problems and causes tension and anxiety in those concerned (Molnár, 1998; Pongrácz, 2002b). The investigation found that two-thirds of the population concerned, regardless of whether the respondents were men or women, feel tension in harmonising their tasks arising from employment and their obligations involved in child-raising (Table 9). Unfortunately we have no comparable data from the 1980s, but it seems likely that far fewer people felt tension in harmonising the two roles at that time.

Table 8. Percentage of respondents agreeing with the given statements, by gender, 1988,1994, 2002

Statements	Year	Gender	
		Women	Men
It can be important to have a job, but what most women really want is a home and children *(Female destiny)*	1988	74	78
	1994	71	68
	2002	63	57
Being a housewife can be just as self-fulfilling for a woman as a paid job *(The role of housewife)*	1988	-	-
	1994	56	54
	2002	52	53
The husband's task is to earn money, the wife's is to look after the household and the family[20] *(Sex roles)*	1988	39	50
	1994	53	59
	2002	37	42
A working mother can have the same warm and close relationship with her children as a mother who is not working *(Female role conflict: child)*	1988	61	40
	1994	53	54
	2002	68	69
Family life suffers if the wife works full-time *(Female role conflict: family)*	1988	60	66
	1994	66	59
	2002	55	50

Source: ISSP 1988, 1994, 2002, own calculation

[20] In 1988 the translation in the questionnaire was slightly different from that of later versions and in our opinion endangers the comparison: "The husband's task is to earn money, the wife's is the household and family".

Table 9. Concerns in Hungary about harmonising work and motherhood, population aged 18–40

Do you worry about	Yes	No	Does not apply	Total (N=)
whether… it is harder for women with children to find work than for childless women, or men?	44.2	22.1	33.7	1468
…whether you will be able to return to your workplace after time spent on child-care leave?	40.5	20.3	38.9	965
… that being absent because your child is sick weakens your job security?	41.4	20.6	37.9	1492
… that employers are quicker to shed women giving birth?	36.0	23.6	40.4	1368

Source: "Család és munka" [Family and Work] NKI, 1998.

Summing up, it can be said that the shrinking of the labour market and its restructuring have created new conditions for (female) employment and childbearing. This could be seen both in the objective processes and in attitudes. The willingness of women in employment to have children has quite clearly declined, there have been sharp breaks in that of women living on maternity benefits, following changes in the system of family supports, while that of women of other status has fluctuated. But it also seems likely that up to the mid-1990s there was an increase in willingness to give birth among the unemployed and housewives. Many different, often contradictory, trends were observed in gender roles and ideas regarding the family.

5. Structural dynamics and the instability of life situations

The economic conditions emerging in the wake of the transformation cannot be compared to the golden age of the industrial society in the 1960s. What has taken shape in Central and Eastern Europe is a market economy dependent on global markets and with a low growth capacity. This social and economic structure could be identified by the neutral concept of 'dynamic' (Leisering and Walker, 1998) or by Beck's much debated category of 'risk society' (Beck, 1986). The follow-up studies[21]

[21] As far as we know, the German GSOEP is one of the oldest follow-up studies in Europe and is continuing (1st wave: 1984). The British BPPS was launched in 1991, and the ECHP in 1992. In Central and Eastern Europe the Hungarian HHP (1992–1997) is the only socio-economic panel study (Tóth, 1995).

which have come to the fore in Europe in recent decades help to give a more detailed picture of the influence of income positions and the labour market on demographic behaviour.

Authors making use of the follow-up studies without exception point out that behind the relatively low changes in the economic structure of the developed societies there are very intensive micro-level (individual and household) dynamics (Duncan, 1984; Godin *et al.*, 1999; Bradbury *et al.*, 2001). While the macro level time series show lasting, stable inequalities, hardly any change in the proportion of the employed or in the unemployment rate, it can be clearly demonstrated with the panel method that from year to year the positions observed are occupied by different persons.

The same applies to the countries in transformation. The dynamics of two structural statuses discussed in this paper– the income position and economic activity– can also be observed quite clearly. The turnover in income positions between 1992 and 1996 gives a good idea of the conditions in Hungary. Table 10 shows where persons belonging to a particular income category in 1992 were found four years later, in 1996. At first sight it can be observed that less than half of the individuals retained their original category (those who did not change their position can be found in the diagonal). The exchange is the most intensive between neighbouring classes, but greater shifts are not unusual either.

Although not so intensive, the movement between that they 'dropped out' of the system of benefits for the unemployed. The most stable population is that of the inactive. This is not surprising since the great majority are pensioners. But even here many (15.7%) returned to the labour market. Much more intensive movement is found if a distinction is made between the employed and the self-employed, if the inactive category is handled separately, or if the employed are grouped on the basis of their strata situations (Kolosi and Sági, 1998). It is not possible here to discuss the details, but it is worth noting that there were significant shifts in other dimensions too. These include the savings, assets or housing situation (Kolosi and Sági, 1998, Spéder, 2002a), or the agrarian economy and household plots (Spéder, 1996).

Table 10. Distribution of the 1996 income positions according to status in 1992 (exit ratios)

Income position 1992	Income position 1996						
	<50%	**50–75%**	**75–100%**	**100–125%**	**125–150%**	**>150%**	**Total**
<50%	45.5	28.8	14.8	5	2.1	3.7	9.4
50-75%	16.7	43.5	25.4	9.6	1.9	2.9	24.8
75-100%	9.8	27.7	39.3	12.7	3.2	7.2	25.6
100-125%	4.2	17.8	24.5	23.5	15.2	14.9	17.9
125-150%	6	11	18.2	19.8	20.7	24.4	8.6
>150%	6.6	6.1	11.4	15.6	16.7	43.5	14.1
N	565	1101	1088	609	357	593	4314
%	13.1	25.5	25.2	14.1	8.3	13.7	100

Source: HHP 1992–96, own calculations.

Table 11. Distribution of economic activity in 1996 by position in 1992 (%) (exit ratios)

Status in 1992	Status in 1996			Total
	Employed	**Unemployed**	**Inactive**	**N=**
Employed	73.1	4.1	22.7	1747
Unemployed	47.9	3.6	42.5	188
Inactive	15.7	2.4	81.9	1904
Total:	43.4	3.5	53.0	3839

Source: HHP 1992–96, own calculations.

These changes in position were generated by economic developments (establishment, expansion, decline and termination of enterprises), and by demographic events. Comparative analyses have also shown that in the period of transformation the turnover in positions was much more intensive than is usually found in industrial societies (Macthig and Habich, 1996; Müller and Frick, 1996; Habich and Spéder, 2000), which is understandable since the privatisation, the reorganisation of enterprises, the restructuring of institutions, etc., eliminated and created a multitude of jobs. As we have reported earlier, the transformation increased inequalities, but at the same time the more intensive turnover occurring at a micro-level indicates that individual positions have become changeable or 'fragile', advantageous positions can be lost, and it is possible to break out of disadvantageous positions. The boundaries of income classes and economic statutes can be crossed, the shifts between categories are

continuous and very dynamic, which in another approach can also be interpreted as the instability of life situations.

Could these circumstances have an influence on fertility behaviour, and if so, what is the nature of that influence? If it is true that decisions on having children are made for the long term, and that more carefully considered decisions can be made if the circumstances are predictable, we can definitely assume that in periods of instability in the 1990s they are less favourable.[22] It is not only the deteriorating circumstances that play a role in making decisions but also the possibility of rapid change. The argument put forward here is in line with the Rajnan's model that states that growing instability of incomes encourages the postponement of decisions to have children (Ranjan, 1999). It could be added that the instability characterises the whole of the economy and society- the labour market, assets, savings and welfare situations, and affects all economic and social statuses. In periods of economic growth the uncertainty can generate general optimism, since the most probable outcome is an upswing (Róbert, 1999). But if the instability goes together with recession, as was the case during the transformation, people can become pessimistic even when this is not justified. This means that above average dynamics at microlevel under recessionary conditions as an external condition does not favour decisions involving long-term commitments, such as having children (Ranjan, 1999).

6. Conclusion

The study aims to draw attention to certain possible influences of the economic transformation on fertility. The analysis is focused on key phenomena accompanying the transformation, economic recession, the growth of inequalities, restructuring of the labour market and the greater than usual intensity of dynamics. The conclusion reached is that the period of transformation created very difficult circumstances for decisions on having children. Naturally, we are aware that many other factors shape such decisions and it was not possible to confirm whether the 'suction' or 'pull' effects from the economy in the 1990s were the strongest. Although the major emphasis was placed on economic logic in our argument, we do not think that it comes before all else, nor that what we have to say

[22] Of course, we have no information on the dynamics of incomes or the labour market under socialism, but we have many reasons to believe that they were much lower.

belongs solely in the 'economic narrative' (van de Kaa, 1996). We have to agree with van de Kaa that only a theory comprising many different considerations can give a comprehensive explanation.

References

Adamski W., P.Machonin, W.Zapf and J.Delhey (eds.), 2003, *Structural Change and Modernization in Post- Socialist Societies*, Krämer-Verlag, Hamburg.

Andorka R., 1987, *Determinants of Fertility in Advanced Societies*, Meuthen, London.

Andorka R., 1990, "1988 utózöngéi – mit kell meghallani 1990-ben" (Echoes of 1988 – What Should Be Heard in 1990), *Közgazdasági Szemle* 10.

Beck U., 1986, *Risikogesellschaft. Auf dem Weg in eine andere Modern*, Suhrkampf, Frankfurt am Main.

Bradbury B., S. P. Jenkins, and J. Micklenright, 2001, The Dynamics of Child Poverty in Seven Industrialised Nations, in: *The Dynamics of Child Poverty in Industrialised Counties*, Cambridge University Press, 92-134.

Bukodi E., 2000a, *A háztartások tartós javai* (Durable goods in households), KSH.

Bukodi E., 2000b, "Ki, kivel, miért (nem) házasodik?" (Who, with whom, and why (not) get married?, Manuscript.

Crimmins E.M., E. A.Easterlin, and Y. Saito, 1991, "Preference changes Among American Youth: Family, Work and Goods aspiration 1976-86", *Population and Development Review* 17, 1l5-133.

Goodin R .E., B. Headey, R. Muffels and H.-J. Dirven, 1999, *Real Worlds of Welfare Capitalism*, Cambridge University Press.

Easterlin E.A., 1987, *Birth and Fortune. The impact of Numbers on Personal Welfare*, The University of Chicago Press, Chicago.

Duncan G.J., 1984, *Years of Poverty, Years of Plenty*, Ann Arbor: Institute for Social Research, University of Michigan.

Füstös L. and L. Szakolczai, 1994, "Kontinuitás és diszkontinuitás a kelt-közép európai átmenetben" (Continuity and discontinuity in East-Central European Transition), *Szociológiai Szemle* 1, 57-90.

Gyenei M., 1998, "A stratégiai gyerek" (The Strategic Child), *Népszabadság,* 14 November 1998.

Habich R. and Zs. Spéder, 2000, "Continous changes – differing variations. Income distribution and income dynamics in three societies", *Review of Sociology*, Special Issue, 14-39.

Hankiss E., R. Manchin, L. Füstös and A. Szakolczai, 1983, Interactions between Socio-Economic Factors, Ways of Life, and Value Orientations. Working Papers Center for Value Sociology, Institut of Sociology, Budapest.

Harcsa I. and G.Vukovich, 2000, A magyar társadalom a jelzőszámok tükrében (hungarian society in the miror of social indicators), in: Kolosi J., A.Tóth, G.Vukovich (eds.), Social Report 2000.

Hobcraft J. and K.Kiernan, 1995, Becoming a parent in Europe, in: EAPS-IUSSP, *Evolution or Revolution in European Population*, 27-64.

Hoem B. and J.M.Hoem, 1988, "The Swedish Family. Aspects of Contemporary Developments", *Journal of Family Issues* 9 (4), 397-424.

Hradil S., 2002, Vom Wandel des Wertwandels – Die Individualisierung und eine ihrer Gegenbewengungen, in: F. Glatzer *et al.* (eds.), *Sozialer Wandel und gesellschaftliche Danerbeobachtung*, Opladen: Leske + Budrich, 31-48.

Kamarás F., 2003, „A termékenység irányzatai és jellemzői Európában" (Trends and directions of fertility in Europe), in: Zs. Spéder (ed.), *Család és néprsség – itthon és Európában. Budapest:Századvég*, 19-64.

Kolosi T. and M. Sági, 1998, Hullámzó háztartások (Fluctuating households), in: Kolosi-Tóth-Vukovich (eds.), *Társadalmi riport 1998*, Budapest, Tárki.

Kornai J., 1971, *Anti-equilibrium*, North Holland, Amsterdam,

Kornai J., 1980, *Economics of Shortage,* North Holland, Amsterdam,

Kornai J., 1993, „Transformációs visszaesés: Egy általános jelenség vizsgálata a magyar fejlődés példáján." (Transformational Recession: A General Phenomenon Examined through the Example of Hungary's Development), *Közgazdasági Szemle* 40 (7-8), 569-599.

Leibeinstein H., 1976, *Beyond the Economic Man. A New Foundation of Microeconomics,* Harvard U.P., Cambridge.

Leisering L. and R. Walker, 1998, *The Dynamics of Modern Societies. Poverty, Policy and Welfare*, Polity Press, Bristol.

Lesthaeghe R., 1995, The Second Demographic Transition – An interpretation, in: A.Mason and A.-M.Jensen (eds.), *Gender and Family. Change in Industrial societies*, Clarendon Press, Oxford, 17-62.

Lesthaeghe R., 1998, "On theory development and applications to the study of family formation", *Population and Development Review* 1, 1-14.

Lesthaeghe R. and G. Moors, 2000, "Recent trends in fertility and household formation in the industrialized world", *Review of Population and Social Policy* 9, 121-170.

Macthwig G. and R. Habich, 1996, Berufs- und Einkommensverläufe in Deutshland nach der Vereinigung, in: R. Hauser *et al.* (eds.), *Soziale Sicherheit für Alle?*, Opladen, Leske+Budrich.

Macura M., S. Y. Mochizuki and J. L. Garcia, 2000, Europe's fertility and partnership: selected developments during the last ten years, Paper presented at the FFS Flagship Conference.

Merton R. K., 1980, *Social Theory and Social Structure*, Free Press, Glencoe.

Molnár S.E., T. Pongrácz, F. Kamarás and L. Hablicsek, 1998, „Házasságon kívüli szülések" (Births out of Wedlock), KSH Népességtudomány Kutatóintézet, Kutatási jelentések, No. 61.

Molnár S.E., 1998, „A munkahely biztonsága és a gyermekvállalás konfliktusai a 18-40 éves nők körében." (Conflicts of job security and childbearing among women aged 18-40), *Demográfia* 2-3, 206-232.

Müller K. and J. Frick, 1996, Die Äquivalenzeinkommensmobilität in den neuen und alten Bundesländern 1990-1994, in: R. Hauser *et al.* (eds.), *Soziale Sicherheit für Alle?*, Opladen: Leske + Budrich.

Offe C., 1991, „Das Dilemma der Gleichzeitigkeit. Demokratisierung und Marktwirtschaft in Osteuropa", *Merkur* 4, 279-292.

Offe C., 1994, *Der Tunnel am Ende des Lichts. Erkundunden der politischen Transformation im Neuen Osten*, Frankfurt am Main, Campus.

Pongrácz M., 2002a, Birth out of Wedlock, Demographic Research Institute Working Papers on Population, Family and Welfare, No.2, Budapest.

Pongrácz M., 2002b, A család és a munka szerepe a nők életében (The role of the family and work in the life of the woman), in: Pongrácz M., Zs.Spéder (eds.), *Népesség, értékek, vélemények*, KSH Népesség-tudományi Kutatóintézet, Kutatási Jelentések 73, 123-138.

Ranjan P., 1999, "Fertility Behaviour under Income Uncertainty", *European Journal of Population* 1, 25-43.

Róbert P., 1999, Gritting the Teeth - Embittered with the Change of System, in: Zs.Spéder (eds.), *Hungary in Flux,* Krämer, Hamburg, 87-116.

Rychtařiková J., 2001, The second demographic transition and the transformation of fertility and partnership in Czech Republic and other eastern European countries, Paper presented in Bad Herrenalb, June 2001.

Spéder Zs., 1996, Wenn man mit dem Einkommen nicht auskommt – Unfreiwillige Änderungen des Konsumverhaltens ungarischer Haushalte während der Transformation, in: W. Glatzer (Hg.), *Lebensverhältnisse in Osteuropa*, Frankfurt, Campus, 159-176.

Spéder Zs., 1998, "Poverty Dynamics in Hungary during the Transformation", *Journal of Economics of Transition* 6 (1), 1-21.

Spéder Zs., 1999, The Twin Faces of Poverty in Present-day Hungary, in: Zs. Spéder (ed.), *Hungary in Flux. Society, Politics and Transformation*, 57-84.

Spéder Zs., 2002a, *A szegénység változó arcai* (The changing faces of poverty), Budapest, ARTT-Századvég.

Spéder Zs., 2002b, Fertility and structural change in Hungary, Demographic Research Institute Working Papers on Population, Family and Welfare, No.4, Budapest.

Spéder Zs. and B. Kapitány, 2002, A magyar lakosság elégedettségének meghatározó tényezői nemzetközi összehasonlításban (Determinants of satisfaction in Hungary using the perspective of comparison), in: Kolosi T., I.Gy.Tóth, G. Vukovich, (eds.), *Társadalmi Riport 2002*, 162-172.

Tóth I. Gy., 1995, "The Hungarian Household Panel: Aims and Methods", *Innovation* 8 (1), 106-122.

Tóth I. Gy., 2002, Jövedelemeloszlás a kilencvenes évek Magyarországán (Income distribution in Hungary during the 90s.), Unpublished PhD Thesis.

UNICEF, 2001, A Decade of Transition. Regional Monitoring Report, No.8.

Utasi Á., 1999, *Ügyvédek.* (Lowyers), Budapest, Új Mandátum.

Zapf W., 1994, „Die Transformation in der ehemaligen DDR und die soziologishe Theorie der Modernisierung", *Berliner Journal für Soziogie*, Band 4, 295-305.

Zapf W., 1996, „Die Modernisierungstheorie und unterschiedliche Pfade der gesellschaftliche Entwicklung", *Leviathan* 24 (1), 63-77.

Van de Kaa D. J., 1996, "Anchored Narratives: The Story and Findings of Half a Century of Research into the Determinants of Fertility", *Population Studies* 3, 389-432.

Witte J. C. and G. G.Wagner, 1994, *East German Fertility: Demographic Transition and Democratic Change.*

Population determinants of the labour market in Poland

Janusz Witkowski

1. Demographic factors influencing the labour market situation

There is a close interrelationship between population development and the labour market. On the one hand, the population situation is an important factor, determining the labour force and its structure, and on the other hand, the situation on the labour market may influence significantly the basic demographic processes (short-term processes as well as the long-term ones). This interrelationship is essential in the demographic, social and economic situation of Poland during the transition period. In the present article, we shall focus on the role of the demographic factor in the changes on the labour market during the transition. However, we shall specify those features of the population, which potentially remain in the closest relationship with the changes on the labour market.

Considering the demographic factors influencing the situation on the labour market, they are reflected mainly in the size of the labour force. The labour force is influenced by many factors, which may be presented synthetically in three groups: an increase in the population of working age, additional activation of population and deactivation of population. The situation of the population, deciding whether and how quickly the number and the structure of the population of working age as the potential human resources change, has the greatest importance often determining other groups of factors. The example of many European countries shows that the increase or decrease in human resources has often significantly influenced the economic policies as well as the labour market and the migration (especially immigration) policies of particular country (Punch and Pearce (eds), 2000, vol.1). Poland belongs to the group of countries where a constant increase in the population of working age takes place, although its dynamics changes over time (Witkowski, 2000). The 1990s are a good illustration of the impact of this factor on the labour market in Poland. In this period, the number of people of working age, and, consequently, the number of economically active population, was changing year by year (the difference between the number of people entering the labour market and the number of people finishing their economic activity). This demographic pressure on the labour market –

unparalleled in Europe on this scale as regards absolute numbers – has had particular consequences not only for the social (early retirement) and economic policy, but also for the situation on the labour market.[1]

The remaining factors influencing the labour force, *i.e.* additional activation of population[2] or economic deactivation[3] usually limit the influence of the demographic factor. However, in particular circumstances their meaning may be significant, as is the case in Poland.

The territorial differentiation of the working age population contributes remarkably to the labour force. It applies not only to different number of population in the spatial approach, but also to the differentiation of the dynamics of the working age population size and its structure. This may be essential for local or regional labour markets. Poland is just such a case. Large dynamics of the population of working age in some areas exceeds possibilities of creating workplaces, which usually leads to a high level of unemployment.

[1] In the years 1991-2000, the population of working age in Europe increased by about 11 million, in this 1.82 million in Poland (about 17%). In Europe, there was no country where the absolute increase in potential human resources was higher than in Poland. In comparison with the decade of 1981-1990, this increase amounted in Poland to 7.4%, but in Ireland 18.4% and in Slovakia to 10.1%.

[2] This group includes people coming back to work after a break (*e.g.* women after maternity leave, people after longer illness), people who decided to start working at a later period of their lives (*e.g.* women after bringing up children) as well as pensioners and the disabled after some period of deactivation. In the 1990s, activation was supported by the possibility of getting the unemployment benefit at the beginning of the transition period or the health benefit after introducing the healthcare system reform. These new categories of economic activation from the 1990s may be described as an institutional activation.

[3] Some number of working age people suspend or quit their work. The most common reasons are health reasons, formally connected with superannuating. However, in the transition period, some new forms of economic deactivation appeared, connected with difficulties in maintaining enterprises. The most important form of such deactivation was early retirement, and in recent years, the pre-retirement and social security pre-retirement benefits (only the latter now). Much more often now the economic activity is suspended by the youth due to continuation of education. All these examples of economic deactivation of the population influence the decrease in the labour force.

The third aspect of the population situation influencing the labour market is the qualifications and occupational structure of the population. As a result of rising educational aspirations of young people and changes in the education system also the structure of the population's qualifications and available occupations are changing. The influence of such changes on the labour market is unquestionable, the evidence of which is the vastly different threat of unemployment depending on the population's education and qualifications. However, insufficient changes in the structure of the population's qualifications may cause additional difficulties on the labour market. This is due to the rapid change in the requirements of the economy and the labour market considering the employees' qualifications under the circumstances of the current economic development, dynamics of technological changes and increasing role of knowledge for economic growth. As a result not only is the adjustment of labour supply and labour demand important in terms of quantity but also in terms of quality (considering qualifications and occupational structure of the population). The latter is an important element balancing the labour market and a factor determining the situation on the labour market.

After all, the population's features also determine the situation of particular groups on the labour market and the extent of the unemployment threat applying to those groups. The most meaningful illustration of the interrelationship between the population and the labour market is the immense differentiation of unemployment depending on sex, age, place of living and other social and demographic features.

These demographic factors affecting the labour market are often observed in social and economic practice, especially in periods of a rapid growth of the working age population and significant pressure on the labour market. They are also a subject of studies and analyses not only at the regional or national level, but also in international approaches. It is worth mentioning here that the Council of Europe has appointed a group of experts within the European Population Committee to the analysis of demographic trends and the labour market in Europe (Punch and Pearce (eds), 2000).

2. Basic trends on the labour market in the transition period

Considering basic tendencies on the labour market during twelve years of the transition of Polish economy, we can identify three periods: 1990-1993, 1994-1997 and 1998-2002. The difference between them lies not only in trends, but also in the reasons for the changes (Table 1).

In the first period (1990-1993), two trends were most important for the situation on the labour market: a rapid decrease in employment and unexpectedly large increase in unemployment. The largest decrease in employment took place in the first two years of transition and amounted to almost 2 million people (1261 thousand in 1990 and 713 thousand in 1991). For the economy, this was a shocking decrease in labour demand, not restored by the present time. It had its consequences for the size of unemployment, which increased by 1 million people each year and at the end of 1991 the number of unemployed reached the level of 2156 thousand people.

Those first two years of transition were the toughest ones and they still have repercussions for the situation on the labour market in Poland. This evaluation does not change by virtue of the fact that already some necessary changes in the structure of employment had started (according to the type of activity, sector of property or employment status), presaging modernisation of the labour market. However, in the years 1992-1993 the situation on the labour market worsened, although these negative trends (further decrease in employment, increase in unemployment) were not so strong. The number of employed decreased by 654 thousand in this period and the number of unemployed rose by 734 thousand.

Considering general trends on the labour market, the first four years of transition were in some sense similar: they were characterised by an unprecedented decrease in the number of jobs and a rapid increase in unemployment. In consequence, in the years 1990-1993 the number of employed fell by 2628 thousand, and the number of unemployed rose to 2890 thousand.

The first symptoms of improvement in the labour market situation during the transition period appeared in 1994 and this trend kept up until 1997. The most important achievement of that period was the increase in labour

demand. In the years 1994-1997, employment rose by 1111 thousand, which gives 278 thousand people a year. It is worth mentioning that the prevailing part of the increase in jobs (568 thousand) occurred in this period in the agricultural sector. This outflow of the unemployed to the agriculture resulted in the decrease in unemployment by 1063 thousand to the level of 1827 thousand at the end of 1997. Considering the improvement of the situation on the labour market, the years 1994-1997 were the most beneficial in the whole transition period.

Table 1. Employment and unemployment in Poland in the transition period (as of the end of year)

Years	Employment		Registered unemployment	Changes in the number of		
				employed		unemployed
	Total	out of individual farming		total	out of individual farming	
	in thousands					
1990	16485	12745	1126	-1261	-1103	+1126
1991	15772	12122	2156	-713	-623	+1030
1992	15357	11772	2509	-415	-350	+353
1993	15118	11531	2890	-239	-241	+381
1994	15282	11536	2838	+164	+5	-52
1995	15486	11550	2629	+204	+14	-209
1996	15842	11712	2360	+356	+162	-269
1997	16229	12099	1826	+387	+387	-534
1998	16174	12044	1832	-55	-55	+5
1999	15919	11789	2350	-255	-255	+519
2000	15480	11406	2703	-439	-383	+353
2001	14988	10914	3115	-492	-492	+412
2002*	14858	10784	3217	-130	-130	+102

* Primary data

Source: CSO Reporting and Estimates

Dynamics of the economic growth in the years 1994-1997 and positive changes on the labour market did not indicate that the situation might worsen in the following period. Nonetheless, as early as in 1998 employment decreased by 55,000 and the number of unemployed raised by 5,000. In the years 1999-2002 even more negative changes took place. In fact, one may talk about a shock on the labour market, which has

continued to the present time. In the years 1998-2002 the number of unemployed increased by almost 1.4 million and the employment fell by almost 1.4 million people.

As a result, the employment level in Poland at the end of 2002 was by over 2.9 million lower than before the beginning of the transition period (end of 1989). Therefore it is not surprising, that in recent years, the number of unemployed has been rising so rapidly. The year 2001 was especially unfavourable, as employment decreased by almost half a million, and the number of the unemployed went up by 412 thousand.

Unfortunately, the negative trend on the labour market from the first period of transition returned in the years 1998 – 2002. If the beginning of the transition was a period of expected worsening of the situation on the labour market, even in view of the recession, recent years have been much more surprising and their interpretation is much more difficult owing to the economic growth occurring during this time. This assessment does not change due to the fact that in 2002 the pace of the unemployment increase slowed; nevertheless at the end of that year, the number of unemployed exceeded 3.2 million people (unemployment rate reached 18.1%).

Are these changes on the labour market consistent with the trends on the European labour market or are they country-specific?

3. Features of the labour market in Poland in comparison with the European labour market

A few negative features distinguish the labour market in Poland. At the time when the situation in Poland worsened, resulting in a new wave of unemployment, in the EU countries positive trends on the labour markets were evident. They included positive changes in the number of jobs as well as in unemployment level. It is enough to say that in the years 1995-2001 in the EU over 12 million of new jobs were created, which means an average yearly increase in employment of 1.1% in the years 1995-1999 and 1.8% and 1.2% in the two following years respectively. In the years 1995-1999 employment increased mostly in Ireland (5.8%), and then in Luxembourg (2.9%), Spain (2.6%), the Netherlands (2.4%) and Finland (2.2%). In the years 2000-2001 the most rapid growth of employment was

recorded in Luxembourg and finally Sweden joined the above-mentioned group of countries (Employment in Europe, 2002, 7, 163-199).

A significant success in creating new jobs in the EU resulted in the decrease of unemployment. In the years 1995 to 2001 the number of unemployed in the countries of the European Union decreased by over 4 million. Therefore, the second half of the 1990s was a period of positive changes on the labour market in the EU countries. One cannot say this about the labour market in Poland. Although in the years 1994-1997 the trends were positive also in Poland (increase in employment and decrease in unemployment), starting from 1998, the trends have reversed. In the years 1998-2001 the number of the employed in Poland (according to LFS, used for international comparisons) decreased by over 1.1 million, *i.e*. 7.2% and the number of unemployed increased by 1.5 million, *i.e.* by 89.3%. These opposite trends on the labour markets in Poland and in the EU countries are the main negative distinguishing feature of the Polish labour market. Changes, similar to the Polish ones were noted only in some countries of Central and Eastern Europe, but not on such a large scale.

The EU countries assumed achievement of a very ambitious goal of reaching an employment rate of 70% by the year 2010. In a few countries the indicators have already been exceeded (Denmark, UK, Sweden), but in the whole European Union this rate (calculated in relation to the population aged 15-64) reaches nearly 64%, showing systematic increase since 1995. In Poland, the employment rate amounted to about 54% in 2001, showing systematic decrease in recent years. Within the EU member states, a similar level of employment (still higher than in Poland) occurs in Italy (54.8%), Greece (55.4%) and Spain (56.3%). Among the candidate countries, this indicator is lower than in Poland only in Bulgaria (50.7%)

So the utilisation of the labour force in Poland is much lower than in the EU countries. This refers especially to the men, for whom the employment rate in Poland in 2001 amounted to only 59.2%, which is much lower in comparison with 73% for the EU countries. Even in Italy, where the male employment rate is the lowest among the EU countries, it is still much higher than in Poland. Among the candidate countries, an employment rate lower than in Poland occurs only in Bulgaria, while in

Lithuania and Slovakia it remains at a similar level (62.8%). For women, the employment indicator, which in Poland amounts to 48.4%, is lower than the average for the EU (54.9%); however it is still higher than in some member states (Greece, Italy, Spain). Also in this case the rate is lower only in Bulgaria (47.9%), and in Hungary it is only slightly higher (49.6%) than in Poland.

As the comparative analysis shows, it is not only the employment rate that is low in Poland now. In spite of high unemployment, the economic activity rate of the population also differs from the most European countries (Zgierska, 2002). In 2001 the labour force participation rate in Poland amounted to 66.1% (for the population aged 15-64) and was lower than the European average (69.2%). It is still worth emphasising that in some of the EU countries this rate is lower than in Poland (Belgium, Greece, Spain, Italy, and Luxembourg). Among the candidate countries only in Bulgaria and Hungary the economic activity rates are lower than in Poland. There are no indications of any improvement of the situation in Poland (Witkowski, 1998, 74-78). The male economic activity is also low. In 2001, it amounted to 71.6% and was the lowest in all EU Member States and candidate countries, except for Bulgaria and Hungary. The level of female economic activity in Poland looks more optimistic. The female economic activity rate in 2001 amounted to 60.8% and it was higher than the average for EU countries (60.2%) and for six other candidate countries. However, in some candidate countries the female economic activity is higher than in Poland.

A characteristic feature of the Polish labour market is also the high unemployment. The unemployment rate in Poland is almost two and a half time higher than the average for the EU countries. In 2001, the unemployment rate in Poland, according to LFS, amounted to 18.4% for the population aged 15 and more. None of the member countries has so high unemployment level. Even in the countries with the highest unemployment level (Spain 10.6% and Greece 10.2%) it is much lower than in Poland. Moreover, in the EU countries the unemployment rate is decreasing (from 10.5% in 1994 to 7.4% in 2001), when in Poland it has been raising systematically for a few years (from 9.9% in 1998 to 18.4% in 2001). Among the candidate countries only Bulgaria and Slovakia have higher unemployment rate.

Another negative feature of the labour market in Poland is very high youth unemployment (15-24 years). In 2001, the youth unemployment rate in Poland exceeded 41%. This scale is not observed in the EU countries, as the youth unemployment rate for these countries amounted in 2001 to 14.9%. Among the member countries, the highest unemployment rate occurs in Greece and Italy, but remains at a level slightly over 28%. Only in Spain in 1994 did the youth unemployment rate exceed 40% and in Italy it amounted for some years to over 33%. Moreover, in none of the candidate countries is the unemployment level higher than in Poland; a similar level is observed only in Slovakia and Bulgaria (about 39% in each).

Some specific features of the Polish labour market are also: relatively small territorial and occupational mobility, a small range of non-standard and flexible forms of employment (one of the signs of the labour market rigidity), low unemployment fluctuation (difficulties with outflow from unemployment) and the problems with the labour market in the rural areas.

The labour market in rural areas has a dual nature. On the one hand, there is a high unemployment level recorded among the non-agricultural population (it is higher than among the urban population). On the other hand, there is low official but high hidden unemployment among the farmers. Only one half of the population employed in farming earns its living mainly or only on farming, and the remaining part has other income sources. Most of the Polish farms produce mainly for their own needs. This situation results from the fact that a significant part of the population employed in farming runs small farms. Moreover, individual farmers are low qualified and are often of older age, what strongly limits their occupational and territorial mobility. These features of the agricultural sector will undoubtedly play a significant role in the further transformation and modernisation of it, which is needed because of the still high employment in agriculture (the percentage of the employed in agriculture is in Poland higher than in the candidate countries and the Member States, except for Romania). There is no doubt that this market segment is a particular characteristic of Poland.

The Polish labour market's biggest problem is mass unemployment. What has brought about such high unemployment level and what was the role of the demographic factor?

4. Role of the demographic factor in unemployment

An analysis of factors determining basic trends on the labour market, especially the changes in the number of the unemployed, has been carried out for each of the periods separately (Table 2). This will allow capturing the essence of the changes occurring on the Polish labour market in the transition period. However, one should start from stating that in the years 1990-2001 the working age population increased in Poland by over 2 million. This is a change on a significant scale, which influenced the situation on the labour market, especially in the case of unemployment. But was it the main factor generating unemployment in Poland?

Considering the first transition period, the years 1990 to 1993, the increase in the population of working age amounted to 443 thousand. It was the smallest increase in the labour force in all the three specified periods of transition. Simultaneously, a large deactivation of population occurred, resulting from early retirements and disability pensions. This deactivation was larger than the additional non-demographic activation, which also occurred in this period. Introducing unemployment benefit for all of the unemployed, without any limitations, encouraged people not interested in work to register as unemployed, which resulted in a false increase in the economically active population. As a result, the increase in the number of population of working age was alleviated by the processes of population deactivation, so the increase in labour force in this time was not so strong as might have been expected and did not play a deciding role in generating mass unemployment in this period.

However, the unemployment on a large scale occurred to be a consequence of other factors. Above all, 1990-1993 was a period when economic recession was observed. The gross domestic product (GDP) decreased by 8.4%, especially in the years 1990-1991 (-14%). Even some improvement in the economic situation in the years 1992-1993 (+6.5%) did not result in an increase in labour demand. At the same time mass restructurisation and privatisation of the companies started, which generally caused a decrease in the number of jobs. This happened in the

public sector (-3.2 million), especially in industry and construction (-1.7 million). Slow development of the service sector in this period was not able to balance the number of jobs lost in other sectors.

The second period, covering the years 1994-1997, was much better for the labour market, although it was not an effect of more gentle influence of the demographic factor. On the contrary, the working age population at this time increased by over 680 thousand, so this increase was higher than in the previous period. Also the economic deactivation occurred on a smaller scale than in the beginning of the 1990s. In spite of this fact, the number of unemployed in this period decreased considerably. So the demographic factor did not play a negative role.

Table 2. Selected determinants of the labour market, Poland, 1990-2001

Years	Changes in the number of		Increase in population of working age	Early retire-ments and other deactivat ion	Additional activation (*e.g.* unemployment benefits, health benefits for the unemployed)	Changes of GDP (in %)*
	employed	unemployed				
	in thousands					
1990–1993	-2628	+2890	443	1857	1676	-8.4
1994–1997	+1111	-1064	682	1023	388	+27.4
1998–2001	-1241	+1289	905	1214	357	14.6
1990-2001	-2758	+3115	2030	4094	2421	+33.7

* Real dynamics of GDP for periods of four years *i.e.* calculated at the base of the year preceding the reference period.
Source: Own calculations based on the data of the Central Statistical Office.

Due to the relatively large increase in the number of jobs it was possible to minimise the negative influence of the demographic factor on the labour market in the years 1994-1997. Subsequently, this was an effect of dynamic economic growth. GDP increased during this time by 27.4%. Absorption of employment reached the relatively high level of 0.3% (the increase in employment due to the increase in GDP by 1%), which may lead us to the conclusion that it was a period of moderately pro-employment economic growth. These positive trends on the labour market occurred in the conditions of further structural transformation of the Polish economy. Nonetheless, their character was different than in the

previous years, which was reflected mainly in the dynamic development of the private sector (increase in the number of the employed by 2.3 million), especially in the services (+582 thousand) (Table 3).

In the years 1998-2001, the labour force increased by over 900 thousand. However, in that period, the processes of economic deactivation became more intensive. This time, it was mainly a result of introducing the pre-retirement benefits, which caused the withdrawal from the labour market of 480 thousand people not registered as unemployed. As a consequence, the demographic pressure on the labour market at that time was also alleviated and played much less important role than it might have been expected.

Table 3. Changes in employment by economic sector, Poland, 1990-2001

Economic sectors	**1990-1993**	**1994-1997**	**1998-2001**
	in thousands		
Total	-2628	+1111	-1241
Farming	-1032	+429	-71
Industrial	-1679	+100	-921
Services	+83	+582	-249

Source: Own calculations based on the data of the CSO.

In spite of the limited labour force increase in the years 1998-2001 unemployment grew quite sharply. It happened independently of the economic growth observed at that time (GDP rose by 14.6%). Anyway, the economic growth was significantly lower than in the previous period and, additionally, it showed symptoms of shrinkage (in 2001 the increase in GDP amounted to only 1%). Moreover, the economic growth did not have a pro employment nature and did not support the creation of new jobs. In that period the restructurisation and privatisation continued, especially in industry, and some reforms were implemented, resulting further in a decline in the number of jobs. At the same time, the financial situation of the companies has worsened and as a consequence they started to reduce costs through, for example massive layoffs of workers. It affected not only the public, but also the private sector (decrease in employment by 51,000, mainly in 2001) and the service sector (-250

thousand, mainly in the years 2000-2001). The decline in the labour demand and the significant reduction in the number of jobs took place in those sectors of the economy, which were most active in creating new jobs in the previous periods. So impeding the private sector development, especially in the case of small and medium enterprises, which also act in the service sector, as well as intensive restructurisation of some sectors led to negative trends on the labour market resulting in a further increase in unemployment (Table 4).

Table 4. Changes in employment by the sector of property, Poland, 1990-2001

Sector of property	1990-1993	1994-1997	1998-2001
		in thousands	
Total	-2628	+1111	-1241
Public	-3216	-1207	-1190
Private	+588	+2318	-51

Source: Own calculations based on the data of the CSO

Summing up, one can state that the most important factor of the increase in unemployment in Poland in the years 1998-2001 was the decrease in labour demand resulting from intensive structural transformation of the Polish economy, non-employment economic growth and insufficient rate of economic growth. In fact, the inability of Polish economy to create a sufficient number of new jobs in the period of a few last years is the main reason for the difficulties on the labour market. Thus, the increased labour force, issuing from the specific demographic situation in Poland, played much less important role, although it did not support improvement of the situation on the labour market.

So what is the future going to be like? The most precise available information refers to the coming demographic changes.

5. Demographic conditions for the future changes on the labour market

The future changes on the labour market will be determined by factors influencing labour supply and labour demand. There is no doubt that the ability of the economy to create new jobs will have a crucial significance for improvement of the labour market situation.

From this point of view, the most important factor will be the rate of the economic growth. However, the rate itself will not be sufficient. Another important thing is the character of the growth from the perspective of employment. In many countries even slight economic growth contributes to new jobs creation. However, in Poland according to many experts, the growth would have to amount in the present situation to at least 5% to cause positive changes on the labour market. It seems then, that when stimulating the economic growth, it is necessary to consider the fact, whether and to what extent it can support the creation of vacancies. That is why the macroeconomic policy considering the needs of the labour market is so important. If we are going to intensify the economic growth mainly through promotion of those economy sectors which require modern technology and through promotion of large enterprises, where are often equipped with labour force reserves, or through the increase in productivity, even a significant pace of economic growth will not help in creating new jobs. The possibilities of creating new jobs in small and medium business enterprises acting especially in the service sector, which are still neglected, are much wider. This means that large reserves exist in these segments of economy: not only the reserves which support development, but also those enabling larger increase in the number of jobs. As we should remember, the share of people employed in services in Poland is much lower than in the EU and other developed countries.

Not only the necessity of reducing unemployment but also the forecasted increase in the labour force should be an incentive to create new jobs. The main factor influencing the size of the labour force is the demographic situation, and especially the pace and the direction of the changes in the working age population. As we already know, the demographic situation in Poland is specific in comparison with other European countries. For over ten years it has been characterised as a large increase in the working age population. This increase has been greater in the last decade, reaching its highest level in the current five-year period.

In the years 1996–2000, the real increase in the population of working age amounted to 1 million, and in the current five-year period (2001-2005) it will probably reach the level of nearly 1.2 million people. From this point of view, the culmination falls on the years 2001-2003, when the average yearly increase will exceed 260 thousand. Starting from 2004, the working age population is going to increase slightly slower; however in

2004 it will still exceed 200 thousand and in 2005 it will amount to over 170 thousand. So, this period will be quite difficult for the Polish labour market, as the absorption of the demographic increase of labour force will require that the economy should create about 200 thousand new jobs each year.

Only in the following five-year period, the increase in the working age population will get visibly smaller, and after 2010, even a decrease in the number of this category of population is expected. In the entire period 2006-2010, an increase in working age population by about 260 thousand is forecasted. Considering demographic factors, this period will be less demanding for the economy, as the pressure on creating new jobs due to the increase in labour supply will be much smaller.

Beyond 2010, the trends in potential human resources will reverse totally. As early as in the years 2011-2015, the decrease in the size of the working age population by 800 thousand, and in the following five-year period (2016-2020) a further decrease by over 1.2 million people, are expected. In the second decade of the present century, the Polish labour market will probably have to face quite different problems, *i.e.* how to activate the population and how to develop the economy under conditions of decreasing labour supply. We can suppose that such a scenario of demographic processes will be a chance for solving or diminishing the problem of unemployment in Poland. But this is a perspective for only a few years.

However, also at that time the demographic situation will influence the labour market and the macroeconomic policy. It is important, then, to remember from now on about the demographic conditions of the labour market in the perspective of the next and following decades of the present century. Moreover, Poland will become a member of the European Union, with all the consequences for the labour market. This time we should not be surprised by the already known fact that in ten years the population of working age will systematically go down. I think that it is worth noting the actions of the EU countries in this field since they are already experiencing difficulties connected with a labour force shortage and the population ageing.

References

Demographic Change and Labour Market: What are the Challenges we are Facing? Background paper contributed by the ILO to panel 1, UNECE Ministerial Conference on Ageing, Berlin, 11-13 September 2002.

Employment in Europe 2002, Recent Trends and Prospects, European Commission, Employment and Social Affairs.

Golinowska S., and M.Walewski (ed.), 2000, *Tworzenie zatrudnienia a restrukturyzacja ekonomiczna* (Job Creation and Restructuring), CASE, Warsaw.

Government Population Committee, 2000, *Sytuacja demograficzna Polski, Raport 1999-2000 (Demographic Situation of Poland, Report of 1999-2000)*, Warsaw.

Kotowska E.I., Witkowski J., 1996, "Labour market developments and demographic processes in countries making transition to a market economy", *Studia Demograficzne* 1-2 (123-124), 55-81.

Kryńska E., 2001, *Dylematy polskiego rynku pracy* (Dilemmas of the Labour Market in Poland), IPiSS, Warsaw.

Punch A., and D.L. Pearce (eds), 2000, *Europe's Population and Labour Market beyond 2000*, Vol. 1, Population Studies 33, Council of Europe Publishing, Strasbourg.

Witkowski J., 1995, Unemployment in Poland in the period of transition, in: M.Jackson, J.Koltay and W.Biesbrouck (eds.), *Unemployment and Evolving Labor Markets in Central and Eastern Europe*, Aldershot, Avebury, 123-182.

Witkowski J., 1998, „Potrzeba kreowania miejsc pracy na XXI wiek" (The need for job creation in the XXI century), *Kontrola Państwowa* 3, NIK, Warsaw, 74-81.

Witkowski J., 2000, Population and Labour Force Projections in Poland, in: A.Punch and D.L.Pearce (eds.), *Europe's Population and Labour*

Market beyond 2000, Vol 2: *Country Case Studies*, Population Studies No. 34, Council of Europe Publishing, Strasbourg.

Witkowski J., 2002, Rynek pracy w Polsce. Szanse i zagrożenia (The labour market in Poland. Opportunities and threats), Inauguration lecture delivered in the Economy and Administration College in Kielce, October 2002 (forthcoming).

Zgierska A., Aktywność zawodowa ludności w Polsce i w krajach Unii Europejskiej (Economic activity of the population in Poland and the EU countries), paper for the conference "Demographic processes in the EU countries – comparisons with Poland", October 19-20, 2002, Krynica Morska, Poland.

Démographie de la pauvreté : la Russie des années 90

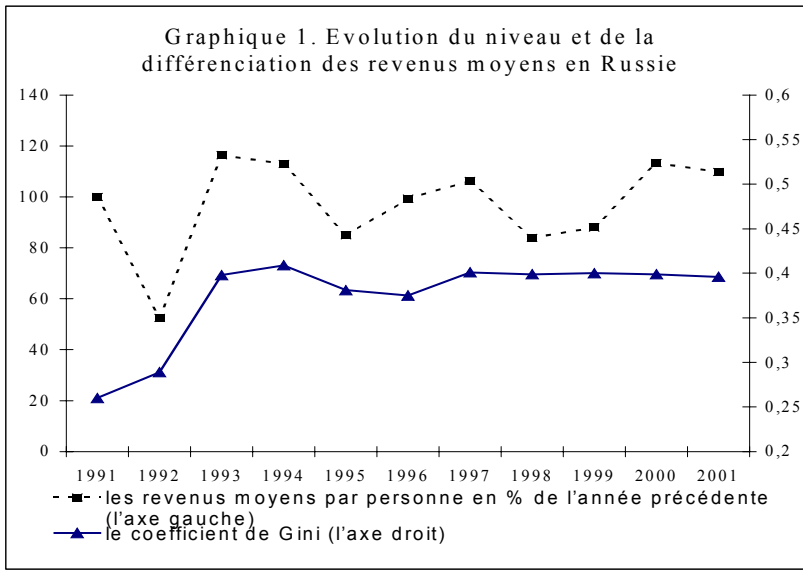
**Patrick Festy, Irina Kortchaguina,
Lilia Ovtcharova, Lidia Prokofieva**

1. Introduction

Les bouleversements survenus dans les années 90, quand la Russie est entrée dans une période de profondes transformations socioéconomiques, ont eu pour principales conséquences le profond changement du marché du travail et de la structure des revenus : le chômage est devenu un fait social, la différenciation des revenus et des salaires s'est accentuée, la pauvreté s'est developpée à une large échelle.

Du point de vue des experts, l'augmentation de la pauvreté est due à la fois à la récession économique durable, avec une chute profonde du niveau des revenus de la population, et à l'essor de leur différenciation (Graphique 1).

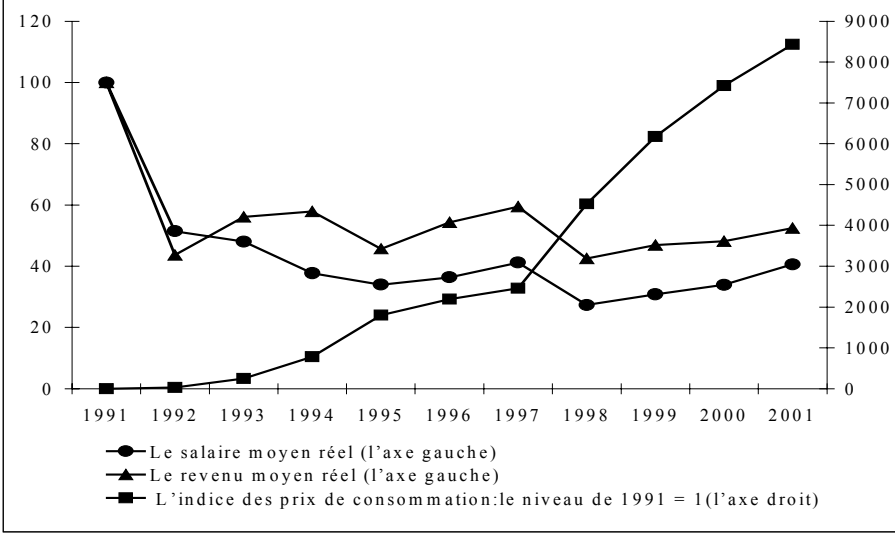
Graphique 1. Evolution du niveau et de la différenciation des revenus moyens en Russie



Durant cette décennie, la tendance économique a varié : à la chute du niveau de vie de toutes les catégories de la population en 1992 (de presque 200 %) a succédé une période d'adaptation. En 1993 les efforts

du gouvernement pour indexer les revenus ont entraîné une augmentation de 20 % des revenus réels, mais il a été constaté en même temps une augmentation de l'inflation ayant entraîné l'interruption de cette pratique. En 1997, le niveau moyen des revenus monétaires réels n'atteignait pas encore celui de l'année 1990. La crise financière d'août 1998 a eu ceci de particulier que ses effets négatifs sur le niveau de vie de la population se sont étalés dans le temps. Bien qu'il y ait eu une reprise de la production russe après la crise, au premier semestre de 1999 la part de la population dont les revenus étaient inférieurs au seuil de pauvreté a augmenté de 10 millions de personnes, et on a simultanément constaté que la différenciation des revenus s'accentuait. En 2001 les revenus moyens n'ont pas dépassé 56 % du niveau de 1991 (Graphique 2).

Graphique 2.Evolution du salaire et des revenus réels (100 % = niveau de 1991)



La baisse des revenus a accentué les inégalités. Au cours de la dernière décennie, l'écart des revenus entre les 10 % de la population les plus pauvres et les 10 % les plus riches montre une augmentation à 300 %. L'évolution du coefficient de Gini, qui est le plus sensible aux changements dans la partie moyenne de la distribution, confirme la polarisation des revenus : avec un coefficient de Gini de 0,26 en 1991, la Russie était moins inégalitaire que la majorité des pays de l'Union

européenne. Mais au cours des années 90 il a augmenté jusqu'à 0,4, niveau plus élevé que celui de la France.

Les bouleversements macroéconomiques exercent leur influence sur le niveau de vie et la pauvreté de la population de plusieurs manières :

- la récession économique a pour conséquence la chute du niveau d'activité et du niveau de rémunération des actifs ;
- la crise économique aboutit à la réduction des transferts sociaux et des programmes sociaux d'Etat dans les domaines de l'instruction et de la santé publique ;
- la libéralisation des prix à la consommation ampute le pouvoir d'achat effectif.

Pauvreté et emploi

Le taux d'activité en Russie se modifie, suite aux mouvements économiques : de 70,3 % en 1992, il a baissé jusqu'à 61,1 % au moment de la crise de 1998 pour atteindre 64,3 % en 2001. La chute économique influe aussi sur la structure démographique de la population active, d'où les groupes les plus faibles – les femmes et les jeunes – ont été évincés.

Comme dans tous les pays en transition, le passage vers l'économie de marché a produit en Russie des changements importants dans le monde du travail. Le chômage est devenu une réalité sociale. Le taux de chômage[1] est passé de 5,2 % en 1992 à 13,2 % en 1998. Pour la période la plus récente, on observe une amélioration de la situation sur le marché du travail : le taux de chômage a diminué jusqu'à 8,9 % en 2001. En même temps le chômage enregistré ne dépasse pas 2 % en 2001. Cette distinction des chiffres du chômage au sens du BIT et du chômage enregistré est une particularité du marché de travail en Russie contemporaine.

Les chiffres du chômage ne sont pas très élevés par rapport aux autres pays en transition. Pendant les premières années de grandes mutations qui ont eu lieu dans les ex-pays socialistes, la Russie, comme la majorité de ses anciennes républiques, s'est orientée, dans le secteur social, vers une stratégie différente de celle des pays d'Europe orientale engagés dans

[1] Il s'agit ici du chômage au sens du BIT.

l'économie de transition. On sait que le choix d'aller vers l'emploi pour tous dans le cadre du modèle socialiste de développement avait été à l'origine d'emplois excédentaires. Pour résoudre ce problème, la plupart des pays d'Europe orientale se sont engagés sur la voie d'une nouvelle répartition et d'une restructuration du marché du travail au moyen du chômage. En Russie on a préféré substituer au gigantesque chômage potentiel, concernant au moins un tiers de la population, un chômage officiel modéré et une énorme baisse des salaires réels.

Evolution des prix à la consommation, du salaire réel et des revenus

Durant cette décennie (1991-2001) les prix, pour le consommateur, ont augmenté de 8 429 fois. En conséquence le salaire moyen réel de 2001 ne représentait plus que 34,8 % de celui de 1991 (graphique 2) ; la pension moyenne réelle de retraite, que 52 %. En même temps de nouvelles ressources des ménages sont apparues (revenus de la propriété, revenus de l'entreprise, etc.) et la baisse des revenus moyens réels n'a pas eu lieu à la même cadence que celle des salaire et des pensions de retraite.

En 2001, le niveau de rémunération des salariés (43,6 %) n'atteignait pas celui du minimum vital et la part de la population dont les revenus étaient inférieurs au seuil de pauvreté était de 34,7 %.

Prestations sociales

Elles sont l'une des ressources des ménages (13-15 % des revenus moyens), dont les retraites représentent la part la plus importante (70-80 %) (Tableau 1).

Les prestations sociales **en nature** et les services gouvernementaux en nature (aides sociales en nature, éducation gratuite ainsi que service de santé, réductions dans les transports, aides au logement, etc.) sont un élément très important de la protection sociale en Russie depuis l'époque soviétique. Ce système compte plus que 100 types de prestations ou d'aides sociales en nature, dont la valeur représentait, en 2000, 1,1 % du produit intérieur brut (PIB) ou 2 % des revenus totaux de la population.

Tableau 1. Part des prestations sociales dans le PIB[(a)] et dans les revenus de la population (en %)

	1992	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Part des prestations sociales dans le PIB	5,3	7,5	8,8	9,9	8,7	8,0	7,8
Part des prestations sociales dans les revenus de la population	14,3	13,1	14,0	14,8	13,5	13,4	14,4
Y compris :							
- pensions de retraite	12,2	10,2	10,0	11,1	10,1	10,1	9,4
- bourses d'études	0,2	0,2	0,2	0,2	0,2	0,2	0,1
- allocations familiales	1,2	2,4	3,2	3,1	2,3	2,0	2,0

[(a)] Produit intérieur brut.

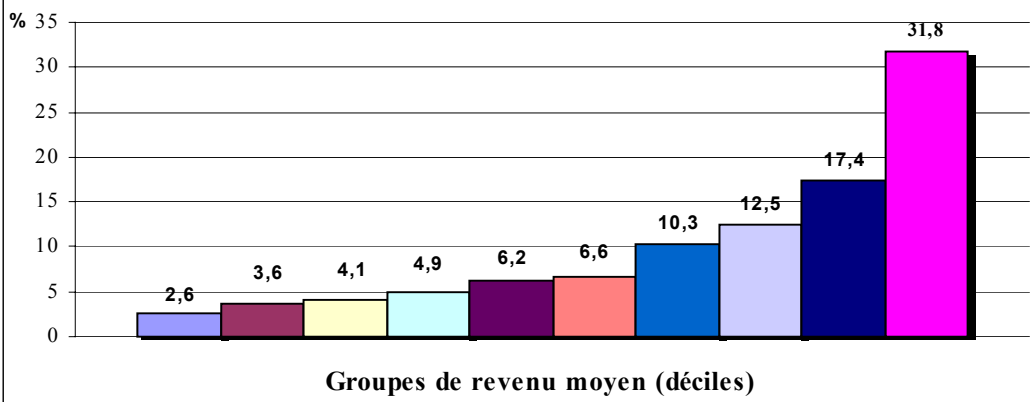
Source : Le niveau de vie de la population en Russie. Moscou, Goskomstat de Russie. Recueil statistique, 2000.

Ces prestations ou services, composantes du niveau de vie, traduisent souvent un effort de solidarité envers les plus pauvres. Mais les données de l'enquête sur les budgets des ménages – réalisée par Goskomstat – montrent l'inégalité des ménages dans l'accès aux services sociaux : 10 % les plus pauvres reçoivent 2,6 % des prestations sociales en nature contre 31,8 % pour les plus riches (graphique 3). Dans les conditions de restriction du budget d'Etat concernant le système de santé ou l'éducation publique, l'accès aux soins et à l'instruction n'est pas réellement garanti pour tous.

Facteurs d'inégalité

Parmi les facteurs jouant sur l'inégalité, tels qu'ils apparaissent dans les décompositions des indices de Theil, les variables géographiques– région, type de commune – occupent le premier plan. La dispersion entre les régions selon les niveaux de revenu en Russie est beaucoup plus importante que celle entre les ménages dans une même région. Le type de ménage est aussi un facteur important : la faible participation de l'Etat abandonne dans la pauvreté extrême les familles monoparentales, les familles nombreuses et celles comprenant des chômeurs.

Graphique 3.Valeur des prestations sociales en nature, reçues par les groupes différents de revenu (en %)



En Russie, en ce qui concerne les variables liées au « capital humain »[2], le diplôme joue un rôle plus important sur l'inégalité que la profession (tableau 2). Plus inquiétant est le pouvoir explicatif des différences entre hommes et femmes (6,7 %), ce qui n'est pas le cas dans d'autres pays d'Europe.

Tableau 2. Part de l'indice de Theil expliquée par les variables sociodémographiques (en %)

Âge	Sexe	Type de ménage	Diplôme	Profession	Type de commune	Région
9,9	6,7	17,5	13,9	6,7	14,3	26,0

Source : RLMS, 2000, 9e vague.

Le maximum d'inégalité est observé chez les moins 30 ans : les réformes économiques donnent libre cours à l'initiative des jeunes, mais en même temps cela correspond au début de la carrière professionnelle, lorsque l'on trouve difficilement une place. En Russie l'inégalité chez les personnes âgées est négligeable, faute de différenciation importante des pensions de retraite. En ce qui concerne les ménages, le maximum d'inégalité est chez

[2] On entend ici, par « capital humain », à la fois le niveau d'études atteint et la catégorie socioprofessionnelle.

les femmes seules, parmi lesquelles 80 % sont en retraite. Selon le type de commune, l'inégalité la plus grande apparaît chez les ménages ruraux.

Ainsi, l'évolution de la situation socioéconomique en Russie dans les années 90 a pour conséquences l'apparition d'un groupe assez large de la population ayant un accès réduit aux sources de revenu et aux programmes sociaux, et l'appauvrissement de la population.

2. Définition et mesure de la pauvreté en Russie

Qu'est-ce que la pauvreté dans la Russie d'aujourd'hui ? Comment varient la part des familles pauvres dans la population totale et leur structure en fonction des différentes méthodes d'évaluation de la pauvreté ?

Nous tenterons de répondre à ces questions en exploitant les résultats de l'enquête spéciale sur la pauvreté de la population urbaine, réalisée en 2001.

La pauvreté se manifeste sous une forme ou une autre dans tout type de société. En ce sens elle est universelle, et c'est partout un objet de préoccupation. En même temps, sa définition même échappe aux critères de l'universalité. La notion de pauvreté est par nature objet de discussion, elle ne cesse de se modifier et de se concrétiser sous de nouvelles formes. La théorie et la pratique de la mesure du niveau de vie supposent un vaste choix de méthodes pour évaluer l'étendue et l'intensité de la pauvreté.

Traditionnellement, la définition de la pauvreté en Russie donnait la préférence à la conception absolue selon laquelle étaient considérés comme « pauvres » ceux qui avaient des revenus inférieurs à la valeur du panier de consommation minimal. C'est à partir de cette idée de la pauvreté qu'a été élaboré le budget de consommation minimal (*minimal'nyj potrebitel'skij bjudzet*, MPB) de la période soviétique. Le budget de consommation minimal représentait le coût du panier de consommation minimal, qui comprenait environ 1 000 références de produits, de denrées non alimentaires et de services payants. Il y entrait à la fois des denrées d'usage courant (produits alimentaires, services payants mensuels et produits d'hygiène), dont le coût était entièrement compris dans le MPB, et des biens d'usage dont le coût mensuel était

calculé à partir de la durée d'utilisation de ces biens[3]. Le coût du panier de consommation minimal était évalué à partir des prix fixés par l'État. C'est cette estimation du minimum de subsistance de la période soviétique qui était considérée comme le seuil de pauvreté.

À la veille des réformes de marché, le minimum de subsistance soviétique était équivalent à la moitié du revenu médian par tête, se confondant ainsi avec le seuil défini par référence à une conception relative de la pauvreté. Ceci confirme une fois de plus le fait que, dans le contexte d'une société stable avec des normes de vie bien établies, les seuils de pauvreté fixés en fonction des diverses méthodes conceptuelles coïncident pratiquement.

Actuellement, la méthode officielle employée par le Goskomstat de Russie pour déterminer le pourcentage de population pauvre se fonde sur la comparaison des revenus moyens mensuels par tête avec le minimum de subsistance, calculé d'après la méthode de 2000. Une famille est considérée comme pauvre si ses revenus monétaires par tête sont inférieurs au minimum de subsistance. Rappelons que le seuil de pauvreté officiel en Russie est défini à partir de la conception absolue de la pauvreté.

Pendant les dix dernières années, la référence a changé deux fois : en 1992 et en 2000. Après la libéralisation des prix de 1992, environ 70 % de la population s'est retrouvée avec des revenus inférieurs à la valeur du MPB soviétique. Une telle extension de la pauvreté commençait à contredire l'idée que la pauvreté correspondait à une certaine exclusion du modèle de vie dominant dans la société. C'est pourquoi, en 1992, un nouveau panier de consommation minimum a été fixé, dont la valeur était deux fois plus basse que le MPB soviétique. On supposait alors que le nouveau minimum de subsistance ne serait introduit que pour une courte période de crise économique, aussi n'y entrait-il pas les dépenses pour les biens d'usage, et les dépenses d'habillement y étaient représentées de manière nettement insuffisante. En conséquence, dans la structure du minimum de subsistance de 1992, calculé en moyenne pour l'ensemble de

[3] Par exemple, le MPB mensuel comprenait 1/180 du prix d'un réfrigérateur, c'est-à-dire que sa durée d'amortissement était estimée à 15 ans (180 mois).

la population[4], la part des dépenses alimentaires atteignait 68,3 % [5]. En 2000 le panier minimal de consommation a été élargi pour inscrire les dépenses non alimentaires devenues importantes ; la part des dépenses alimentaires selon cette nouvelle méthode n'atteint que 54 %.

Les changements de référence compliquent l'analyse de l'évolution de la pauvreté : la part des pauvres dans la population russe a augmenté en 2001 jusqu'à 34,7 % (29 % en 2000), alors que, avant 2000, elle avait diminué jusqu'à 27,6 %. La méthodologie employée pour définir le seuil de pauvreté et mesurer les éléments du niveau de vie des ménages servant à la comparaison avec le seuil de pauvreté**,** lorsqu'on évalue l'étendue de celle-ci, fait d'ailleurs l'objet de discussions permanentes. Par exemple, les recherches internationales donnent des chiffres de pauvres en Russie allant de 18 à 49 %[6]

Remarquons que cette évaluation officielle du niveau de pauvreté est obtenue non à partir de mesures empiriques mais à partir d'une distribution modélisée des revenus. La procédure d'établissement d'une distribution modélisée des revenus comprend une méthode de surévaluation du niveau moyen des revenus à partir des données sur les dépenses de la population[7]. Sur le plan économique, cette correction trouve sa justification dans le fait qu'une importante partie des revenus n'est pas déclarée.

[4] Le minimum de subsistance est calculé en moyenne pour l'ensemble de la population, et de manière spécifique pour chaque sujet de la Fédération de Russie**,** pour la catégorie des enfants, pour la population en âge de travailler et pour la catégorie des retraités.

[5] Dans le MPB soviétique, la part des dépenses alimentaires était de 50 %.

[6] *Making Transition Work for Everyone/ Poverty and Inequality in Europe and Central Asia*. Copyright. 2000 The World Bank. 1818 H Street, N. W., Washington, D.C. 20433, USA.

[7] En Russie, comme dans l'ex-URSS, les principales sources d'information sur le niveau et la structure des revenus de la population sont les résultats de l'enquête annuelle du Goskomstat de la FR sur les budgets de 49 000 ménages (couvrant toutes les régions de Russie). Depuis 1995, pour évaluer le pourcentage de population pauvre, on utilise non pas une distribution empirique des revenus obtenue à partir des résultats d'une enquête par sondage auprès des ménages, mais une distribution modélisée suivant un modèle log-normal, basée sur le niveau moyen des revenus établi par la comptabilité nationale ; mais la dispersion des revenus a été évaluée à partir des résultats de l'enquête sur les budgets des ménages.

Les conditions de l'économie de transition en Russie, qui se caractérisent par le fait d'avoir plusieurs emplois**,** par une concentration des revenus dans l'économie informelle et par la fréquence des formes de paiement du travail en nature (plutôt qu'en rémunération monétaire) mettent en doute la priorité de la méthode d'identification de la pauvreté basée sur la comparaison des revenus monétaires avec le minimum de subsistance, méthode officielle de mesure de la pauvreté en Russie. En outre, la gratuité de l'enseignement et de la santé n'existant plus, le minimum de subsistance, calculé sans prendre en compte les dépenses d'éducation et de soins médicaux, a cessé de refléter les besoins minimaux de la population.

3. Niveau et profil de pauvreté des ménages, établis selon trois méthodes

Pour évaluer le plus exactement possible l'étendue de la pauvreté réelle en Russie, nous avons utilisé une méthode combinant plusieurs seuils basés sur différentes conceptions de la pauvreté. En complément du seuil de pauvreté établi d'après la conception absolue (pauvreté *monétaire*), nous avons défini un seuil de pauvreté *par privations* (établi en mesurant la pauvreté au moyen de l'écart par rapport aux modèles de consommation dominants dans la société), et un seuil de pauvreté *subjectif* (qui mesure la pauvreté à partir des représentations que se fait la population des ressources monétaires nécessaires à la famille pour ne pas être pauvre). Ces trois méthodes sont complémentaires et permettent d'identifier les familles les plus pauvres : si une famille est pauvre à la fois selon plusieurs définitions de la pauvreté, c'est qu'elle fait partie des plus pauvres[8].

[8] Dick, P. (1994), « Ressources financières, bien-être subjectif et conditions d'existence », *Trajectoires sociales et inégalités*, Paris, Eres, pp. 179-198 ; Lollivier, S., Verger, D. (1997), « Pauvreté d'existence, monétaire ou subjective sont distinctes », in *Economie et Statistique*, 308-309-310, pp. 113-142.

Pauvreté monétaire

La méthode traditionnelle isole 30,5 % de ménages interrogés dans la Russie urbaine[9]. La prédominance des familles avec enfants dans legroupe des pauvres explique la pauvreté très élevée chez les enfants, 40 %. Remarquons que ce minimum de subsistance ne comporte ni les dépenses consacrées à l'éducation des enfants, de plus en plus payante, ni les services médicaux.

Tableau 3. Pauvreté monétaire

Part des pauvres dans la population (%)[(a)]			**Indicateurs d'inégalité des revenus**			
Ménages	**personnes**	**enfants jusqu'à 14 ans**	**ménages pauvres**		**ménages non pauvres**	
			Gini	**Theil**	**Gini**	**Theil**
30,5	32,2	40,4	0,195	0,078	0,444	0,344

[(a)] Les revenus monétaires par unité de consommation (uc) sont inférieurs au minimum de subsistance.

Source : Enquête condition de vie et pauvreté de la population urbaine, juillet 2001, IPSEP RAN.

Pauvreté en terme de privations

L'enquête spéciale sur les conditions de vie et la pauvreté de la population urbaine a permis d'établir une liste de base des privations. Nous avons également employé la méthode de Townsend – établissement par des experts d'une liste des privations[10] – et la méthode de Mack et Lansley – établissement d'une liste des privations à partir des résultats d'une enquête auprès des ménages sur ce que ceux-ci associent à la pauvreté[11]. Ainsi, lors de la conception du questionnaire, des experts ont constitué une liste des critères de pauvreté, affinée ensuite à partir des résultats d'un sondage. Parmi les privations que l'immense majorité des ménages (plus de 90 %) considérait comme des critères de pauvreté, nous en avons sélectionné 17 (Tableau 4).

[9] L'enquête sur les conditions de vie et la pauvreté de la population urbaine a été réalisé en 2001 dans la partie européenne de la Russie par l'IPSEP RAN (1 500 ménages interrogés).

[10] P. Townsend (1979), *Poverty in the United Kingdom*, Penguin, Harmondsworth.

[11] J. Mack and S. Lansley (1985), *Poor Britain*, George Allen and Unwin. London.

Tableau 4. Degré de fréquence de certaines privations, sélectionnées par les enquêtés (en % du total des ménages interrogés)

Critères de pauvreté (1)	**Pourcentage de ménages touchés par une privation** (2)
1. On ne mange pas à sa faim (ne peuvent pas toujours se permettre des aliments de base même les moins chers)	12,9
2. Ne peuvent pas se permettre des plats avec de la viande de bonne qualité	31,8
3. Le ménage a contracté un emprunt pour couvrir les dépenses courantes de consommation	10,1
4. N'ont pas d'argent pour remplacer et réparer les vêtements d'hiver des membres du ménage	12,4
5. N'ont pas d'argent pour remplacer et réparer les chaussures d'hiver des membres du ménage	16,4
6. N'ont pas d'argent pour une réparation urgente du logement (fenêtres cassées, toit en mauvais état...)	17,9
7. N'ont pas et ne peuvent pas acheter le mobilier le plus simple	2,2
8. N'ont pas d'argent pour maintenir le logement à bonne température (en cas de manque du chauffage central)	0,2
9. N'ont pas d'argent pour payer à terme ses charges de logement et sa facture de gaz ou d'électricité	18,4
11. Ne peuvent pas organiser des funérailles sans s'endetter de façon exorbitante	0,3
12. Les enfants ne mangent pas de fruits, même pas de temps en temps	20,2
13. Ne peuvent pas donner aux enfants de l'argent pour se nourrir à l'école	5,7
14. Les enfants ne mangent jamais de friandises	1,3
15. Ne peuvent pas acheter aux enfants de nouveaux vêtement ni des chaussures à leur taille	3,0
16. La famille n'a pas les moyens de mettre les enfants dans des établissements préscolaires payants	0,2
17. La famille n'a pas les moyens d'entretenir les enfants jusqu'à la fin de la scolarité (11 ans d'études) et ils ont besoin de travailler pour soutenir la famille	0,3
Nombre d'observations	*1 500*

Source : Enquête Conditions de vie et pauvreté de la population urbaine, juillet 2001, IPSEP RAN.

La ligne de pauvreté en terme de privations a été établie en posant qu'il n'y a pas de hiérarchie entre privations (elles ont toutes la même importance), seul importe leur nombre.
Le seuil de pauvreté en terme de privations a été fixé sur la base de l'analyse du score des privations (Tableau 5). Un ménage est pauvre s'il cumule au moins trois des 17 privations[12].

Tableau 5. Pauvreté de privation

Seuil de pauvreté / valeur maximale du score	Part des pauvres dans la population (%)			Indicateurs d'inégalité des revenus			
	ménages	personnes	enfants jusqu'à 14 ans	ménages pauvres		ménages non pauvres	
				Gini	Theil	Gini	Theil
3/17	30,1	30,7	33,5	0,333	0,199	0,48	0,418

Source : Enquête condition de vie et pauvreté de la population urbaine, juillet 2001, IPSEP RAN.

Pauvreté subjective

Les difficultés budgétaires des ménages, sur lesquelles nous basons la définition d'un taux de pauvreté subjective, sont : des difficultés à « joindre les deux bouts », le sentiment de pauvreté, l'estimation de la qualité de la nourriture, l'importance du budget consacré à l'alimentation.
On considère comme pauvres sur le plan subjectif les ménages qui ont un score supérieur ou égal à 2, soit 27,2 % des ménages (Tableau 6)[13].

Tableau 6. Pauvreté subjective

Seuil de pauvreté / valeur maximale du score	Part des pauvres dans la population (%)			Indicateurs d'inégalité des revenus			
	ménages	personnes	enfants jusqu'à 14 ans	ménages pauvres		ménages non pauvres	
				Gini	Theil	Gini	Theil
2/4	27,2	26,3	28,2	0,365	0,234	0,485	0,429

Source : Enquête Conditions de vie et pauvreté de la population urbaine, juillet 2001, IPSEP RAN.

[12] Le seuil du nombre cumulé de critères est fixé de telle sorte que la proportion de ménages pauvres soit proche de celle établie selon la conception absolue de la pauvreté monétaire en Russie, 30,5 %.
[13] Idem, note précédente.

Le cumul des trois formes de pauvreté, définies selon la méthode traditionnelle pour la Russie, permet d'isoler 12,6 % des ménages en situation d'extrême pauvreté. Deux formes de pauvreté concernent 14 % des ménages ; une seule forme, 22 % ; la moitié n'a aucun symptôme de pauvreté (Tableau 7).

Les corrélations entre les trois approches de la pauvreté sont relativement faibles, ce qui souligne la large indépendance entre les trois formes. On observe une corrélation plus forte entre la pauvreté en terme de privation et le cumul de symptômes subjectifs (Tableau 8).

Tableau 7. Ménages pauvres selon les symptômes de pauvreté (%)

Nature du cumul	Ménages pauvres (%)
Aucun symptôme de pauvreté	**51,5**
Un symptôme et un seul :	**21,6**
- pauvreté monétaire	9,3
- pauvreté de privation	6,7
- pauvreté subjective	5,6
Deux symptômes et deux seulement :	**14,3**
- pauvreté de privation et monétaire	5,2
- pauvreté de privation et subjective	5,7
- pauvreté subjective et monétaire	3,4
Trois symptômes	**12,6**

Source : Enquête Conditions de vie et pauvreté de la population urbaine, juillet 2001, IPSEP RAN.

Tableau 8. Corrélation entre les différentes formes de pauvreté (coefficients de corrélation de Pearson)

	Corrélation
Formes de pauvreté :	
Privations – monétaire	0,41
Privations – subjective	0,49
Monétaire – subjective	0,37
Scores :	
Score de privations – revenu du ménage	– 0,21
Score de pauvreté subjective – revenu du ménage	– 0,19
Score de privations – score de pauvreté subjective	0,62

Source : Enquête Conditions de vie et pauvreté de la population urbaine, juillet 2001, IPSEP RAN.

La pauvreté touche à des degrés divers les différentes catégories de la population et dépend de toute une série de facteurs, aussi bien démographiques que socioéconomiques. Parmi les facteurs les plus importants qui font qu'un ménage se retrouve dans le champ de **la pauvreté monétaire**, il y a le type de famille et la présence de chômeurs parmi les membres du ménage (cf. Annexe. Tableau A). Le risque de pauvreté est plus important chez les familles monoparentales et les familles nombreuses. Au premier plan de la pauvreté, en Russie, on trouve celle des enfants.

La pauvreté monétaire, définie sur la base des revenus, touche plus fréquemment les ménages d'âge moyen (30-49 ans pour la personne de référence) que les ménages jeunes ou de personnes âgées.

Quant aux chômeurs, leur situation difficile est liée au niveau très bas de l'allocation de chômage et au développement insuffisant du réseau de services spécialisés dans l'aide à l'emploi. Les périodes sans travail sont assez longues, 9 mois en moyenne (10 mois pour les femmes et 8 mois pour les hommes).

Plus le niveau de diplôme ou la position socioprofessionnelle de la personne de référence est bas, plus le risque de pauvreté augmente.

La pauvreté monétaire est plus fréquente dans les petites villes que dans les grandes.

Les facteurs essentiels qui jouent sur le niveau des privations et sur celui de **pauvreté de privation** sont les revenus et le type de famille. Le cumul des symptômes de mauvaises conditions de vie est relativement plus fréquent chez les ménages ayant de faibles revenus, les familles monoparentales et les familles nombreuses. Le chômage est un facteur de privation, ainsi que le handicap.

L'accumulation de plusieurs faiblesses dans l'équilibre budgétaire touche plus fréquemment les familles monoparentales et les familles nombreuses. Les jeunes, qui d'une part se plongent activement dans les nouveaux secteurs de l'économie de marché et qui, d'autre part, se trouvent sous la protection des réseaux familiaux, ne manifestent pas de sentiments de

privation subjective aussi souvent que d'autres, par exemple les ménages de 40-59 ans.

Le chômage et le niveau modeste de diplôme ou de position socioprofessionnelle sont des facteurs qui provoquent un sentiment de privation subjective. Toutes les difficultés budgétaires indiquées par les ménages s'accumulent au fur et à mesure que l'on s'élève dans l'échelle des revenus. Pourtant, la corrélation entre le score de pauvreté subjective et le revenu du ménage est assez faible.

La pauvreté subjective est plus fréquente dans les grandes villes que dans les petites.

Le cumul des trois formes de pauvreté permet d'isoler ce que l'on peut appeler la « pauvreté extrême ». Elle concerne surtout les ménages de personnes ayant un faible niveau de diplôme, touchées par le chômage, les familles monoparentales et les familles nombreuses. Ce cumul des trois formes de pauvreté concerne aussi relativement plus souvent les ménages de personnes d'âge moyen que ceux de jeunes ou de personnes âgées.

Le risque de pauvreté multiforme est plus important dans les petites villes que dans les grandes agglomérations.

4. Approche comparative de la pauvreté en Russie

Pour comparer le profil de pauvreté dans les pays de différents types socioéconomiques, nous avons pris la méthode de l'INSEE[14], déjà utilisée pour la comparaison « France-Pologne »[15].

Une mesure de la **pauvreté monétaire** d'essence relative – la population pauvre est constituée des ménages dont le revenu par unité de consommation (uc) est inférieur à la moitié de la médiane du revenu par uc de l'ensemble des ménages. La population des ménages relativement les plus pauvres ainsi isolée représente une proportion plus élevée en

[14] Institut national de la statistique et des études économiques (France).
[15] Comparaison des conditions de vie en France et en Pologne. Varsovie, Office Central de Statistique, 2000.

Russie (14 %) qu'en France (12 %) ou en Pologne (9 %). Ces résultats ne traduisent que le fait que la distribution des revenus est moins dispersée en Pologne ; le bas de cette distribution y est plus proche de la médiane, ce qui n'est pas le cas de la Russie.

Le seuil de **pauvreté en termes de conditions de vie** a été fixé sur la base de l'analyse du score des mauvaises conditions de vie dans chaque ménage. Les données de l'enquête de 2001 auprès des ménages dans des villes de Russie européenne permettent d'appliquer la méthode INSEE pour créer des scores de mauvaises conditions de vie, concernant les privations en matière de consommation courante, le manque de confort du logement ou l'absence de certains biens durables. Selon la méthode utilisée, 15,7 %[16] des ménages en Russie urbaine ont les conditions de vie relativement les plus mauvaises et pourraient être considérés comme des pauvres. Ils sont 12,6 % en France et 11 % en Pologne.

Les déséquilibres budgétaires ont été appréciés sur des items aussi proches que possible de ceux retenus par l'INSEE : difficultés à « joindre les deux bouts », retards de paiement, emprunts pour la consommation courante, sentiment de pauvreté, estimation de la qualité de la nourriture. Les ménages ont été classés « pauvres » s'ils avaient au moins 3 des 5 signes possibles de pauvreté. Le choix de ce seuil a été guidé par le fait qu'il conduit à classer 12,5 % de ménages comme pauvres, un résultat proche des 14,1 % de ménages sous la demi-médiane des revenus. Avec les critères retenus, on considère comme pauvres sur le plan subjectif 10,8 % de ménages en France et 9,3 % en Pologne. Évidemment, comme pour les autres types de pauvreté, cela ne signifie pas que la fréquence de la pauvreté subjective soit plus grande en Russie qu'en Pologne.

Alors même que les trois groupes de ménages ont été définis de facon à être proches en ce qui concerne leur taille – 14 % de l'ensemble des ménages environ pour chaque groupe –, il s'avère qu'ils ne se recouvrent que faiblement. Dans la zone de pauvreté extrême où s'accumulent les trois dimensions de pauvreté se trouvent seulement 3 % de ménages (Tableau 9). Deux formes de pauvreté concernent simultanément 8 % des ménages ; une seule forme, 18 %. Plus du quart des ménages

[16] Rappelons que le seuil a été choisi de façon à avoir un groupe ayant à peu près la même importance numérique que celui des pauvres par la mesure monétaire.

appartiennent au moins à l'une des trois zones de pauvreté (monétaire, subjective ou en terme de conditions de vie).

Tableau 9. Cumul de différentes formes de pauvreté (%)

Nature du cumul	**Russie**	**France**	**Pologne**
Aucun symptôme de pauvreté	**71,3**	**73,4**	**77,2**
Un symptôme et un seul :	**18,1**	**19,0**	**17,1**
pauvreté monétaire	4,9	5,9	4,9
pauvreté de conditions de vie	8,3	6,4	7,4
pauvreté subjective	4,9	6,7	4,8
Deux symptômes et deux seulement :	**7,7**	**6,3**	**4,6**
pauvreté de conditions de vie et monétaire	3,1	3,0	1,2
pauvreté de conditions de vie et subjective	1,4	1,9	1,3
pauvreté subjective et monétaire	3,2	1,4	2,1
Trois symptômes	**2,9**	**1,4**	**1,1**

Les analyses effectuées permettent de définir quels types ou groupes de ménages sont concernés par le cumul des différentes formes de pauvreté. On peut observer la forte proximité des résultats pour des pays différents : le cumul des trois formes de pauvreté concerne surtout les ménages de personnes ayant un faible niveau de diplômes, touchées par le chômage, les familles monoparentales. Pour la France, on ajoute les hommes seuls. Pour la Pologne, on observe une plus grande probabilité de cumuler les trois formes de pauvreté chez les familles nombreuses. En France comme en Pologne, la pauvreté extrême concerne aussi relativement plus souvent les ménages de jeunes, tandis qu'en Russie ce sont les ménages de personnes d'âge moyen qui sont les plus touchés par le cumul simultané des trois formes de pauvreté (Tableau 10).

La probabilité de cumuler les différentes formes de pauvreté est nettement plus grande dans les grandes agglomérations en France, mais pas en Pologne, où c'est la campagne qui est la plus touchée (les petites villes dans l'échantillon de la Russie urbaine).

Quand on observe la structure du groupe des « extrêmes pauvres », c'est la structure de la population dans chaque pays qui joue le rôle important. Le pourcentage de personnes seules est plus élevé en France qu'en Russie ou en Pologne ; les « autres » ménages sont également beaucoup moins répandus en France, tandis qu'en Russie ou en Pologne c'est un signe

d'une permanence de la cohabitation entre générations, particulièrement marquée dans les villes russes et dans les zones rurales de Pologne. En même temps les familles nombreuses sont plus fréquentes en Pologne qu'en Russie ou en France.

Tableau 10. Cumul de différentes formes de pauvreté (en % des ménages pauvres dans chaque catégorie)

Catégories	Russie	France	Pologne
Ensemble	2,9	1,4	1,1
Type de famille :			
Personne seule	2,1	1,9	2,0
Couple sans enfant	0,5	0,4	0,7
Couple avec un enfant	2,7	0,9	0,8
Couple avec 2 enfants et plus	3,9	2,1	2,4
Famille monoparentale	5,7	3,7	2,0
Autres ménages[(a)]	4,1	1,5	1,2
Âge de la personne de référence :			
Moins de 30 ans	2,8	1,9	1,4
30-39 ans	5,0	1,6	1,7
40-49 ans	3,9	1,8	1,5
50-59 ans	2,1	1,8	1,0
60-69 ans	2,6	0,8	0,3
70 ans et plus	–	0,4	0,2
Présence de chômeurs :			
Ménages sans chômeur	1,5	1,0	0,5
Ménages avec au moins un chômeur	12,3	5,6	3,9

[(a)] Le groupe « autres » comprend les couples avec ou sans enfants, les familles monoparentales cohabitant avec les parents et formant un seul ménage, ainsi que les ménages « grands-parents–enfants » ou « frères–sœurs ».

En Pologne, dans le groupe des « extrêmes pauvres », un tiers sont des familles nombreuses, et ce type des ménages se caractérise comme les plus pauvres : la part des ménages qui cumulent de différentes formes de pauvreté y est la plus élevée. En France, dans ce même groupe, on observe la prédominance des personnes seules, même si ce type des ménages est moins touché par la pauvreté extrême que les familles monoparentales ou nombreuses. Dans l'échantillon russe de ménages

urbains, ce sont les familles monoparentales qui représentent un quart des pauvres selon tous les trois critères, et en même temps ce type de ménage est classé comme le plus défavorisé (Tableau 11).

Tableau 11. Cumul de différentes formes de pauvreté (% des ménages pauvres dans chaque échantillon)

Catégories	Russie	France	Pologne
Ensemble	100,0	100,0	100,0
Type de famille :			
Personne seule	13,8	33,5	14,2
Couple sans enfants	3,4	8,5	11,1
Couple avec un enfant	17,2	7,5	11,8
Couple avec 2 enfants et plus	17,3	24,9	33,1
Famille monoparentale	24,2	18,0	16,2
Autres ménages [(a)]	24,1	7,6	13,6
Âge de la personne de référence :			
Moins de 30 ans	6,9	17,6	12,1
30-39 ans	32,8	22,3	31,9
40-49 ans	31,0	26,7	32,9
50-59 ans	13,8	18,8	15,1
60-69 ans	15,5	8,7	5,3
70 ans et plus	–	5,9	2,7
Présence de chômeurs :			
Ménages sans chômeur	43,1	66,4	37,5
Ménages avec au moins un chômeur	56,9	33,6	62,9

[(a)] Le groupe « autres » comprend les couples avec ou sans enfants, les familles monoparentales cohabitant avec les parents et formant un seul ménage, ainsi que les ménages « grands-parents–enfants » ou « frères–sœurs ».

Le chômage massif n'est pas toujours enregistré en Russie et en Pologne ; le niveau bas du soutien de l'Etat aux chômeurs et à leurs familles donne 60-63 % des ménages comprenant des chômeurs dans la structure des « extrêmes pauvres ». C'est presque deux fois plus élevé qu'en France.

5. La dissolution d'un mariage, facteur de pauvreté

Le profil de pauvreté défini selon les trois critères – monétaire, subjectif et en terme de privation –, ainsi que par le cumul de différentes formes qui permet de distinguer « les plus pauvres parmi les pauvres », nous montre les familles monoparentales comme les moins protégées. Ce n'est

pas un phénomène exclusivement russe, mais en Russie les familles monoparentales accusent une plus grande pauvreté que les autres types de ménages.

Comme nous l'avons souligné plus haut, le facteur principal d'augmentation des familles monoparentales en Russie est le nombre très élevé de divorces.

Les hommes et les femmes qui ont vécu ensemble dans le mariage ont des parcours divergents dans l'après-divorce. En Russie comme dans bien d'autres pays, les femmes assument, pour l'essentiel, la garde des enfants mineurs, elles restent plus souvent que les hommes dans le logement que le couple partageait avant la séparation, elles forment moins souvent que leurs anciens maris un nouveau couple, voire un nouveau mariage.

Le divorce affecte négativement les conditions d'existence des femmes dans leur nouvelle vie et celles qui restent seules davantage que celles formant une nouvelle union (Tableau 12).

Tableau 12. Femmes divorcées depuis moins de 12 ans. Proportion de femmes pauvres[(a)] avant le divorce et variations ultérieures, en fonction du statut conjugal à l'enquête

Statut conjugal	Avant le divorce		Entre divorce et enquête				(N)
	Pauvres	Non pauvres	Devenues pauvres		Cessé d'être pauvres		
	p. 100 femmes	p. 100 femmes	p. 100 femmes	Ratio	p. 100 femmes	Ratio	
(1)	(2)	(3)	(4)	(5)=4/3	(6)	(7)=6/2	(8)
Seules	15,8 %	84,2 %	33,7 %	0,40	6,8 %	0,43	(606)
En couple	19,5 %	80,5 %	15,3 %	0,19	15,6 %	0,80	(262)

[(a)] Selon l'approche monétaire (indice des revenus réels aux deux dates).
Sources : Enquête auprès des femmes divorcées, 1993, INED–IPSEP RAN.

Les femmes restées seules après leur divorce sont nombreuses à avoir enregistré une dégradation de leurs conditions de vie, rares à avoir connu une amélioration. La chute du niveau de vie des femmes seules après la séparation n'est pas une surprise. La charge des enfants et la position professionnelle non stable des femmes, en même temps que des transferts publics et privés insuffisants sont les facteurs essentiels de leur situation économique défavorable. S'agissant du montant des pensions alimentaires, il est au niveau de la moitié du minimum vital, mais dans

celui-ci ne sont pas incluses les dépenses d'éducation ni les services médicaux. La part moyenne des pensions alimentaires dans le budget des familles monoparentales ne représente que 15-17 %.

Les femmes qui se remarient après leur divorce sont beaucoup moins affectées dans leur niveau de vie. Elles sont bien moins nombreuses à s'appauvrir et autant d'autres voient leur situation s'améliorer. Le retour à la vie en couple efface ainsi les conséquences financières du divorce.

La situation des hommes après leur divorce est très différente de celle des femmes (Tableau 13). La pauvreté, mesurée sur des critères monétaires, est en moyenne sensiblement plus rare et les disparités associées au statut conjugal sont bien moindres. Pour les hommes remariés, la fréquence de la pauvreté est égale à celle des femmes remariées, mais pour les hommes seuls – vivant avec ou sans leurs parents – elle est nettement plus faible que pour les femmes seules. Pour les hommes sans nouvelle compagne et sans autre personne adulte au foyer, la situation est même plus favorable que dans toute autre configuration domestique. La charge que les enfants font peser sur le niveau de vie de leur mère, surtout lorsque celle-ci est seule, explique une majeure part des différences entre hommes et femmes après leur divorce.

Toutefois, ces disparités entre hommes et femmes ne se retrouvent pas dans l'appréciation subjective que les uns et les autres portent sur leur situation économique. Ceux et celles qui se sont remariés portent un jugement plus favorable que ceux et celles restés seuls. Pour les femmes, l'écart reproduit en l'atténuant celui des niveaux de vie réels, mais le pessimisme des hommes non remariés ne reflète pas leurs revenus relativement favorables. C'est en particulier le cas des hommes seuls dans leur ménage.

Les avantages non monétaires que la politique sociale accorde aux femmes seules, en particulier en matière de logement, pourraient expliquer ce décalage entre la mesure monétaire de la pauvreté et son appréciation subjective par les ménages. Les conditions de vie, concept plus large que le revenu et que la notion de privations saisit mieux lorsqu'il s'agit de mesurer la pauvreté, pourraient bien être l'intermédiaire entre le monétaire et le subjectif. Ceci confirmerait le bien-fondé des

mesures de la pauvreté qui cherchent à s'appuyer sur le caractère multidimensionnel de celle-ci.

Tableau 13. Femmes et hommes divorcés depuis moins de 12 ans. Composition du ménage et indicateurs de pauvreté

Composition du ménage	Niveau de pauvreté après divorce		
	Pauvreté monétaire[(a)]	Pauvreté subjective[(b)]	(N)
Pour les femmes			
Seule	42,7 %	35,3 %	(396)
Seule avec les parents	42,9 %	28,6 %	(210)
En couple	19,1 %	19,5 %	(262)
Pour les hommes			
Seul	11,1 %	33,4 %	(332)
Seul avec les parents	20,5 %	25,3 %	(273)
En couple	19,1 %	19,1 %	(644)

[(a)] Les revenus sont inférieurs au minimum vital officiellement établi.
[(b)] Difficultés budgétaires : « le ménage a du mal à "joindre les deux bouts" » et « le ménage a de l'argent uniquement pour la nourriture et les charges de logement ».

Sources : Enquêtes auprès des femmes divorcées, 1993, INED–IPSEP RAN.
Enquêtes auprès des hommes divorcés, 1998, INED–IPSEP RAN.

Encadré sur les sources

Les sources utilisées pour l'analyse des conditions de vie et de la pauvreté sont l'enquête « Condition de vie et pauvreté de la population urbaine », réalisée en 2001 par l'IPSEP RAN (1 500 ménages), l'enquête « Budget des familles », réalisée auprès de 49 000 ménages (Goscomstat RF,1999), l'enquête auprès des femmes et hommes divorcés, portant sur 1 200 femmes et hommes divorcés (INED–IPSEP RAN, 1993 et 1998).

L'enquête « Condition de vie et pauvreté des ménages urbains » nous donne toute l'information pour mesurer la pauvreté selon les approches différentes. L'enquête auprès des femmes et hommes divorcés nous renseigne sur l'influence du divorce sur le niveau de vie des ex-conjoints.

Annex

Tableau A. Analyse des trois approches[(a)] de la pauvreté en Russie urbaine (modèles Logit)

Variables	Pauvreté monétaire		Pauvreté de privation		Pauvreté subjective	
	Coeffi-cient	Wald	Coeffi-cient	Wald	Coeffi-cient	Wald
Constante	0,99	14,98	0,84	10,01	– 0,25	2,62
Catégorie sociale[(b)]						
Ouvriers non qualifiés	Réf.	Réf.	Réf.	Réf.	Réf.	Réf.
Ouvriers qualifiés	– 0,87	12,30	– 0,06	0,08	– 0,30	1,26
Prof. Int.-Employés	– 0,73	11,56	0,06	0,08	– 0,24	1,21
Cadres	– 0,79	8,19	0,15	0,29	– 0,20	0,50
Administrateurs	– 2,28	29,51	– 0,53	2,45	– 1,22	8,89
Inactifs	0,24	1,77	0,18	0,92	0,006	0,001
Niveau d'études[(b)]						
Sans diplôme et études primaires	Réf.	Réf.	Réf.	Réf.	Réf.	Réf.
Etudes secondaires	– 0,35	4,05	– 0,38	4,61	– 0,10	0,34
Moyen technique	– 0,74	15,71	– 0,60	9,92	– 0,49	6,81
Supérieur	– 0,81	15,5	– 0,72	11,62	– 0,63	8,99
Type de famille						
Personne seule	– 0,38	2,90	– 0,15	0,43	0,35	2,20
Couple sans enfant	– 0,96	16,56	0,01	0,02	– 0,23	0,84
Couple avec un enfant	– 0,38	3,55	– 0,11	0,31	– 0,11	0,24
Couple avec 2 enfants et plus	Réf.	Réf.	Réf.	Réf.	Réf.	Réf.
Famille monoparentale	0,33	2,38	0,66	8,49	0,82	13,25
Autres ménages[(c)]	0,07	0,11	– 0,22	1,00	0,18	0,66
Âge[(b)]						
Moins de 30 ans	– 0,77	16,42	– 0,63	9,56	– 0,29	1,99
30-39 ans	0,14	0,61	– 0,17	0,71	0,05	0,07
40-49 ans	Réf.	Réf.	Réf.	Réf.	Réf.	Réf.
50-59 ans	– 0,49	5,47	0,08	0,16	0,60	8,21
60-69 ans	– 0,77	10,46	– 0,31	1,53	0,41	2,90
70 ans et plus	– 0,73	7,89	– 0,47	2,96	0,01	0,00

Tableau A. Analyse des trois approches[(a)] de la pauvreté en Russie urbaine (modèles Logit)

Variables	Pauvreté monétaire		Pauvreté de privation		Pauvreté subjective	
	Coeffi-cient	Wald	Coeffi-cient	Wald	Coeffi-cient	Wald
Domicile						
Petite ville	Réf.	Réf.	Réf.	Réf.	Réf.	Réf.
Grande ville	– 1,39	114,70	– 0,13	0,64	0,59	12,83
Présence de chômeurs						
Ménages sans chômeur	Réf.	Réf.	Réf.	Réf.	Réf.	Réf.
Ménages avec au moins un chômeur	1,21	36,68	0,83	16,16	0,76	14,55
Forme physique du ménage						
Aucun individu avec handicap	Réf.	Réf.	Réf.	Réf.	Réf.	Réf.
Au moins un individu avec handicap	0,15	0,91	0,35	4,96	0,12	0,55
Revenu (Quatrillions)						
1	//	//	Réf.	Réf.	Réf.	Réf.
2	//	//	– 0,99	44,17	– 1,07	48,29
3	//	//	– 1,67	81,54	– 1,82	85,69
4	//	//	– 3,21	125,20	– 2,81	118,60

[(a)] *Pauvreté monétaire* : les revenus des ménages par unité de consommation sont inférieurs au minimum de subsistance officiellement établi ; *pauvreté de conditions de vie* : mesurée selon la liste des privations qu'au moins neuf ménages sur dix considèrent comme des signes de pauvreté ; *pauvreté subjective* : selon la méthode occidentale.
[(b)] De la personne de référence.
[(c)] Le groupe « autres » comprend les couples avec ou sans enfants, les familles monoparentales cohabitant avec les parents et formant un seul ménage, ainsi que les ménages « grands-parents–enfants » ou « frères–sœurs ».

Source : Enquête condition de vie et pauvreté de la population urbaine, juillet 2001, IPSEP RAN.

The economy and demographic pressure

Stanisława Borkowska

The thesis that predicted demographic changes should be taken into account in advance of the economic and social policy, especially when they are cyclical in nature, or when a fixed trend with a defined scale of changes is emerging, does not require justification. Yet, the way they are allowed for, the type of adjustments and their timing are neither neutral nor obvious. This paper aims to discuss the implications of demographic processes for the Polish economy and the desired direction of economic changes, so that the economy could take up the challenges it faces.

1. Demographic trends

The major demographic trends in Poland can be briefly described as follows. From 1999 the population has been declining. Fertility has been going down (to 1.3 child per woman in 2001), which does not guarantee replacement of generations; in addition, women have their first children at a later age. The number of children at pre-school and school ages are expected to fall. The 2020 proportion of the population under 14 years of age will be around one quarter smaller compared with 2005 and in 2050 the proportion of population aged 0-17 years will drop almost by 30% compared to 2005 (Jóźwiak, 2001). At the same time, life expectancy has been increasing. According to the Central Statistical Office population forecast (Bolesławski, Rutkowska, 2000), the average life expectancy of persons born in 2000 will be almost 70 years for men and 78 years for women. In the years 2005-2020 the number of elderly persons (aged 60 years plus) will increase each five year period by one million. It means that in the years 2000-2020 this group of persons will grow by 1.5 times. In 2020 every fourth Pole will belong to the old population. In that period the fastest to grow (by around 80%) will be the number of persons aged 75 years and more. Compared with 1950, in the year 2020 the share of persons aged 80 years and more will quadruple. The rate of growth of the old-age rate will be slower until 2005 and accelerate after. The growing number of old persons in the total population will coincide with a reverse trend in the group of persons aged 15-59 years. In each quinquennial period in the years 2010-2020 this group will lose approximately 1 million persons, therefore in 2020 it will be around 10% smaller than in

2000 (Jóźwiak, 2001). As a consequence of the changes in the population age structure, the number of persons at retirement age (60+/65+) per 100 persons of the working age (women 18-59 years and men 18-64 years) will grow from 24 persons in 2000 to 25 in 2010, 36 in 2020 and 40 in 2025. According to the forecast, these changes will be dramatic after the year 2010.

Ageing will enlarge the share of disabled persons in the total population, as disability is correlated with age. According to the 2001 data (2nd quarter) disabled persons made up only 1.2% of those under 34 years of age, but as much as 15.7% in the age group 35-59 years and almost twice that much (30.6%) among the population aged 60 years and more (GUS, 2001). Assuming that this relationship is stable over time and bearing in mind that the number of old persons will have grown to around 9.4 million by 2020, about 3.1 million people in this age group (*ceteris paribus*) will be disabled. A smaller number of persons under 34 years of age will not significantly affect the size of disabled persons. This group may, however, slightly decrease as a result of the declining number of persons aged 35-59 years.

Until the year 2010 the labour force will continue to grow. Its largest increment (1.5 million persons) is expected in the years 2000-2005; after 2005 the growth will be almost four times as small. By the year 2005 the number of young adults (20-29 years) will have grown to around 6 million. This means that the number of students at universities will continue to expand until the year 2004. Nevertheless, the size of the age group 20-29 years will drop in the next quinquennial period. Because of the post-war baby boom generation reaching retirement age (1.8 million persons), the labour force will be rapidly ageing after 2005.

2. Major challenges and directions of economic transition

Radical acceleration of economic growth and the improved competitive position of the Polish economy are major prerequisites for effective use of the opportunities offered by the integration into the European Union. Therefore, it is necessary to increase productivity and improve the job creation capability simultaneously. Allowing for purchase power parity, the 2000 productivity in Poland expressed as GDP per capita accounted for only 39% of average EU productivity (EC, 2001). However, mass

unemployment hinders efficient socio-economic development and produces a number of negative social consequences. In the short term, attempts to attain both aforementioned goals are conflicting and extremely difficult.

Today innovations are the major productivity growth factor in the economy. Propensity to innovation is, however, very low in Poland, which is explicitly evidenced by the number of patent applications submitted to the European Patent Office, representing one hundredth of the OECD average (75). This number is almost ten times lower than in Hungary and over five times lower than in the Czech Republic (OECD, 2001). Poland has fallen short of the OECD ranking list showing shares of technologically advanced products and services in the total output of manufactured products and services by country, as its numbers turned out to be too low. Also the level of foreign investments (per capita) is low and their structure inadequate. If the venture capital portfolios in Hungary hold as much as 90% of high-tech companies, in Poland 60% of companies operate traditional technologies.

The goals set for the Polish economy are achievable through a number of supportive actions, the most important of which are modernisation of the economic structure, especially industrial, and building of an information and telecommunication infrastructure, transportation infrastructure and housing, as well as profound reforms in rural areas, including agriculture. The same strategy implies the need to provide conditions conducive to restructuring.

2.1. Main direction of economic transition

One can distinguish five directions of economic transition in Poland. The major economic growth-accelerating engine is development of a knowledge-based economy (KBE). In Poland it is still very underdeveloped. In the ranking of OECD countries Poland is third from the bottom with sixth points, with fifty-two scored by Switzerland (top position). Hungary is sixth from the top, with 31 points (Marsh, 2001).
The KBE spurs a high demand for skilled workers, persons with high qualifications and characterised by essential (common) competencies such as: entrepreneurialism, creativity, flexibility, ability to communicate with others and to absorb knowledge in an on-going process, to work in

groups and to readily accept changes. This is accompanied by a declining demand for workers with low qualifications (with education below average). In the USA for instance, employment of skilled workers in the years 1995-1999 (Arnal *et al.*, 2001) grew twice as much (3.3% a year) as in the case of managers (1.6%), with employment of workers with low skills steadily dropping (-0.2% a year). In the member states in the years 1995-2000 as much as 60% of new jobs resulted from high technologies (EC, 2001) and the science-intensive sector. The ICT development within knowledge-based economy significantly expands opportunities for a broader use of flexible employment, working time and workplace, including various forms of telecommuting.

Regarding the KBE, modernisation of industry resulting from the development of high technologies, including ICT is especially important. It allows the creation of new products, improves the competitive position of Polish enterprises.

In addition, lessons learnt by the developed countries show that ICT investments in the industry contribute to GDP growth most strongly compared with similar investments in telecommunications and other services. This is unquestionably evidenced by the example of countries such as USA, Australia, Finland, Canada and UK (Scarpetta, 2002).

Considering its relatively high absorption of labour, it is especially important to make the small and medium size sector (SME) more dynamic. In Poland SME firms employ around 63% of the workforce in the sector of enterprises (Report on the Conditions of the Small and Medium-Size Enterprise Sector in Poland for the Years 1998-1999, 2001). An expansion of this sector can also increase Poland's export opportunities, especially in its KBE-related area. Application of ICT in the SME sector makes it easier to gather market information and to tailor production and services to customers' needs, which in turn contributes to an enlargement of markets, growth in employment (especially through its flexible forms, such as distributed workplace, telecommuting, *etc.*[1]). In

[1] Some lessons for Poland can be derived from the comparision of SMEs growth in the USA and the EU. In the USA firms that enter the market are smaller than in the EU, but they fail faster. Those that have survived operate longer than in the EU. European firms make larger investments at the start-up stage and lose more when they go bankrupt (Scarpetta, 2002). Careful estimation of survivability is advisable.

traditional industries the SME sector creates jobs for persons with relatively low qualifications. Hence, the sector's growth is important, as its job-creation capability does not exclude workers with low qualifications.

The restructuring of rural areas, being as much difficult as urgent, should contribute to higher productivity of agriculture and GDP growth. Besides, it will significantly reshape the labour market. Restructuring of agriculture, depending on the approach, will reduce unemployment or at least bring to light its hidden part. The restructuring variant emphasising consolidation of arable land, is estimated to potentially increase unemployment in rural areas to 2-3 million persons or even more, unless a comprehensive restructuring of rural areas is undertaken (affecting both agricultural and non-agricultural activities), introducing new types of business activity and jobs for persons that have quit farming. On the other hand, the structure of the rural population and its predicted changes significantly determine such restructuring, both with regard to its pace and shape.

Among factors, which make these reforms more difficult, one should mention firstly that the forecasted labour force growth to the year 2010 (particularly strongly to 2005) does not support such economic restructuring, including agriculture, that might contribute to even more acute tensions in the labour market.

With a limited extent and pace of agrarian changes accompanied by meaningful restructuring of agricultural production and development of agriculture-related services (*e.g.* consulting services, trade, marketing), ICT infrastructure, transportation, water and sewer systems the tensions on the labour market might be released. In addition, the door to larger and more effective agricultural production would be opened, contingent on market diversification: natural food produced mainly for the EU market, mass production destined partly to EU niche markets and partly treated as the so-called alternative production for industrial use (for instance, cultivated rape as an additive to biofuels); its large part might also be adjusted to meet the needs of eastern and other markets (Woś, 1996). Also, development of agriculture-related services and infrastructure, as

well as tourism and recreation, the hotel industry and restaurants should increase the number of available jobs.

Third, the rural population is characterised by a much lower education than the urban one. The percentage of persons with higher education is approximately three times lower than in towns. In addition, the farming population in rural areas has a lower education than the non-farming. Only one peasant child in 130 or 140 enters a higher school (UNDP, 2000), whereas in the 1980s post-secondary education was taken by every fourth peasant child. A positive feature of agriculture employment is that large farms are managed by younger and better-educated farmers (UNDP, 2000). On the whole, effective restructuring of rural areas requires an effort to improve radically the education of their population in line with the intended directions of the demographic development.

Fourth, a declining share of young persons in the total labour force may adversely affect its quality, as older persons are less receptive to attempts to teach them more crucial competencies, such as entrepreneurship, flexibility, creativity. The example of Japan clearly shows the negative effects of the ageing labour force on economic dynamics. They can be prevented by trying to form such competencies of young persons, those who are children and youth today.

A temporary deterioration in the quality of the labour force may also result from the inclusion of a large group of long term unemployed persons to the workforce. Qualifications of them are being eroded. To avert the risk of sinking the quality of the labour force it is necessary to intensify activities that counteract long-term unemployment, as well as to provide training for this group of unemployed to give them skills demanded by the market. Naturally, the magnitude of training addressing the unemployed should be many times larger than the existing one.

Several studies show that in the years 1992-2000 the rural population was characterised by the following demographic traits (Borkowska (ed.), 2002):

- decreasing number of the population at pre-working age in farming households (from 27.7% to 26.1%) and non-farming households from 27.7% to 26.1% ;

- increasing proportion of working age population farming households (from 56.4% to 59.3%) and non-farming households (from 52.1% to 54.0%). In both these groups the percentage of persons aged 45-60/65 went up as well;
- a falling percentage of population at retirement age in farming households (from 15.5% to 14.6%) and its growth in non- farming households (from 18.9% to 19.5%). This indicates the population at non-working age in the rural areas is diminishing, which should facilitate future unemployment combating activities. A smaller share of old persons may make farms more productive and facilitate agrarian restructuring, especially in the south-western macro region.

Further, the diminishing number of persons under 24 years of age should make it easier to reduce the huge unemployment in this age group (50.9% in the case of farming youth and 88.3% for non-farming). Young people, however, should become the engine of transformation and development in rural areas, including the farming industry, as it is naturally more pliable to changes. Therefore, investments in education and development of the youth, taking into account the predictable changes in rural areas, and the resulting demand for skills and occupations, become an imperative.

Apart from development of a KBE and hi-tech industry, another important restructuring goal of the Polish economy is the beefing up of its export potential through the modernisation of: 1) traditional industries promising profitable export; 2) other industries that may contribute to accelerated growth of the Polish economy, *e.g.* the car industry, tourism, hotels, medical equipment, *etc.* (Karpiński, 2001). As it has already been mentioned, the restructuring of rural areas and agriculture should also increase the export capacity of the latter.

Construction of ICT and transportation infrastructure, as well as higher availability of housing, represents another significant goal of the economic transition, as they facilitate (especially the first two) the attainment of the previously discussed objectives. Their higher availability at lower prices improves access to information (for instance via the Internet) and the mobility of the workforce (housing, transportation system), which is important from the standpoint of higher efficiency of the labour market.

2.2 Conditions of success

The outlined goals of economic transition imply several lines of action that decide on the success. The lines are complementary and their implementation requires determined and effective co-operation on the part of all political and social forces that have to compromise if the various and competing socio-economic targets are to be achieved. Here the main focus will be on science and education and on macro-economic policy.

Science and education

The KBE tends not only to create and diffuse knowledge, but also to apply it. The very notion of knowledge steps beyond its codified version, *i.e.* written down and thus relatively easy to share with others, as it includes also tacit knowledge that can be learned directly, within a master and a disciple relationship (direct observation of the master at work, on-job-training watched by the master). As a result, the pool of applied, practical knowledge generated in firms (business or educational organisations, *etc.*) swells in relative terms, directly contributing to a higher degree of innovation. Innovation grows from science financed by the state budget, mainly theoretical research. Higher innovation in the economy hinges on intensive expansion of research and development sector (R&D). Such expansion is necessary, as it allows society to absorb modern technologies, but also prevents Poland's economy from becoming totally dependent on more developed countries (Kleer, 2002).

In the KBE practical knowledge generated in companies becomes more important. A shift takes place, from knowledge "pushed downwards" by R&D institutions financed by the state, to "drawn knowledge", one that is created, disseminated and implemented by enterprises themselves. In 2002 Polish R&D expenditure made up only 0.65% of the country's GDP and belonged to the lowest in the OECD; among the European OECD countries Poland outranked only Turkey and Romania (GUS, 2002). In addition, the outlays' structure in Poland presented a reverse image of the OECD average, including the European Union. If in the OECD (in 2000) over two thirds of the R&D expenditure were contributed by enterprises, and in the EU almost two thirds, in Poland two thirds of funds was financed by the national budget. This shows that Polish enterprises'

participation in financing the development and implementation of science is small, half of the OECD average.

This allows us to draw at least two conclusions. A considerable increase in government expenditure on science is necessary (double), as science has been underfinanced for many years. Next, enterprises should dramatically increase their R&D expenditure to approach the R&D expenditure structure in the OECD countries; it is a *sine qua non* of steady development of innovations in the economy and economic growth.

The required comprehensive restructuring of the economy significantly increases the weight and urgency of deep changes in the system of education. These are: 1) a radically enlarged proportion of persons with secondary and higher education, with assistance to children from poor families that would enable their education, as well as re-education of persons that are either unemployed or threatened by unemployment; 2) reformulation of teaching methods, curricula as well as types (forms) of education is indispensable, as the increase in the formal level of education is far from insufficient to restructure the economy and to accelerate its growth.

The importance of continuous learning processes (*i.e.* life-long education for adults) is outbalancing education of the youth. This situation means that the private sector (entrepreneurs) is becoming more responsible for investing in the development of its workforce. It also puts more stress on the collaboration between the state, public institutions and the private sector, supporting the latter in this area. Besides, since the school education system is the pillar of life-long education, it should be adjusted to the challenges of modern times.

Macroeconomic policy

The restructuring of economy and development of science and education cannot succeed without the government's involvement and related macroeconomic policy. Unfortunately, this paper does not allow the space to expand on this complex issue. It is necessary to produce a clear vision of the restructuring process and a set of instruments to support it. In particular, they should facilitate an inflow of direct investments to modern sectors, as well as those investments that condition modernisation of the

economy (for instance transportation infrastructure, *etc.*), acceleration of export and development of science and education.

The tremendous and difficult challenges Poland faces set against the extremely high, mandatory burdens levied on labour costs suggest necessary refocusing of the present macroeconomic policy and cuts in the burdens. The same conclusion can be drawn from lessons learned by the Triad countries. Robert Mundell, a Nobel Prize winner, explains the present variations in the rates of growth and competitive positions between the USA and the EU (Will the New Times be Better?, 2003), using a simple argument of the supply revolution. In the 1950s and 1960s the USA and the EU countries followed a similar path of development. In the next years their paths differed. In the 1980s the USA introduced reduction in taxes while in the same decade not only did the EU hold on to its old approach, but made it even more prominent, raising taxes to 50% of GDP (in Scandinavia to as much as 60%) and increasing public expenditures.

The lessons indicate the need to keep balanced proportions of the macro and micro policy on one hand and socio-economic policy on the other, but also the need for co-operation and shared responsibility of all market entities (organisations) for the shape and course of the restructuring process in its socio-economic dimensions. Consequently, questions about what model of social policy and collective labour relations suits the economic transition and expanding global competition will become unavoidable, likewise attempts at their redefinition.

3. Demographic changes and the transition

Comparisons of demographic changes and the directions of economic reforms show their multiple ties. Here, the focus will be place only on the impact of demographic changes on economic restructuring.

The decelerating growth in population, and from 2020 also in the labour force, will relax the labour market tensions, provided that the structure of qualifications of the labour force are adjusted to market demands at the same time.

As it has already been indicated, the required scale of economic reforms and adjustments remodelling the structure of qualifications and occupations of the labour force is tremendous and their types are diversified. Consequently, education has to be very deeply modified, also adult education. An additional goal of the latter is accelerated development of life-long education. The growing number of young people of school age should not make the number of teachers and schools decline. On the contrary, this situation provides a convenient environment for making necessary changes in the education system, and consequently in the economy.

The number of persons willing to upgrade their education at higher learning institutions which is expected to grow to the year 2004, will temporarily relax the pressure on the labour market in its most difficult period.

The ageing of the population produces both negative and positive consequences for the economy. The negative ones result from the growing dependency ratio, which translates into higher public assistance for this group of population. An inevitable result is a pressure on even higher GDP growth to cover related expenditures and additional emphasis on the imperative to accelerate the KBE development. The upside of this trend is the emergence of a market of products and services and a labour market addressing this group of the population. For instance, the trend implies refocused development of the industry of medical devices and instruments, the pharmaceutical industry, tourism and recreation, and personal care giving services (offered at home, and probably also in homes for the elderly).

Despite ageing, the age structure of the Polish population remains more favourable in the long term than that of the EU, which offers opportunities for catching up with the EU economy quite soon, provided that the labour force is appropriately used. At this moment, however, the opinions of two Nobel Prize laureates, Becker and Mundell (Will the New Times Be Better?, 2003), are worth reaching for. Becker stresses the importance of investing in human capital (being a factor that accelerates economic growth) and its proper uses, and quotes Mexico as a positive example and Russia as a negative one. Mundell refers to the need for correlation of the macro and micro- economic policies, the need for

Europe to have the "supply revolution", and to depart from "demographic stagnation". Both suggestions deserve close attention.

A higher percentage of disabled persons, being a natural effect of demographic ageing, leads us to expect a growth in the medical care costs for this group and higher public expenditures. On the other hand, a higher share of the elderly and disabled persons will require a build-up of the healthcare system and adjustment of its set-up (likewise in the industry of medical devices and instruments) to meet their needs. In addition, the system of home care will have to be expanded. Such an expansion, though painful for the public finance, may be alleviated by development of volunteerism within the private care sector (paid by the well-off groups) as well as in the area of home care giving and of assistance offered by fitter elderly persons to those less able-bodied, also assistance provided by neighbours.

Considering that the elderly and disabled persons in Poland have relatively low incomes, a share of private personal care (paid) as large as in developed countries (economically and socially), where this sector belongs to the fastest growing, cannot be expected (Hansen, 1998).

On the other hand, the forecasted dramatic growth in the share of one-person households in their total number to the year 2030 (RCSS, 2001) means that the extent of intergenerational support in families will also decrease.

The population ageing is a huge challenge for the economy that may grow even worse in the long term. A reflection on the retirement age limit and evaluation of the financial efficiency of the social insurance system may turn out to be necessary. Social and economic research supports policies towards creating employment opportunities for elderly persons, including those disabled. As the costs of creating jobs for such persons are considerable and requirements imposed on employers rather strict it needs a special policy regulations.

References

Arnal E., O. Wooseok, R. Torres, 2001, "Knowledge, Work Organisation and Economic Growth", *Occasional Papers* 50, OECD, Paris.

Bolesławski L., L.Rutkowska, 2000, *Prognoza ludności Polski według województw na lata 1999-2030* (Forecast of Poland's Population by Region, 1999-2030), GUS, Warsaw.

Borkowska S. (ed.), 2002, *Rynek pracy wobec integracji z Unią Europejską* (Labour Market and the Integration into the European Union), IPiSS, Warsaw.

EC, 2001, *Joint Employment Report*, Brussels.

GUS, 2001, Aktywność Ekonomiczna Ludności Polski II kwartał 2001, (Labour Force Survey in Poland II Quarter 2001), Warsaw.

GUS, 2002, Nauka i technika w roku 2001 (Science and Technology in 2001), Warsaw.

Hansen B., 1998, "Currents in Compensation and Benefits: New and Analysis", *Compensation & Benefits Review*, March-April.

Jóźwiak J., 2001, Ludność i gospodarka (Population and Economy), in: Strzelecki Z., A.Ochocki (eds.), *Polska a Europa. Procesy demograficzne u progu XXI wieku*, (Poland and Europe. Demographic Processes at the Beginning of the 21st), Rządowa Rada Ludnościowa, Rządowe Centrum Studiów Strategicznych, Warsaw.

Karpiński A., 2001, Strategia rozwoju przemysłu w Polsce po wejściu do Unii Europejskiej (Strategy of Industrial Development in Poland After Accession to the European Union), in: Kleer J, A. Łukaszewicz (eds.), *Polska w Unii Europejskiej. Szanse i zagrożenia gospodarcze* (Poland as a Member State. Economic Opportunities And Threats), Friedrich Ebert Stiftung, Wyższa Szkoła Bankowości, Finansów i Zarządzania, Warsaw.

Kleer J., 2002, Polska w Unii Europejskiej: teoria konwergencji i modele imitacyjne (Poland in the European Union: The Theory of Convergence and Imitative Models), in: Kleer J, A. Łukaszewicz (eds.), *Polska w Unii Europejskiej. Szanse i zagrożenia gospodarcze* (Poland as a Member

State. Economic Opportunities and Threats), Friedrich Ebert Stiftung, Wyższa Szkoła Bankowości, Finansów i Zarządzania, Warsaw.

Marsh P., 2001,"A New Millenium Winners and Losers", *Financial Times*, 30.10.01.

OECD, 2001, Science, Technology and Industry Scoreboard 2001. Towards a Knowledge-Based Economy, (http://www.oecd.org/publications/e-book/92-2001-04-1-2-2987)

RCSS, 2002, *Socio-economic Transition in Poland*, Warsaw.

Report on the Conditions of the Small and Medium-Size Enterprise Sector in Poland for the Years 1998-1999, 2001, Polska Agencja Rozwoju Przedsiębiorczości, Warsaw.

Scarpetta S., 2002, *The Role of Product and Labor Market Regulations for Firm Dynamics and Productivity Growth: Evidence for the OECD Countries*, Warsaw Office of the World Bank (typescript).

Strzelecki Z., 2001, Polska a Europa. Procesy demograficzne u progu XXI wieku (Poland and Europe. Demographic Processes at the Beginning of the 21st c., in: Strzelecki Z, A. Ochocki (eds), *Polska a Europa. Procesy demograficzne u progu XXI wieku* (Poland and Europe. Demographic Processes at the Break of the 21st c.), Rządowa Rada Ludnościowa, Rządowe Centrum Studiów Strategicznych, Warsaw.

UNDP, 2000, *Raport o rozwoju społecznym. Polska 2000. Rozwój obszarów wiejskich* (Report on Social Development Poland 2000. Development of Rural Areas), Warsaw.

Will the New Times Be Better? (Czy nowe czasy będą lepsze?), 2003, El Pais 22-23 Sept. 2002., quotation after „Forum" 2003 no. 52.

Woś A., 1996, Warianty strategii rozwoju polskiego rolnictwa (Variants of the Development Strategy of Polish Agriculture), in: *Polityka rolna – element polityki rozwoju gospodarczego Polski* (Agricultural Policy – An Element of the Economic Development Policy for Poland), PTE, Fundacja Rozwoju Programów Pomocy dla Rolnictwa, Komitet Ekonomiki Rolnictwa PAN, Warsaw.

Poland and Ukraine: demographic consequences of the two ways of come-back from the communism

Jan Paradysz

1. Introduction

Poland and Ukraine share a long and dramatic history. Many centuries ago such early Slavs tribes such as Polanie (Poles' ancestors) settled near Kiev (Davies, 1984). Even today the Polish and Ukrainian languages are very similar, more than Russian and Ukrainian. Only the Christian religions adopted in the course of history caused a separation of the two similar nations. This process was restrained by the Polish drive to the East in the 14th century and a polonisation of some of the Ukrainian nobility. During long periods Ruthenia (the Kievan Rus) suffered political and cultural dependency on Tartars, Poles, Austrians and Russians. The national consciousness of Ruthenians remained in the people and folklore. The rudiments of the Ukrainian literature are older than the nation's name.

After World War II the Soviet Ukraine was extended over the former Polish-Ukraine territory and Crimea. On the eve of its independence in 1991, Ukraine was, at a comparable level of economic development to that of Romania and Bulgaria. According to the World Bank (1993) (see Table 1) such social indicators as life expectancy at birth, infant mortality and total fertility rates were similar to those of Poland.

In this paper we discuss the question of why Ukraine, when started at the social and economic levels not so different in 1991, stood well below Poland as concerns the standard of living at the end of the 1990s. Why have the quarrelsome, individualist and incessantly dissatisfied Poles achieved success and the Ukrainians collapsed in spite of the good Soviet drill?

There are many theories that explain the differences between achievements of Poland and the post-soviet countries: the Balcerowicz's program, foreign aid, Polish specificity (for instance the role of the Church in the public life). It is difficult to verify all these hypotheses in such a short paper. We will try to show however that only countries better

prepared for a free market economy in the past have more positive demographic perspectives.

For purposes of this study we use official Polish and Ukrainian data concerning the economic and demographic situation in the 1990s, as well as before 1991. The Ukrainian demographic sources were neither rich nor detailed. Soviet demographic yearbooks were rare and lacked detail for particular republics. After 1991, Ukraine has published its demographic yearbooks. In addition, we have relied on information from international institutions such as the World Bank, WHO, and UN. We have also used Internet data available from the American data bank on the website of the US Census Bureau (international data bank – idb) http://www.census.gov /ipc/www/idbinst.html. However, the 'idb' estimations for the late 1990s are, probably, projections and we have more trust in a French estimation by Monnier and de Guibert-Lantoine (1997), also by Sardon (2000). A lot of statistical information about social, economic demographic situation in Ukraine can be found in the Russian internet pages (http://demoscope.ru/ weekly/).

2. Long-term fertility and mortality trends in the long perspective in Poland and Ukraine

The discussion starts from the year 1950 because good data for both countries are only available from this year onwards (see Table 1), In the period of communism, life expectancy in both countries was quite similar. In the 1950s and 1960s the Ukrainians lived longer. As Ukrainian demographers have shown, at the end of the 1960s life expectancy in the country was similar to that in Western Europe (Steshenko, 2001). In the 1970s, Poles lived slightly longer. Some stronger differences can be seen in the case of males at the start of the period. In the late 1980s, life expectancy at birth became equal in both countries.

At the beginning of the 1990s the official statistics showed that infant mortality rate was slightly higher in Ukraine (20‰) than in Poland (18,2‰) but in Poland there was infant death underestimation until 1994. The underestimation was caused by the national live birth definition, which differed from the one recommended by the WHO. The Polish infant mortality underestimation in the years 1963-1994 was about 3-5

Table 1. Life expectancy at birth, Poland and Ukraine, 1950 – 2001

Years	Females			Males		
	Poland	Ukraine	Differences	Poland	Ukraine	Differences
1950	61.7	66.8	-5.1	56.1	56.2	-0.1
1960	70.6	73.0	-2.4	64.9	66.6	-1.7
1966	72.9	75.2	-2.4	66.9	68.0	-1.1
1970	73.3	74.4	-1.1	66.6	65.5	1.1
1975-76	74.4	74.2	0.2	67.0	65.6	1.4
1978-79	74.7	74.1	0.6	66.6	64.9	1.7
1979-80	74.7	74.0	0.7	66.4	64.6	1.8
1980-81	74.8	74.1	0.8	66.6	64.5	2.0
1982-83	75.2	74.4	0.8	67.1	64.8	2.4
1984-85	74.9	74.0	0.9	66.7	64.8	1.9
1986-87	75.2	74.8	0.3	66.8	66.6	0.2
1987	75.2	74.8	0.4	66.8	66.5	0.3
1988	75.7	74.7	0.9	67.2	66.5	0.7
1989	75.5	74.8	0.7	66.8	65.7	1.0
1990	75.5	74.9	0.6	66.5	65.6	0.9
1991	75.3	73.9	1.4	66.1	64.3	1.8
1992	75.7	73.5	2.2	66.7	63.4	3.3
1993	76.0	72.8	3.2	67.4	62.8	4.6
1994	76.1	72.4	3.6	67.5	62.0	5.5
1995	76.4	73.0	3.4	67.6	61.0	6.6
1996	76.6	73.0	3.6	68.1	62.0	6.1
1997	77.0	74.0	3.0	68.5	63.0	5.5
1998	77.3	73.5	3.8	68.9	62.7	6.2
1999	77.5	73.5	4.0	68.8	62.6	6.2
2000	78.0	73.6	4.4	69.7	62.5	7.2
2001	78.4	73.8	4.6	70.2	63.0	7.2

Sources: For Poland – Central Statistical Office (http://stat.gov.pl/),for Ukraine – Demohraficzny shchorychnyk 1993 and http://www.census.gov/ipc/www/idbinst.html, Monnier and de Guibert-Lantoine (1997, 1214), Sardon (2000, 759), and Steshenko (2001, 321) for the years 1950, 1960, 1966, 1970 and 2001- the forecast.

promille points. So, one can conclude, that infant mortality at the beginning of the 1990s was probably similar in both countries. Similarly, according to the World Bank (1993), "Ukraine stood, on the eve of its independence, well below the West (and East) European countries but somewhat above middle-income countries from other parts of the world (…). Some analyses show that the former socialist countries fell behind Western Europe on these indicators in the past score of years, with adult mortality having risen perceptibly because of the higher incidence of

circulatory and respiratory diseases, which were being brought under control by modern preventive medicine in the West. Ukraine was probably somewhat better off in terms of schooling attainment, ranking nearer its European neighbours and performing well in international competitions. An extensive system of day care facilities may have assisted early learning, in addition to permitting very high levels of women's participation in the labour force. The system of social protection included state-provided education and health; pension benefits for the elderly, disabled, orphans and widows; family allowances and student stipends and subsidies for basic food and services that lowered living costs for all consumers" (World Bank, 1993).

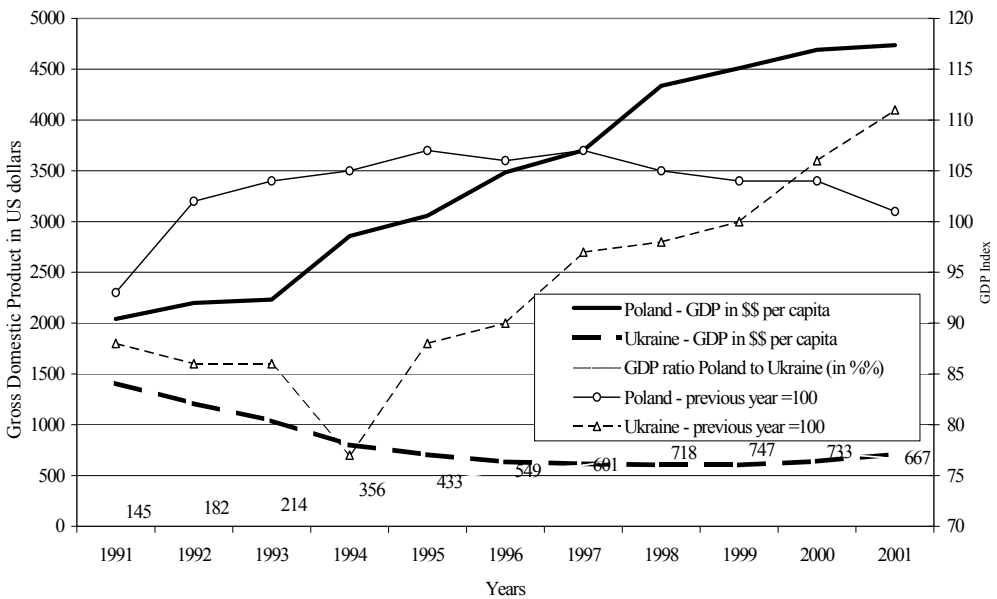
Since 1960 the total fertility rate (TFR) was lower in Ukraine than in Poland. In 1960 in Poland TFR was 2,98 and in Ukraine only 2,29 (see Paradysz, 1990). The mean age at birth at that time was in both countries 27.5 years. Over the next 20 years the TFR in Ukraine stabilized at the level of two children and in Poland a bit higher - at the level of 2.2 – 2.4. The mean age at birth became lower in Ukraine than in Poland by about 1 year. Ukraine, like the other European republics of the former USSR, Hungary, Bulgaria and Rumania, former Czechoslovakia, has always belonged to countries right to the famous Hajnal line (the line connecting St Petersburg and Triest). At present, Ukraine's mean age at birth remains very low: 2.5 years lower than in Poland. This seems to indicate that fertility in Ukraine has not yet been affected by the processes operating in modern societies. The main differences in both countries are manifested by large numbers of abortions and divorces in Ukraine, much larger than in Poland.

3. The socio-economic background of Poland and Ukraine

During the last years of communism, both countries were in quite a similar economic situation. In Poland, from 1976 to 1989 there was a great social, economic and political crisis, with food shortages and rationing. In the final years of communism, Polish people suffered the effects of very high inflation. But in contrast to the Ukrainians, Poles had a bit more economic liberty throughout that period. A great part of the agricultural sector was private. Commerce, handicrafts and services were in private hands as well, although all activity was regulated by a strict license system. The first years of liberty were very difficult for the

Ukrainians. The Ukrainian economy was in a worse situation than those of other countries in transition. The inflation rate was very high and the transformation of the economy went very slowly. Ukraine can be regarded as an example of how slow or gradual reform was attempted and stopped. There are arguments that this has been the result of several political and economic factors, and that the resulting 'arrested transition' may continue indefinitely. In Ukraine the economic situation of a great part of the population was not much better. According to official statistics, the gross domestic product (GDP) at the beginning of the 1990s was lower in Ukraine than in Poland (see Figure 1). However, in the 1990s the ways of economic development of both countries diverged very quickly. In 1991, GDP in Poland was about 45% higher than that of

Figure 1. Gross Domestic Product time series in Poland and Ukraine in the years 1991-2001



Ukraine and in 1999 the GDP difference rose to 747% (seven and a half times!). After the negative GDP growth rate in the first two years of the 1990s, Poland had rates between 2-7%. Until 1999 Ukraine recorded negative values from -2.5% in 1998 to -23% in 1994. Ukraine entered the 21st century with a positive GDP growth rate, which is very high now – at

the level of 6-11%. That increase is caused by the very low level of GDP – only 710 US$ per capita in 2001. The comparable value for Poland was 4737$.

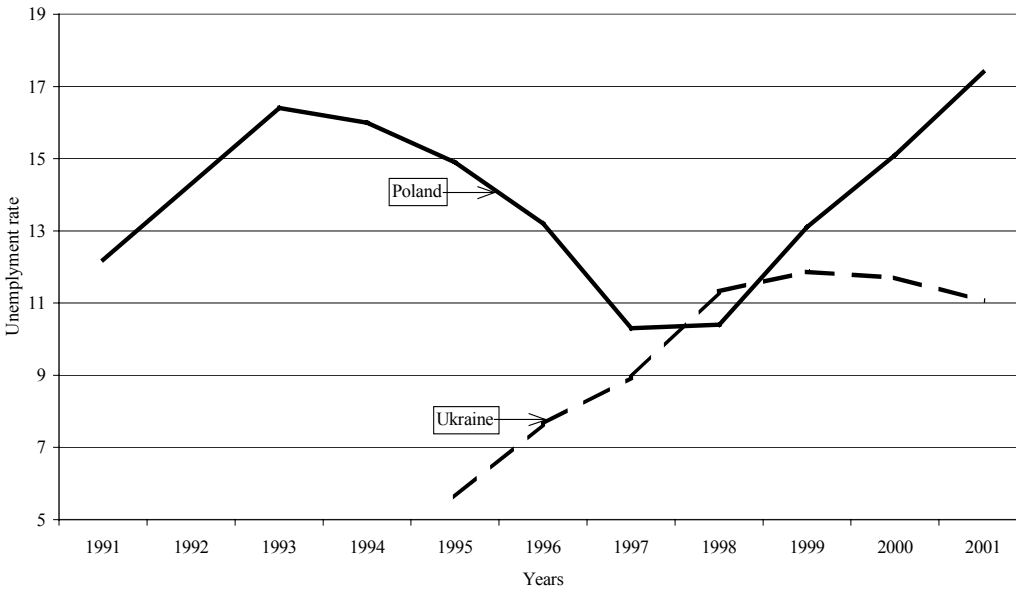
There are also huge differences in the structural changes in Polish and Ukrainian economies. In 2001 3392,268 entities[1] of national economy[2] were recorded in Poland in the business register (REGON) of which 2666,855 constituted individuals conducting their own economic activity. In Ukraine, the State Committee informed about 889,330 entities only. When disregarding farmers and individuals conducting economic activity, Polish records for the year 2001 indicate 725,413 entities, of which state owned enterprises constitute only[3] 0.28%. In Ukraine in 1996, there were 52,836 state owned enterprises (8.6% of the Polish number) and in 2001 – 43,374 (4.9%). Private enterprises in Ukraine in 2001 accounted for only 29,6% while in Poland for more than 99%. In Ukraine, the major form of ownership is collective. In 1996, collective forms of ownership accounted for 55,3% and in 2001- 57,2%. In terms of employment based on the type of ownership the changes are even less favourable for Ukraine. In 2001 only 3,5% workforce was employed in private medium- and large-sized enterprises. The respective value for Poland was 74,8%, however the Polish and Ukrainian data are not comparable.

One of the characteristics of the Ukrainian economy is a relatively high level of employment in the non-private sector with low productivity and a great delay in salary payment. For instance, in April 2002 2,9 millions Ukrainians did not receive their salaries, one third of whom had not obtained wages for 6 months and longer, ("Interfax-Ukraina", 12 April 2002[4]). The unemployment rates are not comparable between Poland and Ukraine, see Figure 2. Particularly, before 1998, the low unemployment rates in Ukraine seem to be very underestimated[5].

[1] All the data for Poland which are cited here come from the Statistical Yearbook of the Republic of Poland 2002, p. 584-585 and for Ukraine from Ukraina u cyfrach 2001, "Technika", Kyiv 2002, p. 159-165.
[2] Excluding farmers.
[3] Already in 1995 in Poland there were 4357 state owned enterprises (1,04%)
[4] See also Demoscope Weekly, nr 63-64, 15-28 April 2002, http://demoscope.ru/weekly/2002/063/php.
[5] Ibidem

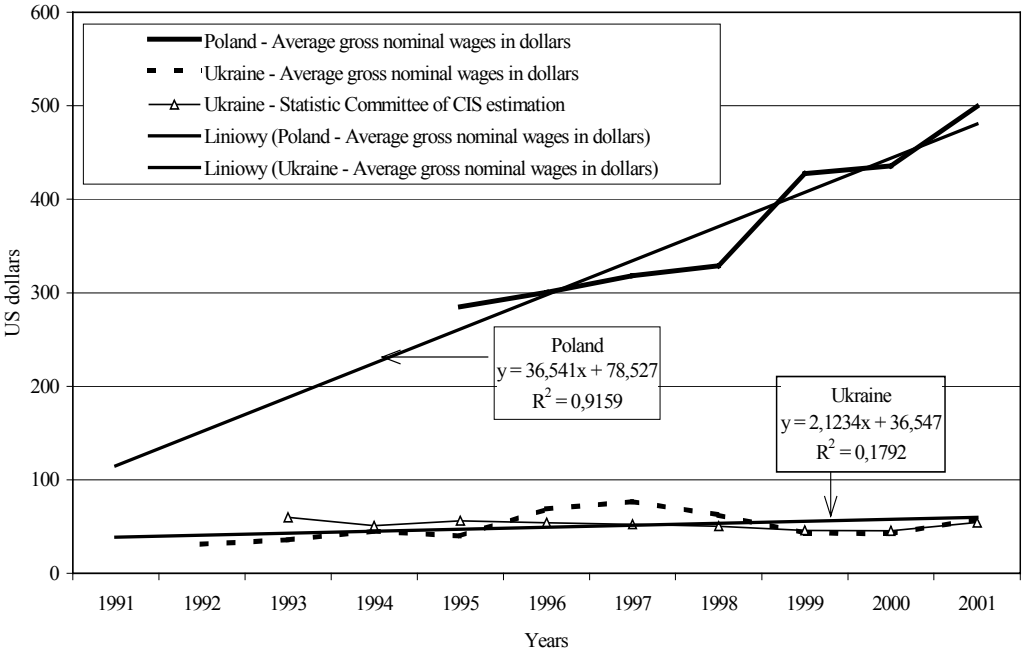
At that time, the Polish economy made relatively good progress. The Polish people have the highest earnings in the whole post-Soviet block. In the 1980s the average wage in Poland was approximately 30-40$. Wages were similar in many socialist countries. After 1990, wages increased very significantly in the Czech Republic, Hungary, Poland, Slovakia and Slovenia. In other socialist countries and the former Soviet Baltic republics the growth was less marked. In the other former Soviet

Figure 2.Unemployment rate in Poland and Ukraine in the years 1991-2001



republics (Commonwealth of Independent States - CIS) the wage increase was very small. About the year 2000, the mean monthly salary in these countries was less than 100$. Figure 3 shows the wage dynamics in Ukraine, as a CIS representative, and in Poland. The wage dynamics in Poland were very strong. At that time the mean monthly salary growth was 36.5$ and in Ukraine only 2.1$ per year. Poles have the highest salary in post-communism Europe group of countries – 500$. Nevertheless, an overwhelming majority of Poles is convinced that life nowadays is hard and some believe that it is even worse than in the years of communism. The dissatisfaction rate in Poland is the highest in Europe. Even the Russians and Ukrainians are more satisfied with their lives.

Fig. 3 Wages in Poland and Ukraine in US dollars in 1992-2001



4. The socio-demographic situation in Poland and Ukraine

Poland and Ukraine, like the other European countries, have gone through great demographic changes in the last decennium. In Poland, population size is not on the rise any more and in Ukraine it has decreased by about 4 millions. Demographic changes have been caused partially by the modernization processes which started already in the 1980s, (see Kotowska, Okólski and Paradysz, 2000) and by a significant fall in mortality. The fall in mortality in Poland was surprising because many people had expected hazards for living conditions. It is commonly believed that new phenomena such as unemployment, social differentiation, poverty and the abandonment of social welfare by the state should cause social trauma and mortality increase. Already in the middle of the 1990s, when the Polish mortality fall was perceptible, many eminent Polish demographers did not believe that this process would be significant and lasting. In the assumptions for the population forecasts for

the years 1995-2020 it has been assumed[6] that life expectation at birth for males in 2000 would be 68 years, in 2010 – 70 and in 2020 - 72, for females respectively: 76.5, 77.5 and 78.5 years. In the discussion nobody believed that the perspectives of life expectation at birth were strongly underestimated. In fact, men already lived to the age of 70 in 2000, 10 years earlier than expected, and women reached the age of 78.5 even faster: 20 years ahead of the forecast. Life duration improvement has been so rapid that currently held opinions about the bad living conditions and life shortness in Poland have not been changed yet. The eminent Polish epidemiologist Zatoński called life prolongation the 'second Vistula miracle'[7]. In his opinion "since 1991 (…) after the sudden socio-economic changes of the late 1980s, there has been a sudden drop in adult mortality rates. The main contribution to this change was a sharp decrease in cardiovascular disease (CVD) mortality, with a rate of decline unprecedented in any developed country in the world. The decrease in premature mortality in middle age and constant post-war decrease in infant mortality (which accelerated after 1993) led to an increase in life expectancy between 1991-1996 of 2 years in males and 1.5 years in females"(Zatoński and Boyle, 1996).

During this time mortality significantly increased in Ukraine. Figure 4 illustrates that the differences between Poland and Ukraine grow systematically. In a territorial cross-section a better situation can be noticed in the Western Ukraine. Here the fall in life expectation was smaller than in the more urbanized and industrialized Eastern Ukraine. In Poland, the longest life expectation at birth is in the east of the country. Like the West of Ukraine, the Polish East has been less urbanized and industrialized. Ukrainian demographers explain this territorial differentiation by referring to economic, social and ecological factors. However, they believe that the causes of the Ukrainian delay in comparison with Western Europe[8] have not been well investigated. More in-depth mortality analysis was made by Andreev (2001). He calls our attention to some factors common for the all Post-Soviet states: "a friendly degradation in the stagnation years", "a termination of the Soviet

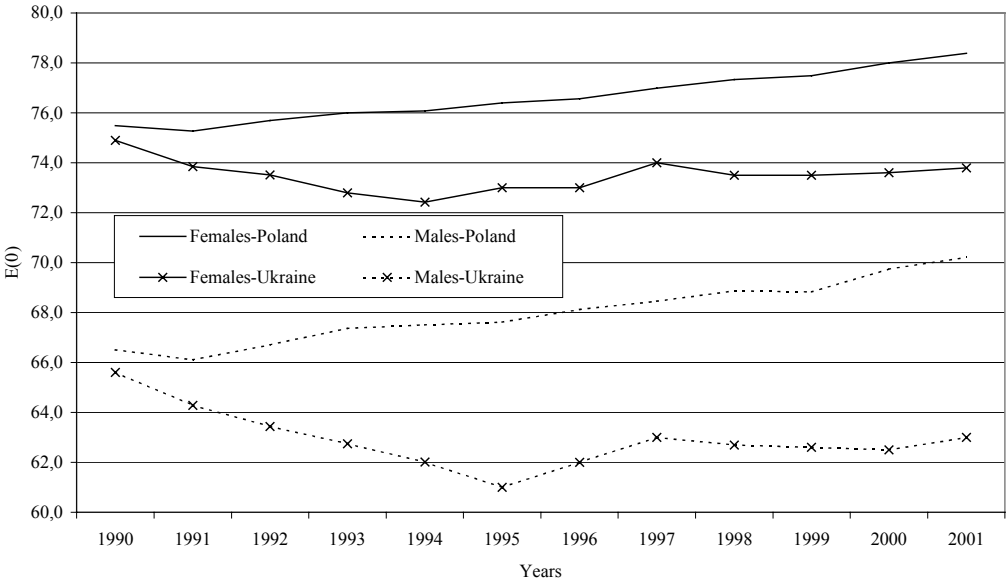
[6] see Bolesławski (1997, 23)

[7] the 'first Vistula miracle' took place in 1920 when the Polish Army stopped the onslaught of the Tukhachesky's Red Army near Warsaw.

[8] the Polish case is not taken into consideration.

–Post-Soviet synchronization?". Probably the problem of the similarity of demographic processes and the explanation of mortality as well as other demographic behaviours can be found only in the analysis of all the former Soviet Union countries.

Fig. 4 Life expectation at birth in Poland and Ukraine in the period of 1990 - 2001



Ukrainian demographers regard fertility as another phenomenon indicative of a demographic crisis. The total fertility rates are lower in Ukraine than in Poland in the whole of post-war period, but the difference is quasi-stable, see Figure 5. In the last ten years the trend line of the total fertility rate in both countries has sloped very quickly at approximately the same rate. For Poland, the best approximation of the total fertility rate is a straight-line trend. For the years 1989-2001, the trend line equation has the following form:

$$TFR(Poland) = -0{,}0745*t + 2{,}208;\ R^2 = 0{,}9734$$

However, the exponential function turns out to be a better model:

$$TFR(Poland) = 2{,}2729*e^{-0{,}0446*t};\ R^2 = 0{,}9766.$$

It is also better in terms of prediction and should be considered rather than a straight-line trend because it has a non-negative low asymptotic. Similarly, for Ukraine the exponential function yields the best fit:

$$TFR(Ukraine) = 2{,}0524*e^{-0{,}0549*t}\ ;\ R^2 = 0{,}9951.$$

Many factors influence fertility in Ukraine. It seems to us they are similar to those in other countries of the former Soviet Union. In comparison to Polish women, the Ukrainians more frequently undergo abortions. Ukraine has had a greater instability of marriages than Poland, a higher percentage of working women and a little influence of the churches on the family life. Frequently cited Ukrainian demographer describe social and economic factors of the very low fertility level in their country (see Steshenko, 2001). The ancient social institutions have either collapsed or work badly due to unemployment and poverty.

In Figure 5 we also show the dynamics of infant mortality. Already in the early 1990s infant mortality rate was many promille points lower in our eastern neighbour than in Poland[9]. In Poland in the last decade the infant mortality rate has been characterized by the exponential line:

$$IMR(Poland) = 23{,}35*e^{-0{,}0857*t}\ ;\ R^2 = 0{,}9738$$

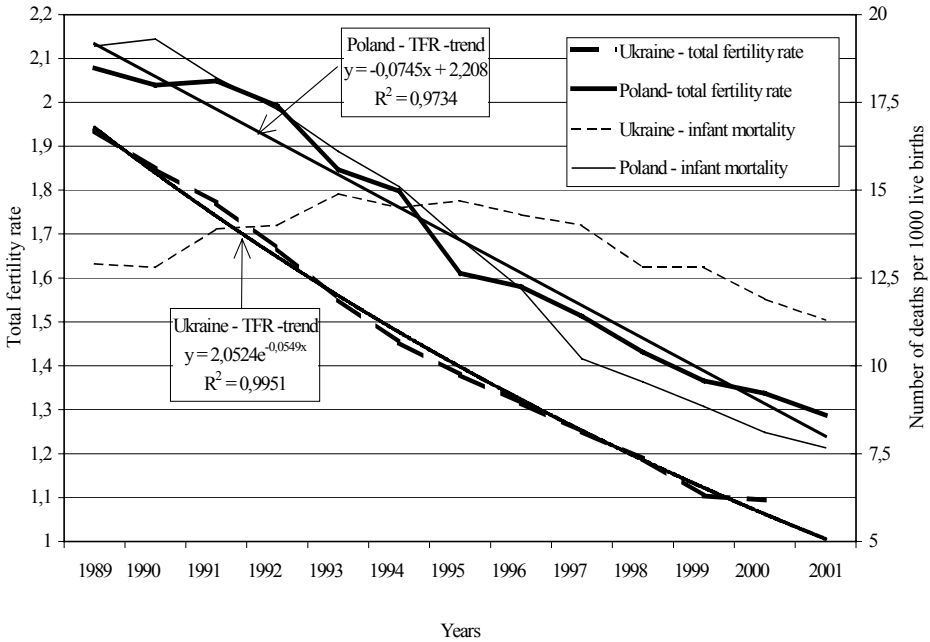
It is difficult to choose the appropriate trend model for the infant mortality rate in Ukraine. As we can see in Figure 5 it would be the second-degree trend line.

$$IMR(Ukraine) = -\ 0{,}0728*t^2 + 0{,}8865*t + 11{,}826;\quad R^2 = 0{,}9263.$$

[9] If the Soviet and Ukrainian authorities did not 'ameliorate' their mortality statistics, the difference between Poland and Ukraine in the eighties and early nineties is even greater. Unfortunately, Polish demographic statistics was 'ameliorated' in the past. In 1962, according to a law accepted by the then communist authorities many live births were regarded as still-born. In 1994 a new definition of birth and death of an infant was introduced in Poland; it was recommended by the WHO. There is a possibility of evaluating infant mortality according to both definitions. In 1980s the difference was quite significant – about 5 promille points. With time this difference grew smaller and smaller but in 1993 it was still 2.8 promille. In this paper we use proper data according to the definition of 1 July 1994. Our analysis is free from the previous communist 'swindle' in mortality statistics.

The function fits empirical data very well although it does not correspond with any reasonable theory of infant mortality and has bad projective properties.

Figure 5 Total fertility rate and infant mortality in Poland and Ukraine, 1989 - 2001



5. Long terms population perspectives

Such a low fertility rate poses a threat that Ukraine will depopulate very quickly. In the last UN projections for 2050, Ukraine will only have from 27.8 (low variant) to 36.2 (high variant) million habitants. It will be less than that of Poland (29.6 to 36.6) (see Table 2 and Table 3). Equally alarming are UN forecasts for Ukraine's life expectancy. According to these projections, Ukraine will reach Poland's present level of life expectancy only in 20 years' time. It is noteworthy that the UN forecasts with respect to Ukraine are cautious rather than alarmist. Apparently, it is assumed that everything will develop favourably in this country. This may be indicated by decreasing male over-mortality. According to forecasts, high male over-mortality in Ukraine, at present at the level of

Table 2. Projected population size and total fertility rate by fertility, Poland and Ukraine

Year	Medium		High		Low		Constant-fertility	
	Poland	Ukraine	Poland	Ukraine	Poland	Ukraine	Poland	Ukraine
	Number of population (in millions of persons)							
2000	38,7	49,7	38,7	49,7	38,7	49,7	38,7	49,7
2005	38,5	47,8	38,6	48,0	38,5	47,6	38,8	48,0
2010	38,4	46,0	38,6	46,5	38,2	45,6	39,0	46,4
2015	38,2	44,4	38,5	45,1	37,8	43,6	39,0	44,7
2020	37,8	42,6	38,4	43,7	37,2	41,5	38,8	42,8
2025	37,3	40,8	38,2	42,1	36,4	39,4	38,2	40,7
2030	36,7	38,9	37,9	40,7	35,4	37,2	37,4	38,7
2035	35,9	37,1	37,6	39,5	34,2	34,9	36,6	36,5
2040	35,0	35,3	37,3	38,3	32,7	32,6	35,5	34,3
2045	34,0	33,6	37,0	37,3	31,2	30,2	34,3	31,9
2050	33,0	31,7	36,6	36,2	29,6	27,8	32,9	29,5
Period	**Total fertility rate (children per woman)**							
2000-2005	1,26	1,15	1,29	1,25	1,22	1,05	1,48	1,25
2005-2010	1,26	1,15	1,35	1,30	1,16	1,00	1,48	1,25
2010-2015	1,32	1,22	1,45	1,42	1,18	1,02	1,48	1,25
2015-2020	1,39	1,28	1,58	1,51	1,20	1,05	1,48	1,25
2020-2025	1,52	1,38	1,80	1,66	1,25	1,09	1,48	1,25
2025-2030	1,67	1,50	2,04	1,85	1,29	1,15	1,48	1,25
2030-2035	1,77	1,62	2,21	2,02	1,32	1,22	1,48	1,25
2035-2040	1,82	1,72	2,29	2,16	1,34	1,28	1,48	1,25
2040-2045	1,84	1,80	2,33	2,28	1,35	1,32	1,48	1,25
2045-2050	1,85	1,85	2,35	2,35	1,35	1,35	1,48	1,25

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2002 Revision and World Urbanization Prospects: The 2001 Revision, http://esa.un.org/unpp, 07 April 2003

11 years, will fall to the present level of western countries in 2050. This would mean that by mid the 21st century Ukraine will have coped with the many plagues it is suffering from at present such as poverty, poor working conditions, alcoholism, suicides and marriage instability. On the other hand, UN forecasts about Poland are too pessimistic, without taking into account the economic achievements. Even the first period 2000-2005 shows that UN predictions have underestimated Poland's vitality. Poland's demographic indicators for this period are already better than those predicted by UN analysts, *e.g.*, predicted male life expectancy of 69.8 was reached at the beginning of the period, *i.e.* in 2000. The same concerns females. Similarly, one can hardly accept claims that Poland will reach the present level of the world's most developed countries

(Japan, France) only in 50 years. It seems that Ukraine will develop faster than what one might expect on the basis of current forecast data.

Table 3. Projection of life expectancy at birth by the sex, Poland and Ukraine

Period	Both sexes combined		Males		Females		Overmortality of men	
	Poland	Ukraine	Poland	Ukraine	Poland	Ukraine	Poland	Ukraine
2000-2005	73,9	69,7	69,8	64,7	78,0	74,7	8,2	10,0
2005-2010	74,9	71,3	71,0	66,7	78,8	75,7	7,8	9,0
2010-2015	75,9	72,5	72,0	68,2	79,6	76,5	7,6	8,3
2015-2020	76,8	73,3	73,0	69,2	80,4	77,3	7,4	8,1
2020-2025	77,4	74,2	73,8	70,2	80,9	78,1	7,1	7,9
2025-2030	78,1	75,1	74,6	71,2	81,4	78,9	6,8	7,7
2030-2035	78,7	76,0	75,4	72,2	81,9	79,7	6,5	7,5
2035-2040	79,2	76,9	75,9	73,2	82,4	80,5	6,5	7,3
2040-2045	79,7	77,6	76,4	74,0	82,9	81,0	6,5	7,0
2045-2050	80,1	78,2	76,9	74,8	83,3	81,5	6,4	6,7

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2002 Revision and World Urbanization Prospects: The 2001 Revision, http://esa.un.org/unpp, 07 April 2003

6. Conclusion

At the beginning of the political transformations, the situation of economies and the level of social problems in Poland and Ukraine were similar in macro scale. But at the threshold of free market economy, Poland and Ukraine chose two different paths: Poland witnessed a shock therapy and deep ownership changes while Ukraine experienced a very slow evolution inhibited by constant returns to a centralist economy. And the Polish way to market economy turned out to be more efficient. It can be related to its main its features:

- it was more consistent in changing the ownership structure of enterprises;
- it created favourable conditions for fast economic development, rational management, and a rise in the population's incomes;
- the labour market became more rational and the unemployment rate was a better reflection of what was going on in the economy than was the case in Ukraine.

Economic transformations in both countries are affected by demographic processes, in particular mortality and life expectancy. The state of our economies has also affected the level of social pathology (alcoholism, suicides, family dissolution, abortion). New phenomena in the field of marriage and fertility do not seem to be determined by economic processes.

The improvement of the Ukrainian economy in recent years must be seen as a positive sign, which is reflected by the fall in infant mortality and the rise in life expectancy. Further development requires more radical economic transformations and the acceleration of restructuring processes. Polish experiences could be of much use in this respect.

References

Andreev E., 2001, Shest' postsovietskikh stran: smiertnost' do i posle raspada SSSR. (Six Post-Soviet Countries: Mortality before and after USSR dissolution), *Demoscope Weekly*, 43-44. http://demoscope.ru/weekly/2001/043/php.

Bolesławski L., 1997, *Założenia do prognozy ludności Polski według województw na lata 1995-2000* (Assumptions of Poland's Population Forecasts by Voivodships for the Years 1995-2050), in: Assumptions and Results of the Population Forecast till 2050, Central Statistical Office, Warsaw.

Davies N., 1984, *Heart of Europe. A Short History of Poland*, Oxford University Press, Oxford and New York.

Derzhkomstat, 2002, Ukrayina u cyfrach 2001. Korotkyj statystycznyj dowidnyk. (Ukraine in figures in 2001. Short statistical abstract). Technika, Kyiv.

Kotowska I.E., M. Okólski and J. Paradysz, 2000, *Czy kryzys demograficzny w Polsce?* (There is a Demographic Crisis in Poland?) Instytut Problemów Współczesnej Cywilizacji, Warsaw.

Monnier A., C. de Guibert-Lantoine, 1997, "La conjoncture démographique: l'Europe et les pays developpés d'Outre-Mer", *Population* 5, 1187-1216.

Paradysz J., 1990, *Reprodukcja ludności w Polsce. Studium metodologiczno-poznawcze* (Reproduction in Poland – Methodological and cognitive study), SGPiS, Warsaw.

Sardon J.P., 2000, "Evolutions récentes de la démographie des pays developpés", *Population* 4-5, 729-764.

Steshenko W. (ed.), 2001, Demohraficzna kryza w Ukrajini. Problemy doslidżenja, wytoky, składowi, napriamy, protydiji. (Demographic Crisis in Ukraine. Research Problems), Instytut Ekonomiky, NAN Ukrajiny.
World Bank, 1993, World Bank Study of Ukrainian Healthcare.

Zatoński, W., 1999, The Dynamic of mortality in Poland, in: *Health and Mortality issues of Global concern*. New York: United Nations, Department of Economic & Social Affairs, Population Division, 227 - 261.

Zatoński, W. and P. Boyle, 1996, "Commentary: Health transformations in Poland after 1988", *Journal of Epidemiology and Biostatistics* 1 (4), 183-197.

PART V POPULATION POLICIES

Impact of transition on family policy

Nada Stropnik

1. Introduction

This paper aims at explaining the way in which the transition - particularly its economic part - induced changes in family policy. In other words, this is a trial to identify economic reasons for both the reduction in rights and the eventual later improvement of family policy measures in individual countries, also looking for the demographic concerns that may have caused the latter. The focus is on four family policy measures: maternity/paternity/parental leave, child benefit, child tax relief and childcare programmes.

In the transition years, the general political and economic environment was crucial for the developments in the social policy. While transforming their political, economic and social systems, many of the Central and East European countries also had to adjust to the European Union, which they have been in the process of joining: they had to meet wider macro-economic objectives for the single market and free competition, as well as reform their social protection systems in line with the EU policy (European Commission, 2002b). Through their assistance, international lenders and financial organisations such as the World Bank and International Monetary Fund also influenced the transition countries. At the same time, these countries were not immune to negative consequences of globalisation; unfavourable international economic developments have had a considerable impact on their economic performance, however differently depending on the degree of their international involvement. National factors closely related to the economic restructuring played an important role as well. To make things worse, the beginning of transition found many countries in a deep debt crisis. And, finally, the dissolution of former multi-ethnic states (Czechoslovakia, SFR Yugoslavia and the Soviet Union) was of great importance, too. Armed conflicts in some parts of the region, generally resulting from ethnic tensions that were allowed to express themselves in the extreme way, were the most negative outcome of the transformation.

The 1990s witnessed a declining share of GDP spent by governments, which was the consequence of reducing the role of the state. The reversed trend has been observed only in the Baltic States since 1992; however, the average share of GDP spent by the governments of these countries has been lower than in the Central Europe. Considering the big falls in GDP that were happening at the same time, the quality of governance - as realised through the effectiveness and efficiency of public sector in its role of providing social services and benefits – became essential (UNICEF, 2001). Social protection systems had to be reformed and reorganised in order to handle the social consequences of economic transformation. Due to budgetary constraints, these policies (family policy included) have undergone revisions. It should, however, be noted that not all countries have suffered the lowering of entitlements to various family benefits in the transition period - some have even increased them considerably - and also the size and duration of a negative change varied across countries. In some cases, reductions in entitlement and benefit levels were only temporary, while others have remained in force till today.

The extent of the transition induced changes in demographic behaviour, too. The timing of these changes depended on the tradition and culture in individual countries as well as on their demographic characteristics and trends prior to transition. Generation replacement became one of the most burning issues in the region. The pattern of having children changed even in those countries, for which decreasing or low fertility rates and postponing childbirth had not been characteristic prior to transition. In some countries, though, this had already been a long-term trend.

2. Economic situation and trends

Speaking of the transition in the context of this paper, we first of all have in mind its negative economic consequences: considerable decrease in national GDPs, high unemployment rates and the resulting lowering of living standards. The dynamics were different across the countries. Some consequences (unemployment, for instance) became evident and problematic only when reforms started to be implemented and not necessarily along with a decrease in the production output and GDP.

In most ex-socialist countries, transition processes began in 1989. By 1993 only four countries were registering some economic growth (Poland, Slovenia, Romania and Albania); by 2000 this was true for all transition countries. However, in spite of the revival of economic growth in the second half of the 1990s in most of transition countries, by 2001 only six of them had surpassed their 1989 levels of GDP: Poland, Hungary, the Czech Republic, Slovak Republic, Slovenia and Albania. In some countries, a decrease in GDP per capita was dramatic: by 62-63% in Moldova and Ukraine, by 52% in Lithuania and by 42% in Russia, all in the period 1989-1999 (UNICEF, 2001).

Almost all countries experienced a year or more of hyperinflation.[1] Bulgaria, Romania and Belarus had two waves of hyperinflation: Bulgaria in 1991 and again in 1996-1997, Romania in 1991-1994 and 1997, and Belarus in 1992-1995 and again in 1999-2000. In many countries, the inflation rate was decreasing in the second part of the 1990s, and in 2001 it was two-digits only in Belarus (59.8%), Romania (34.2%), Russia (21.4%), Ukraine (12.5%) and Moldova (11.1%) - (UNICEF, 2002, Table 10.5).

Disturbances in the countries' economies resulted in decreasing employment rates for both men and women, be it because of dismissals or (mainly involuntary) early retirement. Countries in transition have shown different trends. The employment rate was more-or-less increasing in the second half of the 1990s in Slovenia and Hungary, while in other countries (particularly in the Czech Republic, Slovak Republic, Romania and Albania) it was decreasing. It should, however, be noted that: a) in both Slovenia and Hungary, the number of persons in employment still is

[1] Annual inflation rates over 100% were experienced in Poland (586% in 1990), Slovenia (550% in 1990, 118% in 1991, 207% in 1992), Croatia (610% in 1990, 123% in 1991, 666% in 1992, 1518% in 1993), FYR Macedonia (608% in 1990, 115% in 1991, 1664% in 1992, 338% in 1993, 127% in 1994), Estonia (211% in 1991, 1076% in 1992), Latvia (172% in 1991, 951% in 1992, 109% in 1993), Lithuania (224% in 1991, 1021% in 1992, 410% in 1993) Bulgaria (334% in 1991, 123% in 1996, 1082% in 1997), Romania (161% in 1990, 210% in 1992, 256% in 1993, 137% in 1994, 155% in 1997), Albania (226% in 1992), Belarus (971% in 1992, 1190% in 1992, 2221% in 1993, 709% in 1994, 294% in 1999, 169% in 2000), Moldova (1276% in 1992, 789% in 1993, 330% in 1994), Russia (1526% in 1992, 875% in 1993, 311% in 1994, 198% in 1995) and Ukraine (1210% in 1992, 4743% in 1993, 891% in 1994, 377% in 1995) – (UNICEF, 2002, Table 10.5).

below the pre-transition levels, and b) two of the countries with decreasing employment rates (Romania and the Czech Republic) are nevertheless characterised by the highest employment rates in the region. Countries with lower female employment rates (Bulgaria, Hungary) showed an increase in this indicator in the second half of the 1990s while the opposite was true for countries with the highest rates (Romania, Czech Republic). On the other hand, Albania and Croatia have had low and decreasing female employment rates.

When the economic transition started in the former socialist countries, the uncertainty about previously near life-long guaranteed jobs emerged together with quickly increasing unemployment, which had been almost unknown before. Unemployment has affected some population groups disproportionately. It has struck young people (aged 15-24 years) much harder than other age groups: their unemployment rate is about double (in Romania 2.5 times) that for the total labour force.

The massive loss of jobs has not been properly reflected in unemployment statistics due to extensive early retirement, a shift to self-employment in agriculture, or black economy. For instance, in 2000 the self-employed (most of them in rural areas and overlapping with unpaid helping family members) accounted for more than a quarter of total employment in Romania. Quite often it is under-employment that is also widespread in the Bulgarian agricultural sector and which, also due to low productivity, results in low income and in-work poverty.

In the beginning of the 1990s, the registered unemployment rate remained relatively low in the Czech Republic (where it remained one-digit throughout the 1990s), Slovak Republic, Romania, Bulgaria and the countries that had made part of the former Soviet Union. However, already in 1992 the unemployment rate in the Slovak Republic was a two-digit one. In spite of a dramatic decrease in GDP in Latvia in 1991-1993 (GDP halved!), the registered unemployment rose in this country only in 1993. Such a “delay” could be observed in the other two Baltic States, too. In the Commonwealth of Independent States (CIS), the registered unemployment rate has never exceeded 4.5%

In the second half of the 1990s, following a period of increase, registered unemployment was declining in Hungary, while in Slovenia it first

increased and then decreased. An increase could be observed in the Czech Republic, Slovak Republic, Croatia, Romania, Bulgaria, Latvia and Lithuania. In Poland, registered unemployment was decreasing from 1995 to 1998 and has been increasing since. Due to specific reasons, the unemployment rate in the FYR Macedonia is the highest among the observed transition countries.[2] Apart from it, the highest unemployment rates in 2000 were registered in Croatia (21.1%), Slovak Republic (19.2%) and Bulgaria (18.1%). Poland and the Baltic States also had unemployment rates above 10%. In the Czech Republic and Poland, female unemployment rates have been considerably higher than those for men. Unemployment rates still remain one of the major challenges for employment policy even in the countries where they have been more-or-less decreasing. Countries with increasing unemployment have a much greater problem to solve - particularly Croatia, the Slovak Republic, Bulgaria, and Poland, which are also characterised by very high unemployment rates.

In the transition years, low wages became widespread and the share of working poor increased. This was particularly true for the minimum wage earners. According to UNICEF (2001), in 1990 the minimum wage accounted for 26% of average wage in Belarus and 23% in Russia while in 1999 it accounted for only 5% of average wages in both countries. Of course, such a minimum wage could not protect the earner from poverty whatsoever.

As compared to 1989, real wages fell dramatically in 1990 in Poland and ex-Yugoslavia. In other Central European transition countries, East European countries and the Baltic States this happened in 1991. It was in these two years that real wages reached their bottom in the 1990s in most of the transition countries. In Hungary and Romania, a decrease was gradual. In 2000, real wages exceeded those in 1989 only in the Czech Republic (since 1996). On the other hand, in Lithuania, Moldova, Russia and Ukraine they were less than half their 1989 real value (Eurostat, 2001 and 2002; UNICEF, 2002). These data indicate how large a decrease in the households' purchasing power was and prove that, generally, current incomes were not sufficient to secure families with an appropriate

[2] In Macedonia, unemployment rate was at 22.6% already in 1989, and it has not fallen below that level since.

standard of living. Speaking of wages, one should also mention the problem of irregular payment of wages and unpaid wages.

Consequently, not only those who lost their jobs but also those who remained in employment earning low wages experienced a decrease in living standards and even poverty; formerly state-controlled prices increased sharply; free or highly subsidised social services and benefits that used to enable people to make ends meet in spite of low wages were not granted anymore, were cut considerably or left to deteriorate in real terms; the employers could no longer provide high work-related benefits while fiscal constraints prevented the state from providing them; getting an appropriate social housing was not a common practise any more.

Unemployed people and their families (quite often including children) have been at the highest risk of poverty. The second group have been families with more children, also due to parents' unemployment. It is thus not surprising that at the end of the 1990s some 4 million children lived in absolute poverty in the four Central European countries in transition (Hungary, Poland, Czech Republic and Slovak Republic), some 2.4 million in ex-Yugoslavia, 0.7 million in the Baltic States, 5.7 million in SE Europe (Albania, Romania and Bulgaria) and 26.8 million in the western part of the CIS (Russia, Moldova, Belarus and Ukraine). These children lived on less than 4.3 purchasing power parity dollars a day (UNICEF, 2001). There were large variations across the region: in Moldova, 99.9% of children were poor by this standard, 93.2% in Albania, 75.7% in Romania, 58.9 in Russia, 56.6% in the FYR Macedonia, 52.5% in Latvia, etc. At the other end of the spectrum were countries like Slovenia with 0.9% child poverty rate, the Czech Republic (1.9%) and Croatia (4.9%).

3. Demographic situation and trends

Clear shifts in demographic behaviour were observed in the 1990s (Table 1). They reflected a range of different factors with unemployment, the fall in real incomes, the worsening of living conditions for the great majority of families, new poverty, social insecurity, political tensions developing up to the level of armed conflicts, uncertainty about the future, and a more open and permissive society being just the most frequently mentioned ones.

Already prior to transition, birth rates in the region were characterised by a long-term steady decrease, but a sudden relatively high decrease in some transition countries in the 1990s can directly be linked to the transformation processes and their consequences. The cost of children increased for families. With the level of income insufficient to secure families with appropriate standard of living and in such a turbulent period many couples did not decide to have children.

Table 1.Demographic indicators

Countries	Crude birth rate		Change in the size of population, 2001/1989, index		Total fertility rate		% of children born out of wedlock		Mean age at birth of first child	
	1989	2001	age 0-17	age 0-4	1989	2001	1989	2001	1989	2001
Albania	24.6	17.1**	104	84	2.96	2.10*	-	-	-	-
Belarus	15.0	9.2	84	56	2.03	1.27	7,9	20.5	22.8	23.4
Bulgaria	12.6	8.4	70	58	1.91	1.24	11,4	42.0	22.1	23.1
Croatia	11.9	9.6*	88	86	1.67	1.38	6,6	9.4	23.9	25.5*
Czech Republic	12.4	8.8	74	68	1.88	1.14	7,9	23.5	22.5	25.3
Estonia	15.5	9.3	74	51	2.21	1.34	25,2	56.2	23.0	24.2
Hungary	11.9	9.5	78	79	1.82	1.31	12,4	30.3	23.1	25.3
Latvia	14.6	8.3	77	45	2.05	1.21	15,9	42.1	22.9	24.6
Lithuania	15.1	9.1	88	62	1.98	1.30	6,7	25.4	23.4	24.1
FYR Macedonia	17.0	13.3	92	80	2.10	1.73	7,0	10.4	23.4	24.3
Moldova	18.9	8.5	74		2.46	1.26	10,4	20.5*	-	22.8
Poland	14.9	9.5	82	63	2.09	1.29	5,8	13.1	23.3	24.8
Romania	16.0	10.4*	75	64	2.20	1.24	-	26.7	22.6	23.6*
Russia	14.7	9.1	82	-	2.02	1.25	13,5	28.8	22.8	23.0***
Slovak Republic	15.2	9.5	81	67	2.08	1.20	7,2	19.8	22.6	24.3
Slovenia	11.7	8.8	77	71	1.52	1.21	23,2	39.4	23.5	26.7
Ukraine	13.3	7.8*	81	-	1.92	1.09*	10.8	18.0	-	-

* 2000
** 1999
*** 1997

Source: Council of Europe, 2000 and 2002 (original data and own calculations); UNICEF, 2001 and 2002 (for figures in italics); Eurostat, 2002 (Albania 2000).

Due to insecure employment, many women opted for postponing childbirth if it would have threatened their jobs. Increased opportunities may also have acted as a strong disincentive for some young people for forming a family and having children in their early adulthood.

In 1989, Moldova and Albania had the highest birth rates. In the transition years, crude birth rates decreased in all Central and East European countries, with different variations within the period. The greatest decrease was recorded in Moldova (by 10.4 children per 1000 population in the period 1989–2001), followed by the Baltic States (by 6.0-6.3 children per 1000 population). It is most probable that Albania - with its decrease by 7.5 children in the period 1989-1999 - belongs to this group as well. On the other hand, the smallest decreases occurred in Hungary and Slovenia (by, respectively, 2.4 and 2.9 children per 1000 population), which were the countries with lowest birth rates prior to the 1990s.

In recent years, the birth rate has been increasing in Belarus, Estonia, Latvia and Russia (in individual years also in Bulgaria, Poland, Moldova and FYR Macedonia). A rather stabile situation may have been observed in Romania (after a considerable decrease in the first years following the abortion liberalisation in 1990), Czech Republic, Hungary and Slovenia. In Albania, a decrease in the birth rate has been accelerated. In 2001, the lowest crude birth rate in the Central and East Europe was recorded in Latvia, where 8.3 children were live born per 1000 population. Bulgaria and Moldova (with, respectively, 8.4 and 8.5 live births per 1000 population) followed. Only in Albania (17.1 in 1999) and FYR Macedonia the value of this indicator exceeded 10.

As a result of an ever smaller number of births, the number of children aged up to 17 years has decreased by 8-30% in the period 1989-2001. The smallest decrease was in FYR Macedonia and the biggest in Bulgaria. Only in Albania an increase (by 4%) was registered. The most dramatic was a decrease in the number of children below 5 years of age: it more than halved in Latvia and Moldova, but the percentages of decrease exceeded 40% also in Estonia, Russia, Ukraine, Belarus and Bulgaria. The lowest decreases were registered in Croatia (by 14%) and Albania (by 16%) - (UNICEF, 2002).

Not all the fall in the fertility in the 1990s can be attributed to transition. In part, it was just a continuation of long-lasting trends – particularly in

Hungary, Slovenia and the Baltic States – though transition has undoubtedly speeded that process up. An accelerated decrease in fertility could be observed in almost all transition countries. Hungary was an exception with its first increasing and then rather stabile fertility rate in the first half of the decade, which is believed to be partly a consequence of preserving family benefits (United Nations, 1999). In Poland, the major breaking point which marked the accelerated decrease in the total fertility rate was the year 1995, but already in 1989 the Polish total fertility rate did not allow for a replacement of generations.

The intensity of change was to a great extent dependent on the level of the fertility rate in the late 1980s: where it was relatively high (like in Albania, Moldova, Romania and Estonia), the fall usually was (and could have been) more dramatic. On the other hand, for countries having experienced a falling fertility rate for several decades and its low level already in the end of the 1980s (like Slovenia, Croatia and Hungary) the changes in decimal figures (even in the second ones) were very much important and worrying. It is, however, true that the hardest period of transition (the first half of the 1990s) had caused a sharp downward shift in the Czech fertility rate in spite of its low level already at the start of the transition process.

In the period 1989-2001, Moldova, Romania and the Slovak Republic experienced greatest decreases in their total fertility rates (by 1.2, 0.96 and 0.88 births per woman, respectively). However, a similarly big decrease occurred in Latvia in the period 1989-1997 as the total fertility rate changed from 2.05 to 1.11 (by 0.94 births per woman, meaning that it almost halved) in only eight years; it has somewhat recovered since. Croatia and Slovenia – countries with the lowest fertility rates in 1989 – experienced the smallest decreases, which resulted in the placement of Croatia among three transition countries with the highest total fertility rates in 2001. Albania has been the leader among the transition countries as far as the total fertility rate is concerned (2.96 in 1989); currently, it is close to the replacement level with 2.1 births per woman in 1999-2000.

Such a decrease may be explained by the accelerated transition of the Albanian society from agrarian to a more industrialised one, and from more traditional family patterns to more modern ones (United Nations, 1999).

There was a belief (and hope) that falling fertility rates in the 1990s in part reflected decisions taken by many young women to postpone having children, especially the second child, rather than a permanent reduction. Unfortunate for the population of Europe, the facts so far speak against this argument. Economic and social conditions have improved in many Central and East European countries without any worth mentioning positive impact on fertility rates. However, women who were in their early twenties at the start of transition still are in childbearing age, so the final evaluation cannot be made yet.

Fertility has still been falling in many countries in the region. Even the year 2000 did not reverse the trend in Poland, the Slovak Republic, Lithuania and Moldova. Increases in the total fertility rates in 2000 in quite a number of the transition countries (in Slovenia, it was the first increase in 21 years) gave hope that the situation might change, but they mostly proved to be only temporary. In Romania and FYR Macedonia the number of live births was even lower in 2001 than in 1999 while in Slovenia it returned to the 1999 level; this leads to a conclusion that the increase was most probably related to the ”magic number” of the year 2000, in which the parents wanted their children to be born. In 2001, the Czech and Slovak Republics, followed by Latvia and Slovenia, had lowest total fertility rates (between 1.14 and 1.21).

In 1989, mean age of women at birth of first child was highest in Croatia and Slovenia. In addition to that, Slovenia is a country that experienced the greatest increase in this indicator in the period 1989-2001: by the whole of 3.2 years. The second highest increase (by 2.8 years) pushed the Czech Republic from the bottom but one place in 1989 to the third highest place among the 14 selected transition countries in 2001. In the observed period in the region, the range of mean ages of women at birth of first child has widened considerably: from 1.8 to 3.9 years. In Moldova, mean age was 22.8 years in 2001, in Bulgaria, for which an early start and an early end of childbearing is characteristic, it was 23.1 years, while in Slovenia it was 26.7 years. The fact that mean age at birth of first child has been increasing in all countries means that ever fewer years remain at disposal for having the planned number of children.

In 1989, it was by up to 1.3 years higher than mean age of women at first marriage; only in Slovenia were they the same. However, increasing co-habitation and the share of children born out of wedlock tend to decrease the difference among the two mean ages and have in some countries already caused the situation where the mean age at birth of first child is lower than mean age at first marriage (in Estonia, Bulgaria and Slovenia).

4. Family policy

In the former socialist countries, female employment rates were high and it traditionally was full-time employment. As a consequence, measures aimed at the reconciliation of professional and family duties and ambitions made an important part of family policy.

The transition created a generally unfavourable environment for families. New priorities arose for the governments, which immediately demanded considerable resources in order to prevent an even greater decline in economic growth. Cuts in social expenditure have thus been implemented to limit budget deficits. State protection and assistance through partly compensating for the costs that families have with raising children was weakened. This occurred in the time period when the importance of family policy measures would normally have increased due to aggravated economic position of families with children and disturbances in the former reproduction patterns in many countries in transition. One of the ways in which governments responded was the introduction of benefit targeting that replaced former universal family benefits. The other, "invisible", way of reducing funds for social benefits was omitting of their indexation for inflation which was particularly high in the first years of transition. The third way was to lower entitlements. Very few countries were able to keep and even upgrade their family policies.

In this chapter, the developments in four family policy measures in the transition period are presented, compared and evaluated. These measures are maternity/parental/paternity leave, child benefits, child tax relieves and pre-school childcare. The stress is on the ways in which the policy makers responded to a shortage of resources for financing these measures, unfavourable economic situation of families with children and the worsening demographic indicators.

4.1. Maternity/paternity/parental leave

In this overview, only basic characteristics of maternity/paternity/parental leave are included. The insurance based leave and benefits are described first, and then the benefits for non-insured or all persons. Only changes in the regulation during the transition years are named since it is not our aim here to describe or compare maternity, parental and paternity leave in the former socialist countries but rather to trace developments in this family policy measure that may be considered as a consequence of economic transition and/or demographic situation and trends in these countries.

Insurance based leave and benefit

Generous maternity and parental leave (the latter is often referred to as childcare leave) was a well-known constitutive part of the socialist social policy. The total leave lasted up to the child's age of two, three or even four. However, one should consider the affordability of such a long leave since, quite often, the benefit received during the leave was too low to allow the family to make ends meet. Usually, flat rate benefits during childcare leave acted as a disincentive for mothers with high income to use long leave. According to the Hungarian experience, the benefit was fully used mostly by unskilled women who suffered the smallest lost of income or even received more income while on leave than if working (depending on the level of a flat rate benefit). Nevertheless, the possibility for mothers to stay at home with some income and job security in a way promoted gender equality (Sipos, 1994). It also was an alternative to expensive nurseries and frequent leave for care of a sick child as a consequence of exposure to infections in nurseries (Erler *et al.*, 1994). On the other hand, though, it contained hidden constraints for female professional careers.

In the pre-transition years, the entitlement to maternity benefit was mostly limited to employed persons and was gradually extended to cover large agricultural population and the self-employed. Since the 1990s, new groups have been covered by insurance based leave and benefits. In 1995 in Slovenia, the wage replacement was extended to mothers whose permanent employment was terminated without their violation or fault during pregnancy and maternity leave. In Hungary, since 1996 maternity benefit has been paid also to mothers with less than 180 days of social

insurance in the two years prior to delivery (Tárkányi, 2003). From 2001, periods of study in secondary or tertiary education are counted as insurance period, so that also pregnant women and mothers without contributory entitlement can receive the maternity benefit if they had studied full-time at a college or university for at least one year within two years prior to delivery (European Commission, 2002b). Different from this, the conditions for entitlement were severed in Latvia in 1996; at least 6 months of insurance period are required now. In 1998 the right to maternity benefit was extended to mothers who were dependants of insured persons but, due to the financing problem, this regulation remained in force only several months (Eglīte, 1999).

In the beginning of the 1990s the Slovak Republic introduced a somewhat longer leave for unemployed mothers. Paid maternity leave was extended by two weeks in Lithuania in 1989, Estonia in 1990, Russia in 1991 and Romania at the end of the 1990s. In Poland, however, it was shortened as compared to the pre-transition period and namely from 22 weeks to 16 weeks for the first child of the woman and 18 weeks for each subsequent childbirth. The leave was longer by ten weeks only in the year 2001.

Due to the fact that prior to transition the wage compensation rate mostly was 100%, the benefit level could only decrease. In 1996, the wage compensation rate in Hungary was changed from 100% to 70%, up to a ceiling. Since 1999, there is 90% wage compensation in Bulgaria (European Commission, 2002a and 2002b), and it is limited at both ends. The wage compensation rate was also decreased considerably in 1994 in the Czech Republic: from 90% to the current 69% which is no more applied to wage but to a lower assessment base[3] (up to a ceiling) - (Sipos, 1994; Kocourková, 2002). In the Slovak Republic, though, 90% compensation has been retained and only a ceiling was introduced.

Parental leave has undergone changes, too. First of all, eligibility to parental leave was widened. In 1995 in Slovenia, the wage compensation was extended to mothers whose permanent employment was terminated without their violation or fault during parental leave. Since 2002, parental leave may also be taken by grandmother or grandfather if they are covered by social insurance and if the mother is a student below age of

[3] The assessment base is 100% of the gross daily wage up to 10 Euro plus 60% of the wage amounting to 10-14 Euros (European Commission, 1999).

18. Since 2000, Hungarian fathers may use childcare leave (GYED) also before the child's first birthday (Tárkányi, 2003). Albania is the only one among the observed transition countries that can no longer afford parental leave, particularly not a paid one (Suzor, 1999).

The duration of parental leave has changed in both directions. In Bulgaria, it was shortened by one year in 1999 and it now may last until the child turns two. In most cases, though, parental leave was extended. This was mostly aimed at offsetting cutbacks in childcare provision, but also at solving the problem of excess labour supply. In the former Soviet Union six months of unpaid leave were added to one year of paid leave in 1990. Total period of 18 months was counted as the pension contribution years (McAuley, 1994). From 1991, all parental leave is paid in Russia. There is also a possibility to prolong it till the child's age of three, but the last 1.5 years are not paid. Already in 1989, paid childcare leave was extended in Lithuania till the child's age of 1.5 years and unpaid leave till the child's age of three (with a guarantee of return to the same job). In 1991-1994, mothers could have opted to care at home for their children up to age 7, however without a job guarantee. According to the 2000 act, parental leave still may last up to the child's age of three, but an insurance-based parental benefit is paid only till the child's first birthday (European Commission, 2002a). Since 1994, parental leave may be extended in Poland if both parents remain unemployed (Golinowska *et al.*, 2003). In Croatia since 1996 one of the parents may opt for unpaid leave from the child's age of one to its age of three. However, the person on leave is paid no social security contributions and the return to former job is not guaranteed (thus it has to be agreed upon with an employer). Prior to the mid-1997, the parental leave in Romania was granted till the child's first birthday, then it was prolonged to 20 months (Bodnárová *et al.*, 2001) until the fundamental reforms in 2001 introduced an even longer parental leave (till the child's age of two).

Long parental leave does not mean that parents really use it fully. The legal ban on dismissal of women or termination of their employment contracts protects Polish women only during pregnancy and maternity leave (Bodnárová *et al.*, 2001). According to the quotation in Kotowska and Witkowski (1996), a threat to lose a job during parental leave resulted in a marked drop in the percentage of Polish mothers on that leave in the beginning of the 1990s. Golinowska *et al.* (2003) quote the finding that in

the late 1990s women in low-paid but permanent jobs tended to take parental leave more than four times less frequently than in the mid-1980s. In the end of 2001, the amount of parental benefit was decreased by approximately one-third in Croatia. The new level is quite low, so that many women opt for the return to their jobs after the expiry of maternity leave. The second factor influencing the use of this leave is a danger of becoming unemployed. As the standard of living is declining for many families, also parents in Bulgaria tend to shorten their parental leave and use it only until the child turns one.

The value of the parental benefit is rather low in most countries, particularly where it is flat rate. Slovenia is at the top with an unchanged 100% wage compensation rate during 37 weeks. Improvements in the benefit level in the transition period include its rising in the Soviet Union in 1990 and rising of parental benefit for agricultural workers in Romania from 65% of the contribution base to 80%. In 1989 in Lithuania, parental benefit was increased and also extended (at a somewhat lower level) to the last 6 months of an 18-months leave. The benefit was further increased in 1990 (Stankūnienė and Kanopienė, 1994).

A wage related childcare benefit (GYED), which was aimed at stimulating Hungarian parents (particularly women) with higher earnings to give birth to children - since they had suffered the greatest childbirth related loss of income while receiving a flat rate childcare aid (GYES) (see chapter 4.1.2) - was abolished in the mid-1996 as part of the package of economic austerity measures. It was reported that many pregnant women requested an early childbirth in the days prior to 15 April in order to enjoy the right to GYED (Szabo, 1996). However, the abolishment of GYED did not mean the total loss of a benefit during childcare leave; just the benefit up to the child's age of two was no more wage-related but flat rate (GYES). GYED was reintroduced in January 2000. Its level does no more differ according to the duration of insurance as it used to; the new wage replacement rate is in-between the former two (Gál *et al.*, 2003).

More flexible modes of use of parental leave and parental benefit have begun to be offered recently. Since 2002, parents in Slovenia are allowed to use part of childcare leave (up to 75 days) until the child is below eight years of age. In case of unused childcare leave, there is a possibility to obtain the non-received amount of wage compensation (up to five

monthly amounts) through payment for childcare services, payment of the housing rent or for a housing purchase.

Provisions for large families have also been introduced. In 1993, an employment (insurance) related child raising support (GYET) was implemented in Hungary for parents raising in their households three or more children, of which the youngest is 3-8 years of age (in 1998 it became the right of all parents). The payment is not available to families receiving a childcare aid (GYES) for a child below age three (Bagdy, 1995). The period of receiving GYET is counted in the contribution period for pension insurance. The National Demographic Development Programme, adopted by the Croatian Parliament in January 1996, envisaged a series of measures to help families have the desired number of children. The most important one may have been the 1996 extension of the parental leave from the child's age of one to the child's third birthday in case of birth of twins or the third and subsequent child (Križić, 1999; Zrinščak and Puljiz, 2002). The right is held by employed and self-employed parents. However, in the end of 2001 the leave was shortened to the child's age of two years and can be taken only in case of multiple births. Since 2002, regular childcare leave (260 days) in Slovenia is extended by 30 days if – at the birth of a child - parents already care for at least two children below age of eight, by 60 days if they care for three children, and by 90 days in case of four or more children.

Countries that are in the process of joining the EU were required to adapt their regulations to the EU policy of equal opportunities for both sexes. Namely, parental leave is an individual right of the mother, which she may transfer to the father of the child. Paid paternity leave as an exclusive right of the father has thus started to be included in the relevant legislation. This must be done in spite of the fact that maternity and parental provisions in the accession countries often are much more generous than the compulsory ones for the EU Member States. Paternity benefit was introduced in Latvia in the end of 2000. It amounts to 80% of the wage and is paid for a period of up to 10 days. However, its introduction was postponed until the social insurance budget reaches a positive balance and repays its loans to the general state budget (European Commission, 2002b). The father's individual right to a paternity leave lasting 90 days has been introduced gradually in Slovenia in the years 2003-2005. At least 15 days must be used during the maternity leave,

while the rest of 75 days can be used until the child's age of eight. During the first 15 days of the paternity leave, the father is entitled to 100% wage compensation, while for the rest of 75 days he will only be paid the social security contributions based on the minimum wage. Paternity leave was introduced in Estonia in 2002, too. It lasts 14 days, may be taken while the child is 0.5-2 months old, and is paid at a low flat rate.

Benefits for non-insured persons (citizen/resident benefits)

Prior to transition, benefits for non-insured parents were not as widespread and developed as those for insured parents. In spite of financial constraints during the intensive transition processes, such benefits were implemented in a number of countries; where they had already existed, their coverage was extended and their level improved. Both may be explained by demographic concerns.

In the former Czechoslovakia, mothers taking care of their children below age 3 were receiving a benefit. This benefit had a pro-natalist character because it was granted only to women with two or more children; those with one child could have received the benefit till the child's age of one and take unpaid leave till its age of two (Kocourková, 2002). Since 1991, there is a flat rate parental benefit in the Czech Republic to support full-time rearing of any child, currently until its age of four (prior to 1995 it used to be one year shorter). A parent who is not entitled to insurance-based maternity benefit may draw the parental allowance since the birth of the child. In the Slovak Republic, a flat-rate parental benefit is paid to a parent taking full-time care of a child below age of three.

From 1986 till the end of 1993, the benefit granted in Slovenia to persons who were not eligible for the insurance-based wage compensation during the parental leave was called social assistance to mothers. Eligibility was limited to female secondary school- and university students and the registered unemployed; housewives and some farmers were excluded. Since 1994, a flat rate parental supplement has been granted to all mothers (exceptionally to fathers) who are nationals of Slovenia, have a permanent residence in Slovenia and are not receiving any wage compensation. Since 2002 the child must be a national of Slovenia as well.

The year 1996 obviously was an important turning point in the parental leave policy in Hungary. GYED was terminated while childcare aid (GYES) was made independent of previous employment status and increased, while at the same time it became income tested. In 1999 it became universal again. Currently, GYES is a benefit for parents who take care of their children and do not qualify for the insurance based childcare benefit (GYED), and for employed parents who opt for caring for children till their third birthday. The latter may choose to receive GYES at any time following the birth of the child (if GYED is lower due to low level of former wage) or only after the expiration of GYED (Tárkányi, 2003). Since 2001 the grandparent may be the beneficiary if the child is at least one year old and they are living together. Starting from 1998, employment is no more a condition for entitlement to child raising support (GYET) – see Chapter 4.1.1 – so that, in a way, it is a continuation of GYES. As a consequence of the 1992 Abortion Act, in 1993 a pregnancy allowance substituted a maternal aid (one-time cash benefit) which had been received by a group of insured mothers not covered by GYED. Pregnancy allowance was paid to all mothers from the 4th month of pregnancy until the child benefit became due. The benefit level was equal to child benefit, so it was like a child benefit given to an unborn child. It was aimed at improving the development of foetus through better nutrition of the mother and, probably, at preventing abortions. This allowance was cancelled in 1996 and instead a birth grant was reintroduced (United Nations, 1999).

Paid childcare leave for parents of children below age three was introduced in Estonia in 1992 (Pôldma, 1995). Non-employed parents received it from childbirth while employed parents started receiving it after the expiration of maternity leave. In 2000, it was replaced by childcare allowance. It is currently paid in respect of: a) each child up to 3 years of age, b) child aged 3 to 8 in a family with two children, of which one is below 3 years of age, and c) each child aged 3 to 8 in a family with three or more children. The benefit parameters obviously include demographic incentives (European Commission, 2002b).

In the period 1996-2001 non-insured mothers in Croatia were entitled to an equally long paid parental leave as the insured ones (till the child's age of three) in case of birth of twins, the third and subsequent child (*i.e.* there was no such entitlement after birth of the first and the second child). In

the end of 2001, maternity leave up to the child's age of six month was introduced for non-insured mothers and may be taken after any birth (Zrinščak and Puljiz, 2002).

In the early 1990s, a pregnancy benefit for studying mothers not covered by social insurance was introduced in Lithuania (paid for 70 days preceding delivery). Full-time students in Russia were granted the right to use parental (childcare) leave immediately after childbirth. Since 2002, eligibility to a non-insurance based parental benefit in Bulgaria had covered all non-insured mothers. Prior to that, only full-time student mothers, unemployed mothers and non-insured single mothers were eligible.

Duration of the period of receiving benefits has changed since the beginning of the 1990s. In Latvia, it was gradually extended in the beginning of the 1990s. In Slovenia, it was prolonged from 84 to 365 days in 1994. In Bulgaria, the period of receiving benefit was shortened from two to one year in 2000 (Noncheva and Satcheva, 2003) and in Croatia from three years to six months in 2001 (however, the coverage was extended considerably). The highest child's age for entitlement is currently 8 years, and namely in Estonia (for parents with more than one child) and for GYET in Hungary (for parents with more than two children). In the Czech Republic, parental benefit is received till the child's age of four, in the Slovak Republic, Hungary (GYES), Estonia and Latvia till the child's age of three, and in Ukraine till the child's age of two.

The entitlement to parental benefit has been income tested in Bulgaria since 2002. The Hungarian GYES was also income tested in the years 1996-1998. Some 10% of potential beneficiaries were deprived of it. There used to be an income ceiling for eligibility to GYET, too, but it was removed in 2000.

The benefit levels are mostly flat rate. In Bulgaria, the flat rate benefit level is the same as the one for insured persons on parental leave. In Estonia and Latvia it depends on the age of the child. The amount of benefit was increased in Estonia in 1994 and in Slovenia in 2002, while it was decreased in Croatia in 2001 and in the Slovak Republic in 2002. Insured person's pension insurance contribution is paid in Hungary and

Latvia (in the latter, since the mid 1990s it is paid only till the child's age of 1.5 years).

During the period of entitlement to GYES, the parent of a child below age 1.5 in Hungary is not allowed to be in employment. After that age, he/she may work part-time, or even full-time if working at home. The parent receiving GYET may be employed up to four hours a day (Lukács, 2002). The 1991 act was allowing a gainfully employed parent in the Czech Republic to work for a maximum of two hours per day if earning less than a threshold income, but it was cancelled later on; only a (higher) income threshold has remained as a condition (European Commission, 1999). In the Slovak Republic, entitled is also the employed parent in a two-parent family earning less than half the minimum wage while the single parent must not be gainfully employed. In Latvia, beneficiaries must not be employed for more than 20 hours a week if the child is below 18 months of age, or 34 hours a week if the child is between 18 months and 3 years. There is no obligation for the parent in Estonia to stay at home while receiving childcare benefit, so this benefit may be perceived as an additional child benefit (Ainsaar, 2001).

In the Czech Republic, the child for which one of the parents is receiving parental allowance may be placed in a nursery for a maximum of five days per month (European Commission, 2002a; Kocourková, 2002), while in the Slovak Republic the child must not be included in organised childcare. In Lithuania in 1990-1994 families bringing up at home pre-school children older than 18 months were reimbursed 70% of the average expenses per child in state pre-school institutions if the child was not attending such institution (Pechulene, 1994).

4.2. Child benefit

There is a long tradition of child benefits in the transition countries. Since child benefit often used to make part of social insurance, families outside formal employment were excluded, but coverage gradually broadened (Sipos, 1994). The dependence of eligibility to child benefit on employment (insurance) record led to erosion in coverage when unemployment started increasing (UNICEF, 1995). This was particularly unfortunate because most of the families who lost entitlement were at the same time those with lowest income (if any at all). The satisfactory

employment record as the condition for entitlement was removed in Hungary in 1990. In Lithuania, insurance-based child benefit was abandoned in 1994.[4] In Croatia, eligibility was extended to all parents irrespective of their employment status only in 2000 while in Bulgaria child benefits remained part of the social insurance package till 2002.[5]

Child benefits were regulated for Polish farmers in 1990 while in 1993 the entitlement was extended to cover the families of the unemployed (World Bank, 1995). Also in 1990, the coverage was extended to formerly excluded single children aged 6 and over in Hungary (Jarvis and Micklewright, 1992). From 1990 in Estonia eligibility was covering only children below 1.5 years of age and, upon income test, also those up to age 6. In 1992 child benefit became the right of all children till age 15 (18 for students), which was prolonged by one year in 1994 (Pôldma, 1995; Ainsaar, 2001). FYR Macedonia still provides only insurance based child benefits.

By the end of the 1980s in some countries (like Poland,[6] Hungary, Czechoslovakia, Bulgaria and Romania) child benefits were paid irrespective of the economic position of a family and were of particular relevance for families with children. The stress was on horizontal redistribution. In other countries (like ex-Yugoslavia, the Soviet Union and Albania) child benefits were income tested and resembled social assistance; thus, the stress was on vertical redistribution. Income test was abandoned in Estonia and introduced in Bulgaria in 1992. Universal benefits were formally in force in Russia in 1991-1998, but in practice they were abandoned earlier.

By the mid-1990s, the pressure on government expenditures and increased poverty among families with (more) children had led many countries to reform their social protection systems (UNICEF, 2001). One of the frequent solutions was a move from universal child benefits

[4] In Lithuania, the entitlement to child benefit is related to the child aged 0-3 years if parents are not entitled to insurance-based maternity/parental benefit. If the opposite is true, they are entitled to child benefit only for a child aged 1-3 years. Due to age limit, Lithuania's child benefit may be considered as a form of parental benefit.

[5] Up to then, assistance-based child benefits paid by the municipalities covered the gaps (*i.e.* families with both parents unemployed or uninsured) - (Suzor, 1999).

[6] Except for farmers (Topińska, 1995).

towards more targeted ones, that is, from horizontal to vertical redistribution. This reflected the policy decision to change the role of family policy in order to stress concern about poverty. In this way, child benefits were allocated the role of social assistance. Eligibility became dependent on income test, although the level of income cut-off might be set very high, as in Hungary or the Czech Republic (and in Slovenia which, however, has never implemented a universal child benefit). In 1994, income threshold was introduced also in Poland (50% of national average wage per family member; in 2002 it was changed to social minimum - Balcerzak–Paradowska, 2003) and the Slovak Republic, and in 1995 in the Czech Republic. A scheme of income testing and income dependence was tried in Hungary from 1996 (Klugman *et al*., 2002). Child benefit remained a subjective right only for families with three or more children. Different from this, Lithuania abandoned income test in 1994 and Latvia in 1996. Income threshold for entitlement was raised in Slovenia, slightly in 1994 and considerably in 1996, so that 70% of children in the relevant age group were receiving child benefit.

By the end of the 1990s, steady economic growth allowed for more generous child benefits in a number of transition countries. The new Hungarian government made child benefit universal again by the 1998 act, which was also a consequence of high support by the society to family policy, partly due to serious concerns regarding a long-term persistently low and still decreasing fertility rate. Since 2002 child benefits have been granted to all families with children in the Slovak Republic and Albania, independent of their income (Vagac and Haulikova, 2003). Different from this, income testing was progressively introduced in practice in many Russian regions during the late 1990s, which was formalised by federal law in 1998. In recent years, only Bulgaria has moved away from universality and introduced an income test in 2002. In 1999, income threshold for entitlement was somewhat decreased in Slovenia. In Croatia, targeting criteria were loosened in 2000, but was made somewhat stricter again in 2002).

In some socialist countries, child benefits used to be a significant income source. Sipos (1994) quotes estimates that in 1980 child benefits for two children amounted to 22% of average wage in Hungary, 20% in Bulgaria and Czechoslovakia, and 17% in Poland. Such generous child benefits prevented poverty in families with children under the conditions

characterised by fairly flat earnings. During the initial phase of transition, former price subsidies for goods consumed by children and families as well as various benefits in kind were abolished. In order to protect the poorest families, the governments either introduced new income tested and income dependent benefits or selectively increased child benefits for low-income and/or large families. Around 1989-1991 additional benefits were introduced in Hungary, the Czech and Slovak Republics and Russia to compensate for price increases. In 1990 in Hungary, child benefit for a two-child two parent family was equal to approximately 40% of average male wage (Jarvis and Pudney, 1995) as compared to 25% in 1980. This was a kind of compensation for the cuts in subsidies to children's goods and the introduction of the personal income tax. Income tested supplements are still being paid. The Czech families with children were receiving a compensation benefit from 1990 to 1994. From 1993 there was an income threshold for entitlement (Heady and Smith, 1995). Flat rate compensation benefits were paid in the Slovak Republic from 1991, from 1992 upon income test (Cichon and Hagemejer, 1995). In 1995 they were substituted by an income dependent social allowance which was abandoned in 2001 when the child benefit level was doubled. There is, however, a supplement to child benefit for families with low income. Also in Bulgaria, during the period of high inflation in the 1990s, supplements were added to the basic amount of child benefit (Suzor, 1999). In the end of 1993 in Russia, price compensation was combined with cash benefits for low-income families with children to produce a regular child benefit (UNICEF, 1995).

In most of the transition countries, cash social benefits were not indexed for inflation regularly (or even not at all), thus causing a steep decline in their purchasing power. However, only proper indexation of child benefits that keeps their real value unchanged guarantees a preservation of the initial logic within the system. This is particularly important for child benefits that differ by age or rank of children (Suzor, 1999). Due to inadequate uprating in the course of the 1990s, the real value of child benefits eroded and became very modest in Poland, Hungary, Bulgaria, Romania, Latvia and Russia. This enabled the governments of some countries to stick to universality and thus escape politically sensitive decisions to be made, while at the same time lowering the burden of child benefits for the state budget. Currently, indexation of child benefits according to the consumer price index has been practised in Slovenia; in

Poland, the Czech Republic, Slovak Republic, Latvia and Lithuania it is linked to minimum income; in Hungary and Bulgaria the benefit level is defined annually in the State Budget Act. In the majority of the transition countries there is no automatic adjustment of child benefit.

There were also other ways in which families were hit during transition. In FYR Macedonia severe delays in receiving payment of child benefit (up to three months) were reported in the late 1990s (Suzor, 1999). The mid-1990s surveys showed that half or more of Russian families with children were not receiving what was meant at that time to be a universal allowance. This was due to several reasons, for instance, regional financing for the benefit and payment through employers (until 1997). Arrears have become very common and child benefits were mostly reaching non-poor families (Klugman *et al*., 2002).

Also in the most successful and developed transition countries, average child benefit per child was equal to a (considerably) lower percentage of national average wage in 1999 as compared to 1991 (UNICEF, 2001). The ratios between the 1991 and 1999 percentages were 14.3%: 6.1% in Hungary, 13.5%: 6.8% in Poland, 13.2%: 4.2% in Bulgaria, 13.0%: 3.6% in Latvia, 10.3%: 6.6% in the Slovak Republic, 10.0%: 4.2% in Estonia, and 9.0%: 6.8% in Slovenia.[7] Obviously, the typical pattern has been in favour of high coverage while benefit rates have declined sharply relative to wages. The situation is somewhat different for poor families, for which child benefits still remain an important source of income. In the bottom income decile they accounted for 7% of the total income in the Czech Republic up to 18% of the total income in the Slovak Republic in 1999 (UNICEF, 2001) The 1998 figures for Slovenia were 6.4% for all households in the bottom income decile and 11.6% for those households that included children up to 18 years of age (Stropnik and Stanovnik, 2002).

Universal child benefits are a very welcome family policy measure if the amount of benefit contributes a significant share to covering child costs. If it is not enough generous or is even negligible, it does not fulfil its primary role and is just a symbolic expression of the governments'

[7] The average benefit declined in Slovenia due to the broadening of eligibility to higher income families, while at the same time keeping the benefits income dependent (high benefits for lower income brackets and low benefits for high income brackets).

awareness of the costs associated with raising children. Because of that, the idea is gaining support to have universal child benefits and complement them by income-tested supplements for low-income families.

Large family supplement

The following short overview of benefits targeted at large families is aimed at pointing to good practice of transition countries that have started acknowledging the value and financial burden of raising more children through additional contribution to covering costs of children in such families. Except for Romania, these countries include those that were rather successful in their transformation processes. It is thus not surprising that the large family supplements as a universal family policy measure were mostly introduced in recent years and not earlier than the second half of the 1990s.

In Romania, a supplementary child benefit for families with two or more children was introduced in 1997 as the economic situation in the country aggravated considerably (Vilnoiu and Abagiu, 2003). There is an annual benefit for multiple births of three or more children (or repeated multiple birth of two children in two years) in the Slovak Republic if at least three children in the family are aged up to 15 years. A special benefit is paid to Lithuanian families raising three or more children; there is an income test for families with three children. Only in the years 1999 and 2000 a flat-rate large family allowance was paid in Poland before the start of a school year to all families with three or more children (Golinowska *et al.*, 2003). In 1994-1995 a benefit for families with four or more children existed in Estonia (Ainsaar, 2001); since 2001 there is a benefit for families with 4 or more children or with triplets. A universal large-family supplement has been paid since 2002 in Slovenia to families with three or more children fulfilling the age and status conditions for the entitlement to child benefit. The full benefit level has been implemented gradually in the period 2002-2004.

The large family supplement is flat rate in Slovenia and Estonia, while it increases with the number of children in the family in Romania and Lithuania, and is slightly progressive with the age of child in the Slovak Republic.

4.3. Child tax relief[8]

Currently, there are child tax allowances in the Czech Republic, Slovak Republic, Slovenia, Croatia, Romania, Estonia, Latvia, Lithuania and Russia, and child tax credit in Hungary.[9] In some countries, tax relieves for children gained in importance in the 1990s. In Slovenia, they were increased in 1994, in the Slovak Republic in 2002 (from some 29% of the personal tax allowance in the end of the 1990s to some 43% in 2002 - Kesti and Andersen, 1998; Kesti *et al.*, 1999; Kesti and Balle, 2000; Kesti, 2002), and in Croatia in 1995 and 1999 (where they were somewhat decreased in the beginning of the 2000s). In Latvia, however, child tax allowance was lowered in 1996 and its absolute amount has remained the same since; as a consequence, it was fairly symbolic in 2002 (Eglīte, 1999; Suzor, 1999; Kesti *et al*., 1999; Kesti, 2002).

Child tax relieves are the same for all children in Romania, Latvia (50% of the personal tax allowance in both countries) and Russia. They increase with the rank of the child in Slovenia (by the same amount)[10] and Croatia (the scale was made more progressive in 1995 and considerably progressive in 1999, and it remained quite progressive - but much less than before – also after revisions in the beginning of the 2000s) – (Zrinščak and Puljiz, 2002).[11] A progressive scale indicates a strong pro-

[8] Special cases of child tax relieves (for instance those for disabled children) are not presented.

[9] There art two kinds of tax relieves: tax allowances and tax credits. Due to a progressive tax scale, and since a tax allowance means that a certain amount of income is exempt from taxation, the effect of tax allowances is in favour of more affluent taxpayers. Tax credits result in the same tax saving for all tax payers - of course, if their income is high enough to take full advantage of the credit. If, due to low taxable income, no tax is to be paid, there is no tax saving either since there is no possibility of claiming a negative income tax in cash.

[10] The tax allowance for the first child amounts to 10% of the annual national average wage, 15% for the second child, 20% for the third, etc.

[11] In the period 1995-1998, tax allowance for the first child was 30% of personal allowance, and for each other dependent child it was higher by 10% of personal allowance. In 1999, tax allowance for the first child was set at 50% of the personal allowance, 70% for the second child, 100% for the third, 140% for the fourth, 190% for the fifth, etc. Currently, the tax allowance for the first child is at 42% of the personal allowance, 59% for the second child, 84% for the third, 117% for the fourth, 159% for the fifth, 209% for the sixth, 267% for the sevenths, 334% for the eighth, 409% for the ninth, 500% for the tenth, while it is by one personal allowance higher for each subsequent child.

natalist role given to this measure, since child costs usually decrease for each subsequent child in the family. Child tax allowances in Lithuania are targeted both at large families and single parents (regardless of the number of children). The amount of allowance for families with more than three children is increased with each subsequent child (Suzor, 1999). Estonian Income Tax Laws as of 1991 and 1994 did not contain any direct tax relieves for families. Since 2001 a parent is entitled to a child tax allowance, but only starting from the third child (Kesti *et al.*, 1999; Kesti and Balle, 2000; Kesti, 2002).

If the child has some income of his/her own, tax allowance is decreased by that amount in Slovenia and Estonia, while in the Czech and Slovak Republics the allowance is given irrespective of the child's own income. In Romania, the total amount of personal allowance and allowances for dependants is limited; the maximum amount was increased in 2002 to three times the personal tax allowance, *i.e.* by allowance for one dependant (Kesti and Balle, 2000; Kesti, 2002). In Russia, child tax allowance is granted up to a ceiling income.

From its introduction in 1988 up to 1992, the Hungarian legislation on personal income tax included a tax allowance for families with children. Initially, it was relatively low and available only to tax payers with three or more children below age 15 (25 if in full-time schooling). It was later extended to single parents with two children, and the age limit of children in schooling was raised to 30 years. Furthermore, first and second children below age six were included (Bagdy, 1995). Child tax credits replaced tax allowances in 1992 and the coverage was extended to all children (Jarvis and Pudney, 1995). Tax credits were abolished in 1994 and re-established by the second post-communist government in 1998, so that they may be requested again since 2000. The beneficiaries include pregnant women[12] and other taxpayers entitled to child benefit. The real value of tax credit in 2000 was several times higher than in 1994. The amount of tax credit depends on the number of children, which has been even more stressed since 2001 (Kesti and Balle, 2000; Kesti, 2002).

[12] Tax credit comes into effect on the 91st day of pregnancy (European Commission, 2002b).

4.4. Childcare

In the former socialist countries, public pre-school childcare was both widespread and highly subsidised from central and local government budgets (even free of charge). Single mothers' children usually had a priority at admission. Parent fees were reduced for families with more children. All this facilitated the employment of mothers, meaning that they did not have to give it up when they had small children because of unavailability of childcare or its cost. It was also a relatively long parental (childcare) leave that made the mothers' decision to continue their professional careers – mostly full-time – easier than it would have been if the child aged only several months had to be placed in a nursery.

The transition to a market economy has led to a disinvestment in state-run and state-financed pre-school childcare. For example - as a result of the overall deterioration of the economic situation, but also due to the attitude of the society - about half of the nurseries were closed in Latvia, mostly in the first half of the 1990s (United Nations, 1999). Only in 1989-1992 the number of nursery places in Poland halved (UNICEF, 1995; World Bank, 1995). Between 1990 and 1992 the number of municipal-run nurseries dropped by one third, and just 14 (of former 236) factory-run nurseries kept on operating. Some 20% of kindergartens were closed as well.

Responsibility transfer to local communities, NGOs and the private sector, like in Poland, had adverse consequences. Poor local communities were not in a position to subsidise nurseries and kindergartens, which has generally resulted in a shortage of places, deterioration in the quality of services and a dramatic increase in parent fees. The basic fee in Poland amounted to almost 20% of the average wage in the end of 1993. In Bulgaria, parent fees more than doubled in 1993 as flat rate fees replaced the income tested ones (UNICEF, 1995). In Romania as well, organised childcare has gone out of reach for many families. The general result in most transition countries was that, on one hand, poor families could no more afford paying for low-quality childcare while, on the other, the rich families could obtain high quality services on market principles (Suzor, 1999). Consequently, the number of children attending childcare programmes has decreased substantially in some countries. This seriously limited the possibility of women, particularly those earning low wages,

for participation in the labour market. The extent of negative change was different across transition countries.

There were very few exemptions to this practice. For example, even during the hardest transition years, Slovenia has managed to retain most of its advantages and achievements in pre-school childcare attained in the socialist period (high level of availability and affordability) while also rather successfully reforming services according to principles of the market economy. Not much has changed in the size of the public subsidy for pre-school childcare during the transition period; while the average subsidy amounted to 75% of the costs per child in 1990, it decreased to about 69% in 1998. It is important to note that all approved programmes of public and private day-care providers are entitled to a subsidy.

There are countries that moved away from childcare provision and encourage mothers to stay home and care for their pre-school children themselves. Already in the 1980s in the former Czechoslovakia and the Soviet Union a policy began shifting towards family-based care (UNICEF, 1995). The use of nurseries dropped in Poland in the 1980s, too, as women took advantage of paid parental (childcare) leave, which was introduced in 1981. As a consequence of a lowered cut-off for this means tested benefit, nursery use began to rise at the end of the 1980s. However, as nurseries began to increase parent fees and the real wages started falling, more mothers chose to take longer parental leave. The demand for nurseries further decreased due to unemployment. Although in the beginning of transition in Lithuania poorly developed childcare facilities did not meet the needs of families, some facilities, particularly in rural areas, closed in the beginning of the 1990s because female employment was no more as promoted as before. Some 45% of children below 3 years of age were included in organised childcare in 1985-1988, and only some 10% in 1991-1992 (Stankūnienė, 1993; Stankūnienė and Kanopienė, 1994).

There even were benefits for mothers whose children were not enrolled in pre-school childcare institutions in Hungary and Lithuania (in the latter only in 1990-1994) - (Mikalauskaitė *et al*., 1999). The condition of non-enrolment is usually implicitly present also in the countries that pay benefits to non-employed mothers or mothers on childcare leave. Explicit benefits were introduced at an early stage of transition, but were

suppressed fairly quickly, except in the Slovak and Czech Republics, because of being too expensive (Suzor, 1999). Mothers generally did not opt for taking up employment because of unavailable or/and unaffordable childcare and not because of benefits received.

Pre-primary enrolment rates varied considerably in many countries during the transition years, with bottom points being distributed throughout the decade. The year 1989 taken as a base year, the greatest falls in the enrolment of children aged 3-6 occurred in Lithuania (by 31 percentage points by 1993), Latvia (by 25 percentage points by 1992), the Slovak Republic (by 20 percentage points by 1991), Ukraine (by 20 percentage points by 1997) and Albania (by 15 percentage points by 1992)[13] - (UNICEF, 2002, Table 7.1). Taken as a whole, the first decade of transition did not have any particular impact on the coverage of older pre-school children by childcare programmes in Hungary, Belarus, Poland and FYR Macedonia (with enrolment rates in the range from 87% in Hungary in 1999 to 28% in FYR Macedonia in 2000), but also in Bulgaria, Romania and Russia with more than 60% of children aged 3-6 years being enrolled in 2000 (Table 2).

Table 2. Kindergarten enrolments (% of population aged 3-6)

Country	1989	1994	1997	2000
Belarus	63.2	61.5	67.6	65.6
Bulgaria	66.7	59.7	62.1	66.9
Croatia	29.4	26.1	34.1	36.3
Czech Republic	89.8	-	83.0	-
Estonia	62.2	58.8	70.4	79.5
Hungary*	85.7	86.2	86.1	87.3**
Latvia	52.8	39.9	52.1	63.4
Lithuania	61.0	33.3	44.4	50.5
FYR Macedonia	24.2	23.5	26.6	27.2
Poland	48.7	44.3	47.9	50.2
Romania	61.6	57.4	63.1	66.5
Russia	73.4	62.8	63.0	64.8
Slovak Republic	91.5	-	75.2***	-
Slovenia	55.5	60.1	65.0	69.5
Ukraine	64.2	54.5	44.3	44.7

Source: UNICEF, 2002; Suzor, 1999 (for the Czech and Slovak Republics)
* 3-5-year olds.
** 1999.
*** 1996.

[13] The figure for Albania refers to 3-5-year olds.

Very few among the selected countries had lower enrolment rates in 2000 than in 1989: Albania, Lithuania, Slovak Republic, Ukraine and Russia.

5. Concluding remarks

The economic shock experienced by the transition countries was first evident from the changes in the gross national product. High inflation, decrease in employment as well as increasing unemployment and under-employment were the accompanying consequences that were further reflected in decreasing real wages and increasing risk of poverty. Though economically inefficient, the socialist economy was successful in preventing poverty through a combination of full employment (with low wages), universal social services and benefits, and controlled prices for many basic services and commodities. People in the transition countries have had to bear more-or-less high economic and social costs, particularly those people with low income or unemployed, who remained much less protected against old and new risks. In the situation where the countries were economically and financially weak, the ability to spend more on social protection was seriously limited. One of the consequences was that the costs of children increased for families in most of the countries since the former relatively high public share in covering these costs decreased.

Rapid and profound demographic changes witnessed since the beginning of the 1990s in the Central and East Europe undoubtedly were a consequence of political, economic and social transformation - but not fully and not in all countries in the region. In most countries, the transition only added its impact to the demographic processes that had already been going on, meaning that transition has only accelerated the processes that would nevertheless occur.

It was interesting to find out that similar patterns in economic and/or demographic development resulted in different - even opposite - changes in the family policy measures. This proves that it would be an over-simplification to speak generally of both the state of family policies in the transition countries and their trends. Currently, the Central and East European countries aim at introducing coherent and integrated family policies; however, most of them are still far from realising this objective. The list of implemented family policy measures may namely be misleading; one has to take the level of benefits into account in order to

correctly evaluate the impact of individual measures on the budgets of families raising children, the incentive they may represent for having (more) children, their contribution to facilitating the reconciliation of professional and family duties, etc. Such an analysis may well identify the seemingly comprehensive family policy to be under-funded.

The advocates of family policy tend to overstate the effects of family policy measures on fertility. In practice, these effects appear negligible, possibly none at all. Nevertheless, could it be that the Hungarian Government was right to believe that the stability of the comprehensive Hungarian family policy in the first half of the 1990s kept the fertility rate from decreasing as much as in other countries in transition (United Nations, 1999)? The data show that the fertility rate even increased in 1990 and 1991 as compared to 1989, and was falling relatively slowly in 1992-1995. On the other hand, it is obvious from today's perspective that the Croatian National Demographic Development Programme had only a short-term impact on the fertility behaviour; it was adopted in 1996, while a decline in the fertility rate continued in 1998. It may well be that a temporary increase in fertility in 1995-1997 was only due to births that were delayed because of the war that ended in 1995. However, one may pose such a question as well: had there not been family policy measures that redistributed income in favour of families with children and contributed to the reconciliation of the professional and family life, would there have not been even less births?

At the same time, we would not like to leave any doubt about positive effects of family policy for the welfare of children and their families. Considering the opinion surveys which mostly support the belief that family-policy measures may help overcome the discrepancy between the actual and the desired number of children, we can just hope that – as the transition process is approaching its final phase in many countries - economic and social constraints will soon cease to be factors that negatively influence demographic trends. If it is true that in more favourable conditions people would have more children, then there is a way for optimism; but at the same time we should be aware of the complexity and dynamics of our environment. We are witnessing constant changes in the perception of family, female roles, etc., which seriously limit the positive impact of economic and social welfare on fertility. One should also not underestimate the importance of competing interests and

activities to childbearing, such as longer education, building careers, travelling and attractive leisure activities, as well as lifestyle which may not be compatible with child rearing.

Governments in many transition countries are obviously facing a serious problem of generation replacement and a number of related problems, but they do not really know how to combat low fertility. The developed countries, that started experiencing a similar situation before, can not help with any "recipe" or "remedy" since they have not yet identified or invented one for themselves. This, of course, does not mean that the governments should give up any effort to improve the pessimistic demographic trends. On the contrary, the redistribution in favour of families with children must continue – and even at a larger scale than currently – because of the high costs of children, empirically proven high risk of poverty for families with more children and the externalities of raising children, of which nowadays everybody is aware. One should not be "obsessed" by the idea that family policy should lead towards more births. People themselves make decisions about their future, including creating a family and giving birth to children. There is, however, no doubt that a weak and invisible family policy will definitely not help them to take a positive decision even if there is common optimism in the society resulting from a belief in a long-term security and development. Let us conclude by quoting UNICEF (2001, p. IX), that "there is no excuse for inadequate investment in younger generations".

Acknowledgements

Valuable help by Mare Ainsaar, Helena Blažić, Pārsla Eglīte, Jiřina Kocourková, Irena E. Kotowska, Éva Lukács, Teodora Noncheva, Yulia Potanina, Vlada Stankūnienė, Ákos Tárkányi and Siniša Zrinščak is gratefully acknowledged. They provided additional information and clarifications that helped the author to correctly understand the developments in family policies in their respective countries. However, responsibility for the views expressed rests with the author.

References

Ainsaar M., 2001, "The Development of Children and Family Policy in Estonia from 1945 to 2000", *Yearbook of Population Research in Finland* 37, 23-40.

Bagdy G., 1995, The Social Protection System of Hungary, in: M. Cichon (ed.), *Social Protection in the Visegrád Countries: Four Country Profiles*, International Labour Organisation, Central and Eastern European Team, Budapest, 39-56.

Balcerzak–Paradowska B., 2003, Family Policy in Poland at the Turn of the Centuries, in: J. Jóźwiak, I. E. Kotowska (eds.), *Population of Central and Eastern Europe: Challenges and Opportunities,* Statistical Publishing Establishment, Warsaw.

Bodnárová B., J. Filadelfiová, and P. Guráň, 2001, *Reflections on Recent Demographic Conditions on Family and Social Policies in CEE Countries* (Final Report Part II), Bratislava: Bratislava International Centre for Family Studies.

Cichon M. and K. Hagemejer, 1995, The Social Protection System of Slovakia, in: M. Cichon (ed.), *Social Protection in the Visegrád Countries: Four Country Profiles*, International Labour Organisation, Central and Eastern European Team, Budapest, 81-98.

Council of Europe, 2000, *Recent demographic developments in Europe, 2000*, Strasbourg: Council of Europe Publishing.

Council of Europe, 2002, *Recent demographic developments in Europe, 2002*, Strasbourg: Council of Europe Publishing.

Eglīte P., 1999, "Population policy in Latvia: declared and undeclared", *Revue Baltique* 13, 152-168.

Erler G., M. Jaeckel and J. Sass, 1994, *Auswirkungen und Einschätzung familierpolitischer Massnahmen für Familien mit Kinder unter 6 Jahren im europäischen Vergleich*, Munich: Deutsches Jugendinstitut.

European Commission, 1999, *MISSEEC – Mutual Information System on Social Protection in the Central and Eastern European Countries*.

European Commission, 2002a, *MISSEEC 2002 – Social protection in the Central and Eastern European Countries*.

European Commission, 2002b, *Recent Evolution of Social Protection in the Central and Eastern European Applicant Countries*.

Eurostat, 2001, *Statistical yearbook on candidate and South-East European countries, Data 1995-1999,* Office for Official Publications of the European Communities, Luxembourg.

Eurostat, 2002, *Statistical yearbook on candidate and south-east European countries, Data 1996-2000,* Office for Official Publications of the European Communities, Luxembourg.

Gál R., Zs. Mogyorósy, Á. Szende and P. Szivóis, 2003, *Study on the Social Protection Systems in the 13 Applicant Countries, Country Study Hungary*, Study financed by the European Commission - DG Employment and Social Affairs - implemented by GVG/ LSE, Brussels.

Golinowska S., K. Pietka, Ch. Sowada and M. Zukowski, 2003, *Study on the Social Protection Systems in the 13 Applicant Countries, Country Study Poland*, Study financed by the European Commission - DG Employment and Social Affairs - implemented by GVG/ LSE, Brussels.

Heady Ch. and S. Smith, 1995, "Tax and Benefit Reform in the Czech and Slovak Republics", *Discussion Paper* no. 1151, Centre for Economic Policy Research, London.

Jarvis S. J. and J. Micklewright, 1992, "The Targeting of Family Allowances in Hungary", *CEPR Discussion Paper WSP*/81, London School of Economics, London.

Jarvis S., and S. Pudney, 1995, Redistributive Policy in a Transition Economy: The Case of Hungary, in: D.M.G.Newbery (ed.), *Tax and*

Benefit Reform in Central and Eastern Europe, Centre for Economic Policy Research, London, 49-84.

Kesti J.LL.M. and P. S. Andersen (eds.), 1998, *European Tax Handbook 1998*, Amsterdam: International Bureau of Fiscal Documentation Publications BV.

Kesti J.LL.M., P. S. Andersen and Ch. Swanhagen (eds.), 1999, *European Tax Handbook 1999*, Amsterdam: International Bureau of Fiscal Documentation Publications BV.

Kesti J.LL.M. and C.H. Balle (eds.), 2000, *European Tax Handbook 2000*, Amsterdam: International Bureau of Fiscal Documentation Publications BV.

Kesti J.LL.M. (ed.), 2002, *European Tax Handbook 2002*, Amsterdam: International Bureau of Fiscal Documentation Publications BV.

Klugman J., J.Micklewright and G. Redmond, 2002, "Poverty in the Transition: Social Expenditures and the Working-Age Poor", *Innocenti Working Paper,* No. 91, UNICEF Innocenti Research Centre, Florence.

Kocourková J., 2002, "Leave arrangements and childcare services in Central Europe: policies and practices before and after transition", *Community, Work & Family* 3, 301-318.

Kotowska I. E. and J. Witkowski, 1996, "Labour market developments and demographic processes in countries making the transition to a market economy", *Studia demograficzne* 1-2/123-124, 55-81.

Križić M., 1999, Nacionalni program demografskoga razvitka i njegova provedba, in: *Obitelj u suvremenom društvu*, *Državni zavod za zaštitu obitelji, materinstva i mladeži*, Zagreb, 53-56.

Lukács É., 2002, *Hungary in the Process of Transition – The Field of Social Security*, unpublished lecture.

McAuley A., 1994, "Social Welfare in Transition; What Happened in Russia", *Research Paper Series*, no. 6, Washington, DC.: World Bank.

Mikalauskaitė A., A. A. Mitrikas and V. Stankūnienė, 1999, "Family policy in Lithuania", *Revue Baltique* 13, 182-197.

Noncheva T. and D. Satcheva, 2003, *Study on the Social Protection Systems in the 13 Applicant Countries, Country Study Bulgaria*, Study financed by the European Commission - DG Employment and Social Affairs - implemented by GVG/ LSE, Brussels.

Pechulene L., 1994, *Social Protection in Lithuania*, Budapest: International Labour Organisation, Central and Eastern European Team.

Pôldma A., 1995, Social and population-related policies in Estonia, 1991-1994, in: *Demographic Processes and the Socio-Economic Transformation in Central and Eastern European countries - Population Related Policies*, Warsaw School of Economics, Warsaw.

Sipos S., 1994, Income Transfers: Family Support and Family Relief, in N. Barr (ed.), *Labor Markets and Social Policy in Central and Eastern Europe: The Transition and Beyond,* New York: Oxford University Press, 226-259.

Stankūnienė V., 1993, Family Policy in Lithuania: Achievements and Discontnuities, paper presented at *Population-relevant Policies in Europe*, Wiesbaden.

Stankūnienė V., and V. Kanopienė, 1994, Public Opinion on Family Policies in Lithuania, in: W. Lutz, S.Scherbov and A. Volkov (eds.), *Demographic Trends and Patternsin the Soviet Union before 1991*, Routledge, London and New York, 249-261.

Stropnik N. and T. Stanovnik, 2002, *Combating Poverty and Social Exclusion - Volume 2, A Case Study of Slovenia*, Budapest: International Labour Office.

Suzor V., 1999, Family Benefits, in *Change and Choice in Social Protection: The Experience of Central and Eastern Europe*, Vol. 2, Paris: ADECRI and PARTEX, 101-157.

Szabo J., 1996, "Slabša socialna varnost", *Delo* 22 April, 6.

Tárkányi Á., 2003, *Family Benefits*, unpublished paper.

Topińska I., 1995, The Social Protection System of Poland, in: M. Cichon (ed.), *Social Protection in the Visegrád Countries: Four Country Profiles*, International Labour Organisation, Central and Eastern European Team, Budapest, 59-78.

UNICEF, 1995, Poverty, Children and Policy: Responses for a Brighter Future, *Regional Monitoring Report*, No. 3, Florence: UNICEF International Child Development Centre.

UNICEF, 2001, A Decade of Transition, *Regional Monitoring Report*, No. 8, Florence: UNICEF Innocenti Research Centre.

UNICEF, 2002, *Social Monitor 2002*, Florence: UNICEF Innocenti Research Centre.

United Nations, 1999, *Population in Europe and North America on the Eve of the Millennium: Dynamics and Policy Responses*, New York and Geneva: United Nations.

Vagac L. and L. Haulikova, 2003, *Study on the Social Protection Systems in the 13 Applicant Countries, Country Study Slovak Republic*, Study financed by the European Commission - DG Employment and Social Affairs - implemented by GVG/ LSE, Brussels.

Vilnoiu M. and C. Abagiu, 2003. *Study on the Social Protection Systems in the 13 Applicant Countries, Country Study Romania.* Study financed by the European Commission - DG Employment and Social Affairs - implemented by GVG/ LSE, Brussels.

World Bank, 1995, *Understanding Poverty in Poland*, Washington, DC.: The World Bank.

Zrinščak S., and V. Puljiz, 2002, "Hrvatska obiteljska politika u europskom kontekstu", *Revija za socijalnu politiku* 9, 117-137.

Family policy in Lithuania: assessments and needs

Vlada Stankuniene

1. Introduction

In Lithuania, the formation of family policy actually began only at the end of the 1980s/beginning of the 1990s, *i.e.* from the onset of basic and cardinal socio-economic transformations in the country. The process is still under way, and family policy in Lithuania does not yet have a system of interconnected measures in place; significant contradictions between the conceptual basics and the actual decisions made still persist. Not infrequently, family policy in Lithuania is a notion of rather limited scope — as a system of benefits for families raising children, or even as support only to families with many children. Therefore, society finds it difficult to understand its essence, to assess its value, and to voice needs concerning ways of modernisation.

This article aims to make an assessment of the support rendered to families in Lithuania and to identify the needs for its further improvement and is based on the findings of the international project "Acceptance of population related policies survey" (PPA2) carried out in Lithuania.[1]

2. Specifics of the notion and the evaluation of family policy: variations of the transitional period

Like other post-communist countries, Lithuania has faced the specific problems of the development and the evaluation of family policy, as well as society's acceptance of it. First it is related to the problem of the notion of family policy. What is it and what could or should a family expect from it? Meanwhile, the notion of family policy has a broad range of variation: from the most general treatment of identifying it with population-related policy (and more specifically, with the demographic policy in the sense of the Soviet definition), to a very narrow one, where family policy is only attributed the role of support to families with many

[1] PPA2 in Lithuania was carried out in 2001. The sample covered 1400 respondents (613 males and 787 females) aged 18-75.

children, moreover, of support in cash only. Despite these extreme notions, family policy in Lithuania has, until now, been perceived in a rather limited sense – as financial support to families with children. This is typical of all the segments of the society, from policymakers to the family, *i.e.* a recipient/consumer of the family policy measures. Despite the fact that recently decision-makers have been increasingly treating family policy as a system of different measures for family support addressed to all families, not only families with children, there are still, among them, supporters of extreme types of family policy. Overall, the situation is quite normal if seen as a manifestation of the former system in the current situation. The current definition of family policy was introduced to Lithuania only at the beginning of the 1990s, with the start of socio-economic transformations. Before that, during the Soviet period, family support measures were treated as demographic policy. Besides, for a long time, there were direct measures in this field, such as paid maternity leave and orders/medals and the names of hero-mothers for women who raised many children.

With the evaluation of family policy and identification of the needs for its development by society, another problem determining the specifics of Lithuania is related to the survival of the ideas of the centralised ruling system in the social mentality. There is a persistency of paternalistic orientations and expectations manifested in all societal segments, starting with policymakers and ending with recipients of the family policy measures. The opinion that somebody, in the first place the government, must take care of everyone and of each family is very much alive. However, in the survival of such attitudes a kind of asymmetry is observed: among the policymakers the proponents of paternalistic ideas are met less frequently, while among the recipients of the means of family policy these ideas are still viable, and even predominant among those who are at the bottom of the social ladder. These are the people who have not been able, by force of various circumstances, to adapt to existing economic conditions.

Third, the assessment of family policy is encumbered by the inconsistency and fragmentary character of its development in Lithuania (and in neighbouring countries of the former Soviet system as well, Eglite, 1999; Zarina, 1997; Poldma, 1997). Family policy has been developed sporadically, with no reference/compliance to the existing

strategic provisions. Besides, under the frequently changing governments, the basic patterns of family policy that have been developed by different parties have experienced major changes, too: from those typical of conservative social welfare states to social democratic ones (Stankuniene, *et al.,* 2001). In recent years, however, a more pronounced shift toward liberal principles has been observed in the development of family policy despite the influence of the presently ruling social democratic party. This has been engineered, too, by leaving the governmental management of scanty resources allocated for the development of family policy to the market relation's sphere. Thus the specific rotation of the parties forming the government and representing the expectations of different layers of the society is reflected in the inconsistently and even controversially developed family policy, while the limited economic resources channelled for the development of family policy make a transfer of dominance to the market imperative, irrespective of the ideas of the ruling party. In this way the expectations of the society and the stance of the government on the issue never quite meet.

Thus, at least the above prerequisites should be borne in mind, both in analysing the development of family policy and in summing up subjective evaluations by the society of the appropriateness/adequacy of the available means of family policy and of the needs for its development.

3. Development of family policy in Lithuania in the 1990s: between policy and politics

3.1. General trends

The development of family policy in Lithuania started after the country entered a new stage of its historic development – after independence was regained and the country stepped onto the path of a market economy and democratisation. Grasping the essence of family policy and working out conceptual foundations and strategy was even more important than the development of a system of measures. During the Soviet time, only a few of the tools in question (*e.g.* paid maternity leave) were used, and they were aimed at specific goals, too. One of these was to ensure the full employment of women in the public sector. However, the activities of the government in this field were inconsistent from the very beginning, and

not infrequently policies were adopted and implemented in the absence of a strategy and of clearly defined goals.

At the end of the 1980s, with the emerging national revival, and at the beginning of the 1990s, after independence was regained, family and children as the key national values and a guarantee of survival were elevated against the background of universal euphoria. All this encouraged efforts toward the development of measures for family support. As early as 1989, in the absence of a vision for the development of family policy, the length of paid childcare leave was extended. Simultaneously, but without co-ordination with the authorities drafting legislation in the field, a development of the conceptual basics of family policy was planned. The government assigned a group of researchers and policymakers to develop a Programme of the Lithuanian Population, three sub-programmes of which Family and Fertility; Occupational and Home Conditions of Women; Social Care and Provision of the Elderly and Disabled addressed family policy. In 1990, the Programme of the Lithuanian Population, in which the basic ideas concerning the development of family policy were to assist families with children (with an objective of extending the possibilities for parents to combine parental duties with professional activities) and to provide the opportunity of choice between different types of care for small children (at home or in pre-school institutions), was submitted to the government. The development of the system of family benefits and improvement of family planning services was also foreseen. The programme also provided an action plan of support for the elderly and disabled. However, the programme was never implemented. As early as 1990, on the initiative of the ruling Conservative Party, family policy took a different turn. In pursuing the patriarchal ideology of preserving the traditional family, the policy of granting different benefits to families with a view to encourage mothers to stay at home with the children, was launched. In parallel to that, pre-school institutions were closed down (as was also typical of Latvia; Zarina, 1997). In the years 1990-1992, a lot of different benefits were provided and received by numerous families, with considerable funds allocated for the purpose (Stankuniene, 2001). In accordance with the predominant patriarchal ideology of the time, women were supposed to go back home and become “nurturers of the family hearth”, while men had the obligation to work and serve as breadwinners for the family. But the ideas of such a family policy had few prospects in a society engulfed

by a deep economic crisis, and they were at variance with the pattern of a two-salary-family, which had been consolidated during the Soviet time. Meanwhile, setting up small benefits was, all in all, a policy of a "morsel", which had no perceivable effect upon family welfare. The realities of life also proved the importance of day care institutions in the general system of family policy.

With the coming of the Social Democratic Party to the government, the formation of priorities for family policy was changed as well. In 1993 the attitude towards pre-school establishments started changing and the renaissance of those institutions began. In 1994 the benefit system for families was considerably rationalised; multiple small benefits were forsaken. In 1994, national and international initiatives (International Year of the Family, the actions programme of the ICPD conference in Cairo, etc.) gave rise to a new stage in the development of Lithuanian family policy. The elaboration of the concept of family policy began and was later approved by the government in 1996. The main ideas and patterns of the concept were close to the family policy of the social democratic welfare states.

The concept stressed that an improvement of conditions for parental occupation, for housing acquisition, and for benefits formed the priority trends of the policy. The family policy also envisaged actions towards the consolidation of equal rights for men and women, family planning, maternal and infant health, the development of care facilities for young children, the preservation of children's safety, the welfare of the elderly, and the integration of the disabled into society (Family policy in Lithuania: principles and actions, 1996; Children and family: Lithuania '98, 1998).

The main objectives articulated in the concept of family policy in the first place answered social demands for family welfare and were only slightly coloured by demographic goals.

The main objectives of the Concept of Family Policy in Lithuania were:

- to promote the establishment of a democratic and autonomous family based on mutual care and responsibility of family members and ensuring the replacement of generations;

- to assist families in the fulfilment of their functions, to provide conditions which strengthen families, and to assure their comprehensive functioning;
- to stimulate families to perform the functions which are required for the smooth functioning of family and society (Family policy in Lithuania: principles and actions, 1996).

But in autumn 1996 the Conservative Party came to power and formed a new government; therefore, the concept of family policy that was closer to social democratic ideas no longer served as the basis for the subsequent decisions on family policy. No new strategy of family policy was adopted. The development of family policy became inconsistent and slack. Furthermore, its development was mostly oriented towards the expansion of the benefit system (for example, the benefit for families fostering children was introduced), while other schemes were given inadequate treatment.

Before the new parliamentary elections of 2000, the development of family policy was invigorated: Working group for the preparation of the Programme of Support to Families with Children was established. The programme was drawn up and submitted to the government, but the Conservatives lost the elections, and no consistent implementation of the programme followed.

In 2001 a new government was formed from the parties advocating social democratic ideas, but it did not make any radical corrections in the development or conceptualisation of family policy and continued, in fact, the former policy until 2003. It should be mentioned here that in the development of family policy some improvement was made by a slight tax relief for parents with children. However, the need for a family policy strategy became more and more imperative. Under a decree of the government, a development of a strategy for the national policy of the population, with family policy as a component of the strategy, was planned for the year 2003.

It is quite evident that during this period of transformations to the national economy, alterations in social conditions, and frequent changes of government, the political parties, which usually use their strength for the formation of family policy (Gauthier, 2002) predetermined the changes in

of family policy, from the origination of ideas and motives to the adoption and implementation of certain measures.

3.2. A changing strategy

In summing up this short introduction on the development of the Lithuanian family policy, the conclusion could be drawn that the development of family policy, which was only started in the 1990s, has been rather controversial, inconsistent, variable, and has had no definite strategy. Poldma (1997) has observed that the instability of certain newly introduced support schemes is a problem for all the Baltic countries. Besides, throughout the period of transformation, contact between the demographers working out the conceptual basics of family policy and the decision-makers were rather unstable and sporadic. And that is not surprising; even more advanced western countries have experienced rising tensions between demographers and governments in solving population-related matters (Höhn, 1999).

In the development of family policy in Lithuania, the essence of family policy was not even grasped in full by policymakers, let alone the families – the recipients of the support. A consistent implementation of the conceptual basics of family policy developed during the period was never started, downgrading it to mere paperwork. The same could be said, unfortunately, about the situation in Latvia, a neighbouring country (Eglite, 1999).

The ideas and motives that dominated family policy in Lithuania frequently changed. Depending on the ruling party (and the governments changed often) the motives of family policy varied from strictly conservative with an emphasis on patriarchal attitudes, to social democratic ones propagating the ideas of equal gender rights and opportunities. But regardless of the ideas prevalent in the government, policymakers have been voicing the attitudes of the liberal welfare state more and more explicitly, at the same time pushing the decision of the problems to the sphere of the market. This is even true of the government formed by parties with a social democratic orientation. The spread of these ideas might be related to the lack of funds. Such an imbalance between the ideas and intentions of developing population-related policies propagated by the government and the demographic realities and

economic potential has been observed in the other Baltic countries too (Berzins and Zvidrins, 2000; Katus and Sakkeus, *et al.,* 2000).

It should be noted, however, that in Lithuania, specifically in the popular need for the development of family policy, a legacy of the centralised economic system is still perceptible. Attitudes about the paternalistic schemes of support are still viable. This should be borne in mind when making an assessment of the findings of the PPA survey.

Since the article deals only with the findings of the PPA survey on the acceptance and need of support for families raising children, only the structure and the principal measures of this segment of family policy implemented in Lithuania will be presented in the following section.

4. Current tools of the support for families raising children

Framework of assistance measures for families with children. Family policy is still being developed in Lithuania. Although a system of measures is already in place, they are poorly integrated. The range of assistance offered to families raising children includes:

- benefits;
- the family dimension in the fiscal system (*e.g.*: tax relief on income, rebates on childcare expenses, compensation for expenses on lodgings and utilities);
- family and labour market policy (*e.g.*: protection of pregnant women, maternity leave, parental leave, child care leave, day care, etc.);
- preferential health care services;
- preferential terms to buy or rent housing (non-interest bearing credit, non-repayable loans);
- discounts for public transport.

Benefits for families raising children.[1] Benefits for families raising children are visible elements of the family policy in Lithuania. The benefits include:

- pregnancy and maternity benefits;
- parental benefits;
- family (children) benefits;
- benefit for large families;
- childbirth grants;

- foster child benefits;
- benefits for the children of men in compulsory military service;
- benefits for orphans and children left without parental care;
- orphans stipends;
- settlement grants for orphans and children left without parental care;
- pensions for the care of a disabled child;
- social benefits for low-income families.

5. Opinions concerning the responsibility of the government to settle urgent family-related issues

The findings of the survey Acceptance of Population-related Policy have shown that the inhabitants of Lithuania hold rather inert views on the role of the government in the solution of some social problems most urgent in the sphere of society, family or the individual – occupation of youth, combining professional activity with childcare, acquisition of housing, health protection, and care for the elderly (Table 1). Regardless of the ten –year- long formation of a market economy, the society still clings to the view that in the solution of most social problems, a considerable proportion of responsibility should be borne by the government. Only a fraction thinks that the government is not responsible for these matters (Table 1). Concerning the problems above, as many as 37 to 77 % hold that the government should be completely responsible or quite responsible.

Nevertheless, attitudes on the role of the government in solving social problems are considerably predetermined by the socio-demographic characteristics of the respondents. First, they are related to the respondents' age: the older the respondents are, the more frequently they hold the government responsible for the solution of the problems mentioned above. Evidently, for them it is difficult to adapt to the new environment and to grasp the functioning mechanism of the market-based system of the national economy. But the age-specific differences of responses are lessened by the education level of the respondents. Even with the older respondents, the higher the level of education, the less often the respondents express expectations for paternalistic governmental policy. Among the respondents of the youngest age (18-29 years) the wish to hold the government responsible and, especially, "completely responsible" for different social problems, is expressed least frequently.

Even on the issues that are vitally important for them such as "taking care of young people looking for a job", and "availability of adequate housing for everyone", they seldom say that the government should assume full responsibility for the solution of these problems, and in their responses they mostly state that the government is "not responsible" (Table 1). In responses on the role of the government in solving the other social issues mentioned in the survey, young people (aged 18-29) indicate more frequently than older respondents that the government is not responsible. Overall, the young people who reached employable and marriageable age during the period of economic transformations are more inclined to trust their own efforts and accept the rules of the market economy quite naturally without posing high requirements on the government's paternalistic policy.

Table 1. Answers to the question: "Please indicate what you think about the government's responsibility regarding the following issues"

Issues under the government's responsibility	Completely responsible	Quite responsible	Responsible	Slightly Responsible	Not responsible
Looking after the elderly	27.4	27.4	37.6	6.6	1.1
Availability of adequate housing for everyone	22.2	25.0	35.2	14.4	3.2
Facilitating the participation of women in the labour force	14.8	22.0	38.8	18.8	5.7
Providing opportunities for women to combine a job outside the home with raising children	29.5	27.5	35.5	5.9	1.6
Providing opportunities for men to combine a job outside the home with raising children	18.2	22.6	35.5	19.6	4.1
Taking care of young people looking for a job	47.4	24.0	21.9	4.4	2.4
Providing adequate health care for everyone	55.4	21.8	19.6	2.4	0.8

Source: own calculations based on the PPA data

6. Evaluation of support measures addressed at families raising children

The PPA survey also attempted to find out what inhabitants think about the measures most frequently used in different countries to support families with children (the list of measures is presented in Figure 1 and Appendix 1). Most of these measures have for some time been implemented in Lithuania with greater or lesser success; thus the population of Lithuania is likely to have some idea concerning their importance.

At first glance it seems that the evaluations of all the measures presented in the questionnaire are quite similar. The majority of the respondents (over three quaters) are favourably disposed ("strongly in favour" or "in favour") toward all the measures presented for test. Besides, over 90% of the respondents had a favourable opinion about more than a half of the measures presented (Appendix 1). The findings of the survey show that the majority of the country's population would like the government to take care of families through the adoption and development of as many measures as possible. Nevertheless, a more thorough analysis reveals that some measures do receive a preferential treatment, thus disclosing the most urgent social problems.

The results of the survey indicate that people most favour measures which aim to solve the economic/financial problems of families and the measures enabling people to combine parenthood (looking after children under three years of age) and a career.

Among the measures for solving the economic/financial problems of families, the most favourable treatment is given to:
- allowance at birth (95.9% respond "very favourably" or "favourably");
- a benefit for a parent who does not take a job because he/she looks after the child until the age of one (95.2%);
- a benefit for a parent who does not take a job because he/she looks after the child between one and three years of age (93.6%);
- a lower income tax for people raising dependent children (92.1%);
- a substantial decrease in education costs for children (90.9%);
- better terms for the acquisition of housing for families with children (90.2%).

Among the measures addressed at the improvement of opportunities to combine maternity functions and a career, the following measure received the most favourable evaluation:
- better terms of child care leave to working mothers: until one year of age – 93.1%; between one and three years of age 92.7%

The measures which have not yet been implemented in our country (*i.e.* those with which our society is not familiar and which it most probably does not expect to be adopted in the near future) and the measures of

which implementation has not yet become universal are evaluated less favourably. They include:

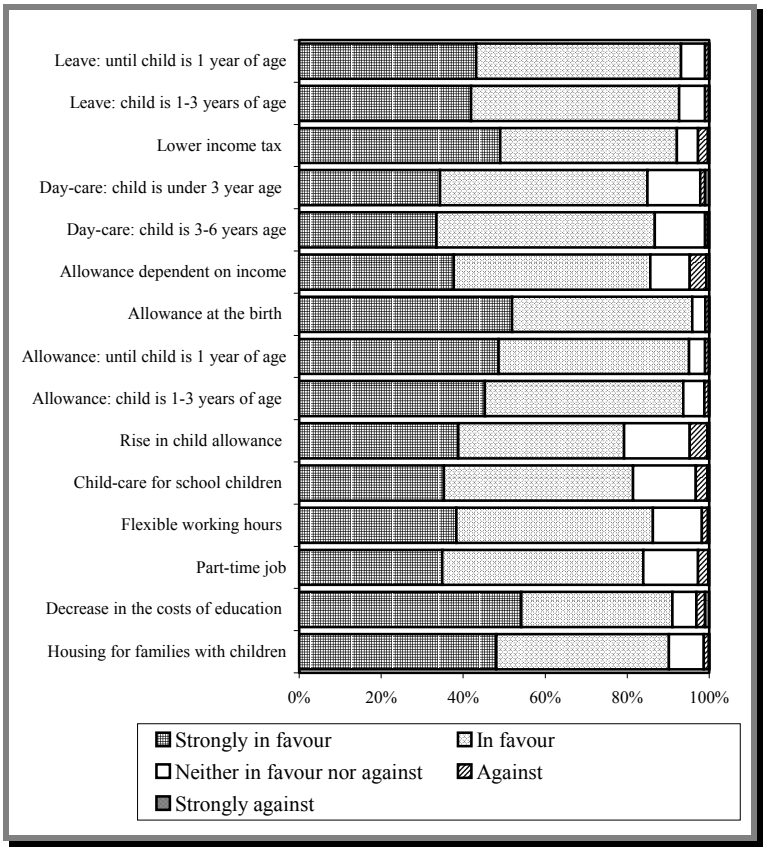
- sufficiently large benefits for children until they come of age (79.2%);
- child-care facilities for school children before and after school and during school holidays (81.4%);
- more and better opportunities for parents with young children to work part-time (81.4%);
- flexible working hours for parents raising small children (86.2%);
- income-dependent benefits for families with children (85.6%).

Although no major age-specific differences are observed in the assessment of the measures (the society is evidently aware of the problem of child-rearing) the younger respondents (18-39 years) give, nevertheless, a slightly more favourable assessment to the measures under test than the older ones. In addition, the women are more favourably disposed towards the measures of family policy than the men. The respondents who have children give the most favourable assessment. The respondents with a higher level of education also make a better evaluation.

Among the answers to the whole set of questions, an important element which emphasises the highly sensitive topic of child education is revealed. More than half (54.1%) of all the respondents make a very favourable evaluation of the "significant decrease of the costs of education" (Figure 1; Appendix 1). Even more frequently ("strongly in favour" – 57.8%) the importance of this measure is stressed by the respondents 40-49 years of age who have the painful experience of paying the costs of higher education for their children. This measure has drawn higher rates than the rest. Anxiety about the future and the education of children has been painfully echoed in the answers to all the related questions of the questionnaire.

By importance this measure of particular importance ("strongly in favour") is closely followed by some other measures, such as "allowance at birth", "lower income tax for parents raising children" and "better terms for the acquisition of housing to families with children".

Figure 1. Measures to facilitate having, looking after, and raising children



7. Desires concerning the improvement of measures to support families raising children and their potential impact on procreative behaviour

In evaluating which of the proposed measures in the questionnaire the respondents would most like to see implemented in Lithuania, an attempt is made to come close to the actual situation and the actual needs of the population (each respondent could specify three measures).

Here, an interrelation is seen between the measures that are very positively treated („very favourably") and the measures of which the implementation is the most desirable, notably, economic/financial measures (see Annex – Table 1 and 2).

Among the measures of which the implementation is the most desired, the first place is occupied by "substantial decrease in the cost of education". This desire was expressed by as many as 44% of the respondents. It is evident that it is a problem of great importance for Lithuania.

Responses to the question reveal another acute problem of our society, *i.e.* dissatisfaction with the conditions in the acquisition of housing. Implementation of this measure is desired by 35% of the respondents.

The third place among the measures of which the implementation is most desirable is taken by the measure, which is popular in western European countries, but which has not yet been implemented in Lithuania – "benefits for children until they come of age" (31%).

Such measures as "lower income tax for people with dependent children" and "income-dependent benefits for families with children" are also among the measures of which prioritised implementation is desired. These measures have not been applied in Lithuania or have been applied insufficiently. Thus, the opinion of the respondents could serve to further the development of family support in accordance with popular needs.

During the survey an unexpectedly low rating of the measures that would improve the opportunities for combining the professional activities of the parents with childcare was revealed. Very few respondents expressed a wish for "better day-care facilities" (this was only indicated by 3-4% of the respondents), "improved parental leave arrangements" (9-10%), "more and better opportunities for parents with young children to work a part-time job" (9%). This only proves that a considerable proportion of the population still relate the improvement of child raising conditions with financial measures, *i.e.* measures that provide direct government support in cash, and not with the measures that would provide an opportunity for the families themselves to solve emerging problems better. The need for measures that could improve the compatibility of a career with childcare takes on secondary importance. Given the high unemployment rate, the existence of this problem is probably most natural (at the time of the survey, the unemployment rate in Lithuania was 13%, and among the youth over 20%). In such a situation, finding a job, rather than a comfortable working environment, is of primary importance. Thus, high unemployment rates must evidently not only be responsible for the

ineffectiveness of family policy in the field (McDonald, 2002), but also suppress chances for a rise in the need to combine occupation and family issues.

There are no significant differences in desires for the implementation of certain measures of family policy by the socio-demographic characteristics of the respondents. Among the more significant differences noted, it could be mentioned that even more than 50% of the respondents 30-49 years of age would like to see a "substantial decrease in the costs of education" (on average 44%). Besides, the survey findings show that the people with the lowest education most want an improvement of the family support measures payable in cash as benefits, while the better-educated respondents want to have more flexible forms of employment.

The answers to the question about whether the implementation of the measures that the respondents consider desirable would have consequences for their own procreative intentions arouse optimism. As many as two third of the respondents 18-39 years of age indicate that it would make it easier for them to have the number of children they intend to have (it is worth noting here that the average number of children wanted in this age group is 2.2.). Almost half of the respondents of this age group indicate that the implementation of the desirable measures may change their procreative attitudes (the intentions to have a or another child would increase) and almost half of them would change their procreative behaviour (they would probably decide to have a or another child).

Table 2. Opinions on the effects of the most preferred measures addressed at facilitating childcare and upbringing (in %)

Opinions	Agree	Disagree
	Respondents 18-39 years of age % (N=611)	
It would make it easier for me to have the number of children I intend to have	65.6	9.0
It would enable me to have my next child sooner	38.8	22.3
I would reconsider the possibility of having a (another) child	49.8	19.3
I would probably decide to have a (another) child	47.6	20.5

Source: own calculations based on the PPA data

These answers give us hope that purposely and reasonably developed family-related policies would not only help families to solve their problems, but would also aid in increasing fertility in Lithuania as well.

8. Conclusion

The development and improvement of support to families raising children is a highly topical issue in Lithuania. The evaluation of the system of measures has revealed considerable discrepancies between the family support policy implemented in Lithuania and the needs of the population. A partial satisfaction of needs for concrete measures could be undoubtedly related to extra expenditure; however, in some cases it would imply a decreased need for expenses (for example, to rearrange benefits for families fostering children). Furthermore, some ways for the improvement of support to families are closely related to the organisational restructuring of society, notably to the arrangement of the education system, the improvement of the labour market, the introduction of flexible forms of employment, and increased opportunities for combining parenthood with a career.

Notes

[1]***Definitions of benefits***

1 Pregnancy and maternity benefits for women insured by state social insurance are paid for 70 days before delivery and 56 days after delivery (in the case of a complicated delivery or the birth of more than one child the post-delivery period is 70 days). The benefit is equal to 100% of the mother's average wage.

2 Upon the expiration of the term, a parental benefit for parents insured by state insurance is paid for childcare. This is paid for a year and equals 60% of the average wage of the parent.

3 Later a family (child) benefit of 75% of the minimum standard of living (MSL) is paid every month until the child's third birthday (MSL = 125 LTL).

4 A pregnancy benefit for studying (not insured by state social insurance) for women is paid at 75% of MSL for 70 days before delivery.

5 Later a parental benefit of 45% of MSL is paid to the studying mother until the child reaches 3 years of age.

6 A benefit for large families (with three or more children) is paid for the third child up to 16 years of age (for students, until they finish secondary school) at 100% of the MSL, while for the fourth and further children, a mother receives benefits equal to 30% of the MSL. The benefit for three children is paid if income for one family member is less than three state-supported incomes. The benefit for the fourth and every other child is paid independent of the family's income.

7 Since 1 January 1999 the foster child benefit has been 4 MSL (500 LT), payable to foster parents until the child reaches 16 years of age (for students, 18 years of age).

8 The benefit to a child whose father is on compulsory military service is 1.5 times the MSL.

9 An orphan's stipend is paid at 4 MSL and is granted to children who are in vocational training for the first time.

10 Childbirth grants for the family are equal to 6 times the MSL.

11 The pension for the care of a disabled child is paid at basic pension (138 LTL).

12 Settlement grants for orphans and children without parental care were paid at 18 times the MSL upon completing education. From 1 January 2000 it was increased to 50 times the MSL. The money is used for the acquisition of a dwelling or for settlement.

13 Special social benefits (social benefits for low-income families) are paid to families with an income that is lower than the state-supported income. However, these social benefits are not large.

The majority of the benefits are universal and only the special social benefits and the benefit for mothers with 3 children are means-tested.

References

Berzins A. and P. Zvidrins, 2000, Population Development in Latvia, in: T. Kučera, O. Kučerová, O. Opara and E. Scheich (eds.), *New Demographic Faces of Europe,* Berlin, Springer-Verlag, 183-198.

Children and family: Lithuania '98, 1998, Vilnius.

Eglite P., 1999, "Population policy in Latvia: declared and undeclared", *Revue Baltique* 13, 182-197.

Gauthier A., 2002, "Family policies in industrialized countries: is there convergence?", *Population* 57, 447-476.

Höhn Ch., 1999, When research meets policy-making: demography in an area of tension, in: A. Kuijsten, H. de Gans, H. de Feijter (eds.), *The Joy of Demography and Other Disciplines,* Amsterdam, 325-334.

Katus K., L.Sakkeus, A.Puur, A.Poldma, 2000, Demographic development of Estonian population: recent changes in the context of the long-term trends, in: T. Kučera, O. Kučerová, O. Opara, E. Schaich (eds.), *New Demographic Faces of Europe,* Berlin, Springer-Verlag, 125-140.

McDonald P., 2002, "Sustained fertility through public policy: the range of options", *Population* 57, 417-446.

Poldma A., 1997, "Population-related policies in Estonia in the context of Baltoscandia", *Revue Baltique* 10, 239-256.

Stankuniene V. (ed.), 1996, *Family Policy in Lithuania: Principles and Actions*, Vilnius.

Stankuniene V., 2001, Lithuania, in: *Reflections of recent demographic conditions on family social policies in CEE countries,* Bratislava, 23-49.

Stankuniene V., V. Eidukienė, B. Gruževskis, R. Jančaitytė, A. Mikalauskaitė, J. Paluckienė, 2001, *Paramos seimai politika: samprata ir patyrimas,* Vilnius.

Zarina I. B., 1997, "Social policies in Latvia and their impact on the development of the population", *Revue Baltique* 10, 226-238.

Appendix

Table 1. Measures to facilitate having, looking after, and raising children (in %)

Measures	Strongly in favour	In favour	Neither in favour nor against	Against	Strongly against
Improved parental leave arrangements for working women who have a baby (until child is 1 year of age)	43.2	49.9	5.9	0.9	0.1
Improved parental leave arrangements for working women who have a child (1-3 years of age)	41.9	50.8	6.3	0.9	0.1
Lower income tax for people with dependent children	49.0	43.1	5.2	2.4	0.3
Better day care facilities for children younger than age three	34.4	50.6	12.9	1.2	1.0
Better day care facilities for children between age three up to school age	33.5	53.2	12.3	0.7	0.3
An allowance for families with children dependent on the family income	37.7	47.9	9.6	4.1	0.7
An allowance at the birth of each child	51.9	44.0	3.2	0.8	0.1
An allowance for mothers or fathers who do not take a job because they want to take care of the children up to 1 year of age	48.7	46.5	3.9	0.9	0.1
An allowance for mothers or fathers who do not take a job because they want to take care of the children 1-3 years of age	45.2	48.4	5.1	1.1	0.1
A substantial rise in the child allowance	38.8	40.4	16.0	4.3	0.5
Child-care facilities for school children before and after school and during school holidays	35.3	46.1	15.3	2.8	0.5
Flexible working hours for working parents with young children	38.3	47.9	11.9	1.5	0.3
More and better opportunities for parents with young children to work part-time	34.9	49.0	13.4	2.5	0.2
A substantial decrease in the costs of education	54.1	36.8	5.9	2.1	1.0
Better housing for families with children	48.1	42.1	8.5	1.2	0.1

Table 2. Measures to facilitate having, looking after, and raising children implementation of which by the government would most like to see[1] (in %)

Measures most preferred to be implemented	Age of respondent			Total (N=1400)
	18-39	40-49	50+	
	In %			
Improved parental leave arrangements for working women who have a baby (until child is 1 year of age)	10.0	8.9	7.7	8.9
Improved parental leave arrangements for working women who have a child (1-3 years of age)	11.6	7.4	11.0	10.6
Lower income tax for people with dependent children	32.2	34.4	26.8	30.7
Better day-care facilities for children younger than age three	4.7	3.2	4.5	4.4
Better day-care facilities for children between age three up to school age	4.3	2.8	2.6	3.4
An allowance for families with children dependent on the family income	20.6	25.5	17.2	20.4
An allowance at the birth of each child	15.4	15.6	17.0	16.0
An allowance for mothers or fathers who do not take a job because they want to take care of the children up to 1 year of age	12.4	9.9	12.0	11.8
An allowance for mothers or fathers who do not take a job because they want to take care of the children 1-3 years of age	16.0	11.3	16.4	15.2
A substantial rise in the child allowance	31.8	32.6	29.2	31.0
Child care facilities for school children before and after school and during school holidays	11.9	11.0	9.7	10.9
Flexible working hours for working parents with young children	16.5	17.7	15.0	16.2
More and better opportunities for parents with young children to work part-time	7.0	11.3	9.7	8.9
A substantial decrease in the costs of education	43.4	50.4	42.2	44.4
Better housing for families with children	36.8	31.2	34.7	34.9

[1] Respondents could specify three measures.

Family policy in Poland at the turn of the century

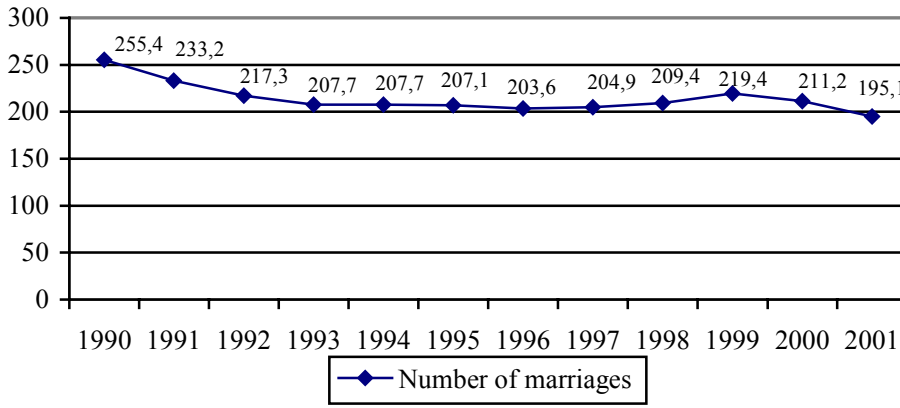
Bożena Balcerzak-Paradowska

1. Demographic conditions

Demographic processes linked with the family formation, as observed in Poland in the last decade of the 20th and first decade of the 21st centuries, foster reflections regarding the future development of Polish society.

Both Polish culture and custom define marriage as the cornerstone of the family, yet the number of new marriages is falling. The number of new marriages contracted between 1990 and 2001 fell from 255,400 to 195,100 *i.e.* by 24%. This fall is not only the result of a drop in the size of successive age groups entering the age of 'matrimonial activity', but it is mainly the tendency to marry, expressed by the marriage rate, that is falling. The marriage rate dropped from 6.7 to 5.5 (per 1,000 population) between 1990 and 2001.

Figure 1. Marriages in Poland over the years 1990–2001 (in thousands)

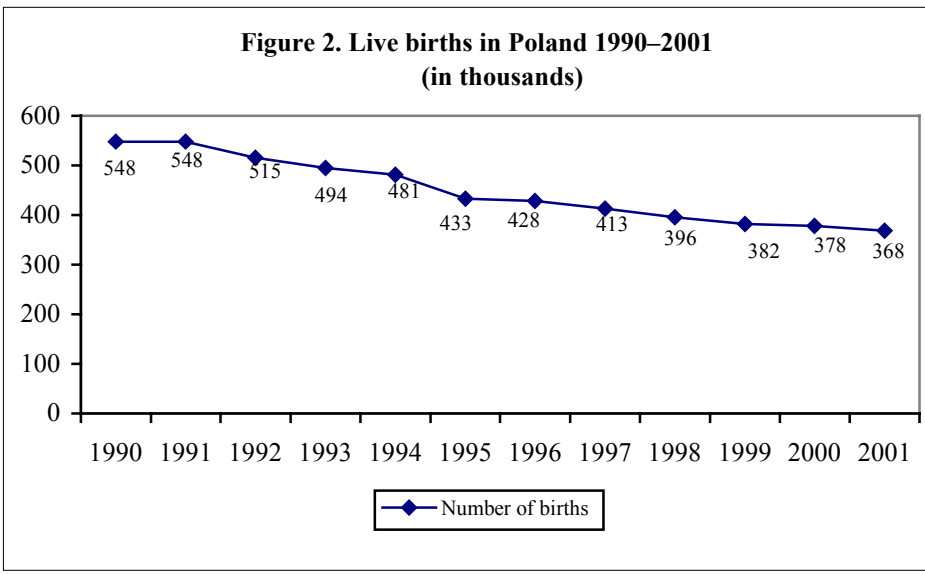


Source: Government Population Council (2002)

The family continues to occupy a high position in the hierarchy of values of the young generation. Among them a happy family life remains one of the most important life objectives. This objective- considered of highest importance- takes on some meaning in the opinions of young people. In 1994 it was selected by a total of 48% of respondents, compared with 57% in 1998 (CBOS, 1999). Thus, it can be assumed that what is being seen is delaying decision to marry, where the negation or attitudes against entering into marriage and creating a family play a much less significant role. The average age of newlyweds is changing. Out of 1,000 men aged 20-24, a total of 99 were married in 1990, while the figure for the year 2000 was 53; among women of this age group the figures are 109 and 71, respectively. For each 1000 men in the 25–29 age group, 46 were married in 1990 and 52 in 2000; among women the figures were 24 and 33, respectively.

At the same time there has been a significant decline in the number of births: from 547,700 in 1990 to 368,200 in 2001. The total fertility rate fell from 2.03 in 1990 to 1.30 in 2000.

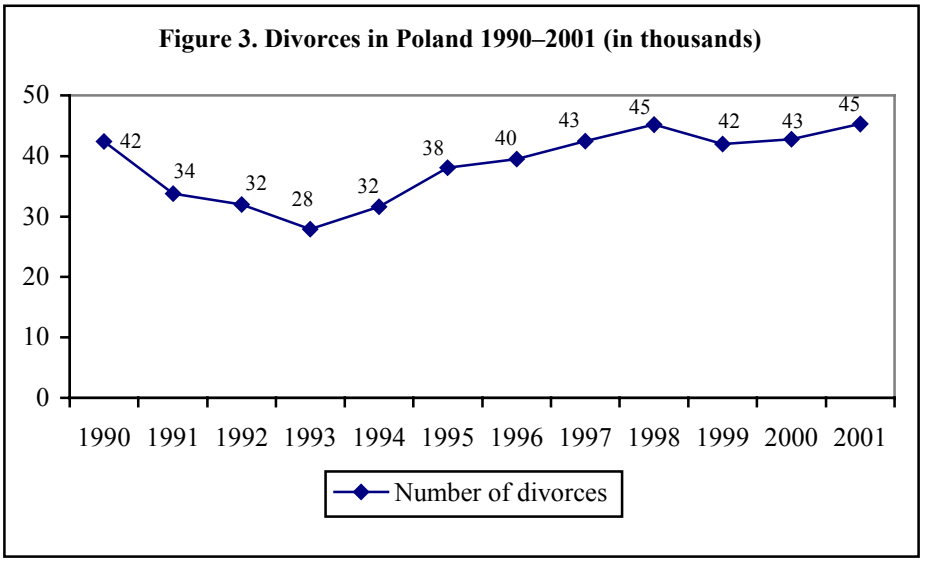
Figure 2. Live births in Poland 1990–2001 (in thousands)



Source: Government Population Council (2002)

The increase in the number of divorces as well as extramarital births indicates an increase in the number of one-parent families as well as in the number of children being brought up in such families.

Figure 3. Divorces in Poland 1990–2001 (in thousands)



Source: Government Population Council (2002)

The course of demographic processes demonstrates the same direction that that occurred in post-industrial countries and these changes could be called the 'second demographic transition (van de Kaa and Lesthaeghe, 1986; van de Kaa, 1987; Kotowska, 1999). However, the question regarding the real factors influencing the course of demographic processes in Poland remains unanswered.

2. Social and economic conditions

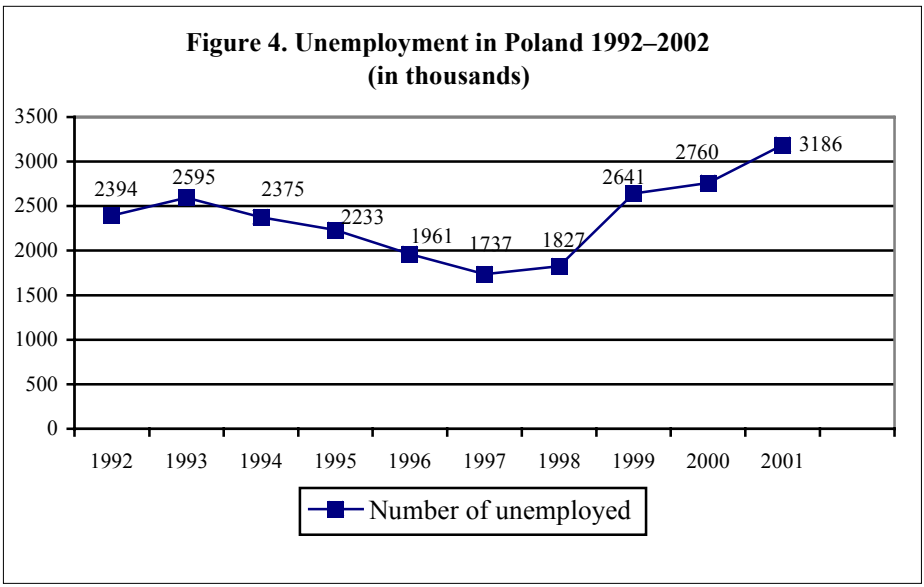
On one hand there is no doubt that what is being seen is what the authors of the second demographic transition concept defined as cultural factors. The list includes entry onto the path of the democratisation of demographic life, the rise of pluralism and individualism, and prominently an increase in the importance of educational level and a striving towards achieving this aim. The enrolment rate for young people continuing their education up to and including college level is rising. For the 1990–1991 school year indicator of school enrolment of young people aged 18–24 was 20.7% and reached 32.7% in the 2000–2001 school year.

Among college students over half were women (57% in the 2000–2001 school year, GUS, 2002a). The prolonged education period most often means a shift in the time of starting a family.

The use of birth control methods is growing, although there is still a large gap between Poland and Western countries in this matter. The flow of information favours the dissemination of models and stances characteristic of post-industrial countries. The increasing access to information technology is among factors defined as 'technological'.

One can speak of young people applying the following life 'scenario': get education → get a job → start a family → have children of appropriate "quality' (their number in line with the family's financial ability to provide a basis for guarantying investment in the children facilitating their good start in life).

Figure 4. Unemployment in Poland 1992–2002 (in thousands)

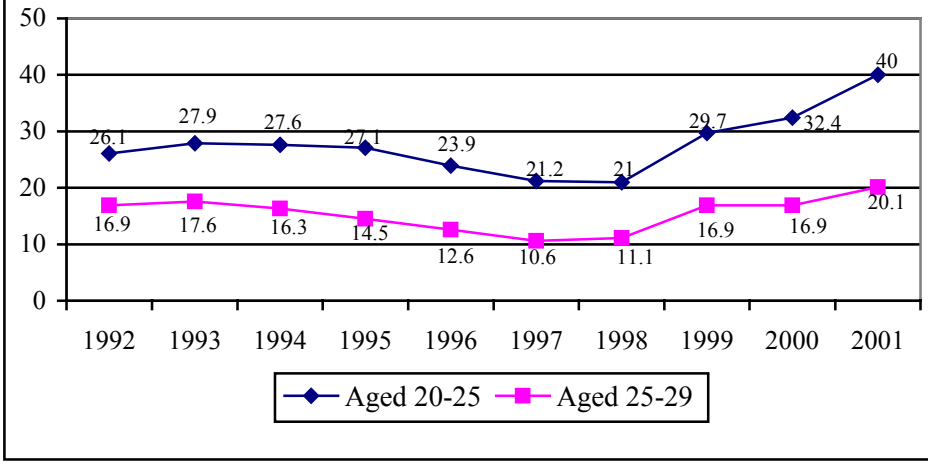


Source: GUS, 2002b

On the other hand, the social and economic changes in Poland have an impact on the realisation of marital and procreation plans of the young generation. Firstly, one should refer to changes that have occurred in the labour market. Unemployment exceeded three million in the year 2002.

The 20–24 age group was most hit (their unemployment rate in the second quarter of 2002 reached 44.4%, while the figure for the 25–29 age group was 23.3% (GUS, 2002).

Figure 5. Unemployment rate among 20–24 and 25–29 age groups, 1992–2001

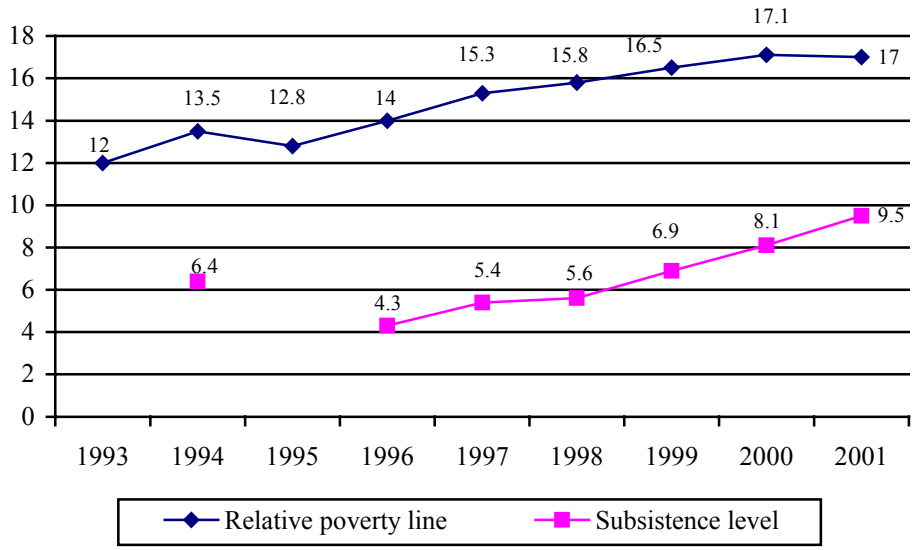


Source: Government Population Council (2002)

Additionally, economic and social inequalities have increased. The ratio of average monthly disposable household income of the 20% of people of the highest incomes (the 5th quintile group) and 20% of people with the lowest incomes (the 1st quintile group) increased from 5.3 in 1996 to 6.1 in 2001. The fall in the standard of living equates to a lowering of a sense of social security. There was an overall growth in real household income over the years 1995–1998. Compared with the previous year, this increase amounted to 101.9% in 1995, 106.4% in 1996, 107.6% in 1997, and 105.2% in 1998. In 1999 it amounted to 99.9% as compared to the previous year, and 98.9% in the year 2000. It stayed almost at the same level in the year 2001 – 100.1.

The threat of poverty increased. The share of people in households living below the relative poverty line increased from 15.3% in 1997 to 17.0% in 2001. The figure for people living below the subsistence level (people in danger of social and biological degradation) increased from 5.4% to 9.5%.

Figure 6. Percentage of people below the poverty line



Source: GUS, 2002c

The families most threatened by poverty are multi–children families. In the year 2001 a total of 13.8% of families with three children and every third family with four or more children lived below the subsistence level.

There was a backslide in housing construction in the 1990s. The number of dwelling units ready for occupancy was falling year by year. For example, over the 1991–1995 period a total of 101,400 dwelling units were ready for occupancy (which means 469 dwelling units per 1,000 new marriages), 77,300 dwelling units over the years 1996–2000 (which comes to 368 dwelling units per 1,000 new marriages). It was not until the year 2001 that there was a noticeable improvement, when 106,000 dwelling units were ready for occupancy (543 dwelling units per 1,000 marriages). However, these are resources built for sale or lease (an increase from 1,600 dwelling units over the years 1991–1995 to 20,700 dwelling units over the years 1996–2000) or built as individual projects (35,500 and 34,300, respectively). The number of dwelling units built by housing co-operatives is also falling (from 55,300 dwelling units in the year 1991–1995 to 26,500 dwelling units in the years 1996–2000). The

last form was the most popular among newlyweds due to the relatively favourable cost of procuring a home.

Respondents interviewed in 1995 pointed out social and economic factors as important for their procreation plans. For 62% of people who did not implement their procreation plans, the reason for restricting childbearing was the increase in costs of living. Difficulties in finding work were in the case of 37%, the threat of unemployment for 37%, and the lack of a sense of social security for 23% (GUS, 1997). It may be assumed that the unfavourable tendencies on the labour market as well as in living conditions at the end of the 1990s and the start of the 21st century increase the 'force of influence' of social and economic factors on the decision to start a family.

3. Family policy at the turn of the centuries

What kind of actions were and are being undertaken within the framework of family policy[1] in order to work against unfavourable tendencies in the establishing and functioning of the family?

The change in the political and economic systems in Poland was accompanied by new declarations relating to the moulding of family policy as compared with the period of real socialism. Slogans bartered about referred to the endowing of the family with subjectivity in contrast to the dominant role of the state in all areas of life. In practice this meant that the state started retreating from its role as provider of assistance to the family or at least restricted it significantly. Declarations for basing family policy on new principles were accompanied by certain changes of an institutional character. No concept for new models of social and family policy congruent with the conditions of a market economy and taking into account the transitional period was developed, however.

The crisis in public finances has resulted in an effort to cut expenditure on social objectives. This is reflected in modifications made to principles for

[1] Family policy is understood as all legal norms, actions, and resources set in motion by the government or other entities aimed at creating the best possible conditions for the establishing of a family, its development, proper functioning, and stability (Balcerzak-Paradowska, 1999,2002).

allotting monetary family benefits. For example, the level of the family benefit payment was 'frozen' in 1992. This brought about a lowering of the real value of the family benefits and a fall in their importance in family income. Successive years showed a strengthening of the principle of directing aid to families that needed it most. Cash benefits were directed to families in the most difficult material situation. Eligibility was acquired by families with low incomes. The introduction of the income criterion brought about a drop in the number of families receiving the benefits.

The sphere of family–targeted social services was touched by the changes to an even greater extent. There was a decentralisation of state jurisdiction in the realm of family policy and most decision-making powers linked with the management and financing of social services were transferred to local government. This applied to nursery schools and kindergartens, primary schools, and ultimately secondary schools, culture, sport, and recreation centres, etc. Local government proved to be incapable of meeting the obligations placed upon it due to limited organisational and financial resources. This led to the liquidation of some institutions and the introduction of fees for the use of others. The need to pay became a barrier for less affluent families. It restricted access of children from poor families to the institutions.

The International Year of the Family (1995) created a favourable climate for undertaking a public debate and subsequent actions aimed at developing a family policy program. The first governmental program emerged in 1997 (during a left-wing coalition's tenure) while the second came in 1999 (as a right-wing program).

Both programs were based on different premises derived from the ideological basis and philosophical outlook of the two political formations that approved them as government documents. They did share certain qualities, however. In both cases the development of the program was preceded by a diagnosis of the state of the family in Poland, identifying the most important problems.

One of the primary objectives of the programs was the treating of family support as assistance for investing in young generation. The programs declared the subjectivity and sovereignty of the family. It is worth

stressing that family policy was indirectly (implicitly) political in character. This signified that the programs incorporated actions that fit into broader frameworks of detailed policies. This pertained to creating conditions for family-based economic activity, primarily through limiting unemployment and the commencement of work, including self-employment. A lot of significance was attached to housing policy; both family policy programs included detailed provisions in this realm. The prime objective was to create conditions fostering the procurement of a home by families of varying financial standing.

Both programs promised respect for the principle of subsidiarity and multiplicity of entities. The premise behind this is that effective family policy is not dependent exclusively on the actions of the state, but also on entities implementing the objectives of the policies on various levels, especially on the local level.

What differed in the two programs was the special emphasis placed in the 1999 program on actions that could have an impact on demographic processes- to stop the fall in the numbers of marriages and births. These objectives were *expressis verbis* formulated in the second program. The programs also established different priorities with respect to basic family policy instruments. The 1997 program underscored the rationalisation of social benefits, treating them as the leading instrument. It was decided that in a situation in which there is income inequality and poverty, this form of 'external help' is more useful for the family. In the 1999 program, it was the tax system that was considered the main instrument. It included tax allowances for children. The assumption there was that this was an instrument that guaranteed the subjectivity of the family to a greater extent; the state help is not based on 'giving' (*e.g.* social welfare), but on 'not taking' what the family earns (allowances mean lower taxes).

The 1999 program attached particular attention to improvements in the moral condition of the young generation. Less emphasis was placed on limiting poverty among children and providing equal opportunities through better access to social services that can replace functions usually carried by the family. In spite of existing differences, the qualities common to both programs point to a need for support for the family through family policy and the readiness of even radical political groups to undertake such actions.

The 1997 family policy program was approved several months before the elections that changed the topography of political power in parliament and the government. This made implementation impossible.

The 1999 family policy program functioned for a year and a half (up to the next elections). Certain solutions introduced for multi-children families underwent modifications or even elimination when left-wing groups came to the force. Efforts concentrated on helping those most in need. New criteria regarding eligibility for benefits were approved. In practice, this signified further restrictions on the number of beneficiaries.

Further work on the rationalisation of benefits was announced in the "Social Policy Strategy for the Years 2002–2006." They found their expression in the draft act on family benefits (see below). Additional efforts with an impact on the family situation are to be found in other government and ministerial programs. Ways to improve the situation regarding access to jobs is the topic of several government programs.[2] The programs announced actions that have a direct influence on the family situation as it relates to additional food for children and 'school layettes' for children from poor communities. The planned introduction of the obligation of kindergarten attendance from the age of five creates a potential for improved equal opportunity.

4. Family policy measures - main directions of change

Social Benefits

Monetary social benefits are the dominant form of family support. The following modifications to family benefits have been introduced over the last decade of the 20th and the first decade of the 21st centuries:

- Introduction of the income criterion granting rights to benefits. Such benefits have become a form of assistance for families of the lowest

[2] A part of these is a result of the implementation of the European Employment Strategy-*e.g.* the National Action Plan for the Years 2002–2006 and the Sectorial Human Resource Development Operational Program-while a part marks the performance of the electoral platform of the governing coalition, *e.g.* the "Entrepreneurship, Development, and Work," "Entrepreneurship First and Foremost," and "First Job" programs.

income. This criterion was established parametrically in terms of the average monthly remuneration in the national economy, but it was different for individual benefits (*e.g.* 50% for family allowances, 25% for child-raising benefits). As of the year 2002, the criterion was unified for all benefits. Its level was established using the social minimum category. For families made up of a married couple and children the social minimum is for a four–member household of employees, while for a one-parent household the minimum is for a two-member household.

- Preferential principles for granting benefits have been established for incomplete families and multi-child families (families raising three or more children). This was also an expression of increased aid for families in difficult situations.
- Introduction of an indexing policy for benefit level using the consumer price index, which to a certain extent prevents a fall in the real value of benefits.

Currently,[3] principles governing family benefits are moulded in the following way:

Family allowances are granted for:

- Children aged up to sixteen, and twenty in case of continuing education;
- For the spouse if care is being provided for a handicapped child or if aged sixty (in the case of a woman) or sixty-five (in the case of a man), or is handicapped.

The income criterion at its basic level is a figure equal to the social minimum for a four-member household (PLN 548 per person), and there is a preferential level (PLN 612).

The level of family benefits varies depending on the number of children (PLN 42.50 each for the first and second child, PLN 52.60 for the third child, and PLN 65.70 for the fourth and each subsequent child).

[3] The information on the principles and levels of benefits is as of March of 2003. Announced changes stemming from the draft act on family benefits is taken into account in the subsequent parts of this paper.

The **nursing benefit** is granted to families bringing up a handicapped child up to the age of sixteen that requires continuous care by another person for health reasons, as well as persons over sixteen years of age if the disability occurred prior to that age. Benefits for persons over seventy-five are considered assistance in covering potential nursing costs. Initially, the level of the nursing benefit was established parametrically with respect to the average remuneration in the national economy and subsequently by lump sum.

Alimony fund benefits are intended to provide financial assistance to families who are incapable of executing the alimony they are due. The income criterion was waived at the start of the 1990s and was reinstated in 1999. Initially, it was established parametrically with respect to the average remuneration in the national economy and subsequently by a lump sum (PLN 612 per person as of the year 2002). Benefits are disbursed up to the level of adjudicated alimony, but no more than 30% of the average remuneration in the national economy.

A new form of monetary assistance from the state consisted of **benefits for women who were pregnant or raising children,** introduced in the 1990s. This was linked with the coming into force of what was known as the *anti-abortion act* (the Act on Family Planning, Protection of the Human Foetus, and Conditions Allowing the Abortion of a Pregnancy). The act made it impossible to have an abortion for reasons of difficult living or material conditions. In connection with this, the state was obliged to introduce a form of assistance for women whose situation was difficult.

Principles for granting these benefits changed in terms of period of payment, level of benefits and the income criterion as the basis for eligibility.

Starting in 2002, this temporary benefit was transformed into the **periodic maternal benefit** granted to the mother (or father) for the child old up to four months. People whose income does not exceed the level entitling them to receive social welfare benefits are eligible for this benefit. The level of the periodic maternal benefit is established as the difference between the income defined in the Act on Social Welfare (the criterion for the granting of assistance) and the actual income of the person applying

for the benefit. It cannot exceed a set amount (PLN 406). In addition to the period material benefit there is also the **one-time maternal benefit** (PLN 195).

The Act on Social Welfare came into force in 1990. It created a foundation for a new approach to social welfare. Social welfare benefits are considered a separate system intended to help the poorest people and families. Among the many benefits derived from social welfare, attention should be called to those addressed to families facing difficult and specific situations.

The **permanent benefit** is for persons giving up work or not holding any job because they are personally caring for a handicapped child. Such people should meet requirements as defined in the Act on Social Welfare (higher than in the case of other persons as it amounts to a factor of 1.5). The benefit is set as a lump sum.

The **guaranteed periodic benefit** for persons who have lost their right to unemployment benefits and are single-handedly raising a child aged up to seven (in 2001 the age was set higher up fifteen). The period of disbursement of the benefit amounts to thirty-six months. Its level is set at a figure amounting to the difference between the income criterion for a single person eligible for social welfare benefits and the actual income of the beneficiary. The benefit is disbursed at this level for a period of twelve months; for the subsequent twenty-four months it amounts to 80% of the initial sum.

The basic principles governing **maternal leave and benefits** were introduced in the 1990s and were in effect up to the end of the 1990s. The most significant change was introduced in 1999 by the right-wing government, which was based on extending maternity leave (up to twenty-six weeks following a single birth and thirty-six weeks following a multiple birth). The reason behind the changes was to influence the procreation stance of working women. The view that extended maternity leave will weaken the position of women on the labour market was why prior principles were reintroduced by the left-wing government. Maternity leave now amounts to sixteen weeks in the case of a first child, eighteen weeks in the case of all subsequent children, and twenty-six weeks in the case of multiple births. The mother may waive a part of the leave after

having used at least fourteen weeks, assuming that the remaining part is used by the father of the child. Maternal benefits amount to 100% remuneration. Maternal benefits for private farmers are disbursed over a period of eight weeks at a level of one–thirtieth of the minimal retirement pension for each day.

Child–raising leave and benefits. The duration of the child-raising leave, in its basic dimension, is thirty-six months up to the time that the child is four. It may be extended for a subsequent thirty-six months if the child is disabled, chronically ill, or mentally or physically retarded and requires care up to the age of eighteen. Both mother and father of a child have the right to child-raising leave and benefits.

Persons meeting a defined income criterion have the right to child-raising benefits. The criterion, initially set parametrically with respect to the average remuneration in the national economy is presently defined as a lump sum. In the case of a married couple it amounts to PLN 548, while for single parents- PLN 612.

The benefit is disbursed over a twenty-four month period, while in the case of single parents it is provided for thirty-six months. The child-raising benefit at its basic amount to single parents as well as persons raising three or more children are entitled to a benefit on an increased level.

Nursing leave and benefits (the childcare benefits and leave of absence from work related to childcare) are granted to working people (both women and men) in connection with care of a sick child up to the age of fourteen, as well as care of a healthy child in the following cases: the unforeseen closing of a nursery school, kindergarten, or school attended by the child, or due to the illness or hospitalisation of the person responsible for care of the child. The period of leave (and disbursing of benefits) cannot exceed sixty days per year. The benefits are disbursed at a level of 80% of the worker's remuneration (100% up to the year 1995).

The **childbirth benefit** was a benefit (introduced in 1954) linked with giving birth to a child. It was eliminated in 2002. A one-time **benefit for giving birth to a child** (of insurance character) is granted to private

woman farmers (and the wives of private farmers) at a level three times lower than the retirement pension.

The mentioned draft act on family benefits achieves the objective of addressing welfare benefits primarily to families that are most in need. The "most needy' group shall be defined on the basis of new criteria (the "family income support' threshold as calculated by the Institute for Labour and Social Studies[4]).

The basic benefit is to be the family allowance. The basic level of the family allowance is dependent on the age of the child (for age groups 0–6, 7–16, and 17–20 or 24 in the case of a disabled child). It has been assumed that the basic level of this allowance shall be the equivalent of a portion of the monthly food basket for children of the given age group. Persons entitled to family benefits shall also receive increased benefits by virtue of childbirth, a handicapped child, leaving work in order to raise a handicapped child, utilising child–raising leave, commencement of the school year, commencement of education by the child beyond its place of residence, and the loss of the right to unemployment benefits by a single parent of a child up to age six.

Changes to the system of family benefits in relation to the family situation are illustrated in Table 1.

[4] In establishing this criterion, following principles were taken into account: the provision of food at a level guaranteeing the development needs of children, the maintaining of satisfactory housing conditions, and the guaranteeing of participation by the children in the educational process as well as the integration of children and parents into society.

Table 1. Family situation and forms of assistance within the framework of family policy (explicit types)

Current form of assistance	Family situation	Assistance following changes
Potential for the joint settlement by spouses of personal income tax	**I. Marriage**	No change
	II. Childbirth	
Maternal leave and benefits	Working mother	No change
Periodic maternal benefits One-time maternal benefits	Mother with a low income (poverty)	Family allowance + one–time supplemental benefits
Maternal benefits One-time benefits for giving birth to a child	Mother – farmer	Family allowance + one–time supplemental benefits
	III. Childcare	
Nursing leave and benefits Child-raising leave	Families of working people	No change
Child-raising benefits	Families of working people with low incomes	Family allowance + supplemental benefits for utilising child–raising leave
	IV. Child-raising	
Family allowance	Low-income families	Family allowance
	Commencement of the school year	Family allowance + supplemental benefits by virtue of the commencement of the school year
	Child's education beyond the place of residence	Family allowance + supplemental benefits by virtue of the child's education beyond the place of residence

Table 1. Family situation and forms of assistance within the framework of family policy (explicit types), continued.

Current form of assistance	Family situation	Assistance following changes
	V. Families facing difficult situations	
Joint settlement of taxes with the child	1. Incomplete families	- Benefits granted in line with general principles; elimination of preferences
Alimony fund benefits	With low incomes	
Preferential criteria in family allowances		
Child-raising leave and benefits (preferences as to benefit level and duration,	Working mothers/fathers	
eligibility criteria)	Unemployed mothers/fathers	Family allowance +
Guarantied social welfare benefits		supplemental benefits for unemployed persons raising
	2. Multi–children families	children up to the age of six
	With low incomes	
		Benefits granted in line with
Higher family allowances for	Working with low income	general principles; elimination
successive children		of preferences
Higher child–raising benefits		Family allowance + supplemental benefits for persons utilising their child-raising leave disbursed over extended periods of time
	3. Families with a handicapped child	
	With low income	
Family allowances in line with preferential principles		Family allowance + supplemental benefits for handicapped children
Nursing benefits		
permanent benefits for persons		Family allowance +
leaving work	Families of working people	supplemental benefits by virtue of leaving work
Extended child–raising leave		No change

The Tax System

Introduced at the beginning of the 1990s, personal income tax failed to take into account allowances linked with the family situation of the taxpayer. Certain elements are pro-family in character, however. Those include:

- The potential for joint returns by the spouses (the tax is accrued on the basis of one-half of the total revenues of the couple and subsequently multiplied by two). This solution is beneficial in cases in which one of the spouses has no revenue or when there are significant differences in the level of revenues.
- The potential for settlement by a single parent in line with similar principles as in the case of a married couple, effectively resulting in lower taxes for such people.
- Tax exemptions with respect to various benefits and forms of assistance provided to the family.
- The potential for applying deductions from untaxed revenues. Initially, it was possible to deduct tuition paid to non-public schools. Currently, only travel expenses of children attending school above primary school may be considered a family deduction.

Social Services

Changes in the sphere of social services are based on a decentralisation of state prerogatives in the sphere of organisation and financing in favour of local governments and the introduction of market or quasi-market principles of their functioning. The establishing and managing of nursery schools, kindergartens, primary schools, junior secondary schools, and senior secondary schools are now the responsibility of local governments. They are also obligated to provide the financing necessary for the functioning of these institutions. Limited local government funds, together with low state subsidies, have forced a search for other sources of revenues. The solution was the introduction and subsequent increase of fees for the childcare institution's services. In the case of less affluent families this fee became a barrier to benefit from such services. However, the social welfare system has the potential for providing assistance in covering nursery school and kindergarten fees. Nevertheless, few families benefit.

5. How will be family policy like in the future?

The social and economic conditions behind demographic processes connected with the family formation as well as its functioning, demonstrates the need for both an explicit family policy aimed directly at the family, and an implicit, indirect policy. The latter is not addressed directly to the family, but it has an impact on it. Fighting unemployment, income policy, as well as housing, educational, environmental protection, and law and order policies are addressed to different groups of the society, but each has an impact on the family. This is not at odds with the need to apply and develop direct policy instruments; the opposite is actually true as it is strengthened.

Family policy should be based on the following principles:
- family subjectivity and sovereignty;
- helpfulness (subsidiarity) and solidarity;
- equal opportunity;
- multiplicity of entities;
- active policy liberating or waking the activity of families for themselves and the community at large, in which case the family is not only treated as an object of activity, but as one of the entities implementing family policy objectives.

Family policy should create conditions fostering the family formation and development, taking into account current social and economic conditions, as well as strengthening the model of the family with working parents-difficulty in reconciling professional and family obligations is considered one of the main barriers to increase fertility.[5]

This objective may be facilitated through many instruments. Primarily, these include leave from work and benefits intended to ease the reconciliation of professional and family obligations. What should also be

[5] The final report of the "Low Fertility, Families, and Public Policies" seminar that was held in Seville in the year 2002 states that "difficulties in reconciling professional and family obligations have an impact on the level of childbearing […] making it possible for women and men to reconcile the earning of a living and family life without major personal sacrifice makes its appearance as an important premise raising the level of childbearing" (Bagavos, Martin, 2000; Gauthier, 2000).

mentioned here is the increase in the compensation function of cash social welfare payments. Results of the survey on the population policy perception demonstrate that a significant barrier to take child-raising leave is a fear that a family income may fall dramatically.[6] The development of institutional support services of various scope and form should take place independently of the above.[7]

The development of support services should be accompanied by their accessibility, especially for children from poor communities (*e.g.* through the application of the principle of varied fees dependent on family income, and expanded help in covering them). Assistance in reconciling professional obligations with family ones may also be based on appropriate solutions in the realm of work organisation- flexible work time and flexible forms of employment creating conditions for bringing to life the concept of a 'family-friendly' workplace.

Diversity in family states induces the need for strengthening of an equal opportunity function in social benefits. This signifies the maintaining of the principle of granting benefits (in line with income criteria), and even making them dependent on the level of family income.[8]

The tax system is also used in implementing family policy objectives in the form of either allowances for each child or the deduction of specified expenses from taxable income (or tax). The latter solution favours the use of the tax system to have a stimulating influence on the decision

---

[6] A study was conducted in 2002 within the framework of the National Research Council grant pertaining to "Population Policy – Objectives, Solutions, and Opinions"- PPA2 survey- headed by I. E. Kotowska. This study fits in with European comparative project Population Policy "Acceptance of Population–Related Policies" granted by the European Commission.

[7] Sweden can be considered a good example with its broad gamut of services that are varied depending on the age of the child, and various forms of participation-*e.g.* several hours spent by the child in an institution facilitating educational and social development. At the same time, Sweden is a country with a high indicator for professionally active women and a relatively high birthrate.

[8] Such principles have public approval. The PPA2 study demonstrated that 51% of respondents were in favor benefits dependent on income levels. A linking of the benefit level (family allowance) with the number of children was more popular (89.4%), however.

regarding how expenses should be directed (*e.g.* through the deduction of expenses incurred for the "development of human capital').

The development of social services should also be examined in the context of investing in the young generation. This is because of their importance for the development of the child (biological, intellectual, and cultural) as well as their socialising influence. This second aspect becomes important in the face of a limiting birth rate and of the network of family links. Institutions providing care and upbringing create conditions for peer contacts that are considered advantageous for the development of the child.

Development of social services, in quantity and quality, is a task for local government. They should be assisted by the state and other entities (public and denominational organisations as well as business). Parental participation in implementing the tasks of such institutions would, in its turn, lower certain costs of its functioning. Parental participation can also be treated as a "substitute' for fees for the services rendered by the institution (such practices are applied in certain countries of the European Union European Observatory, 1996).

Implementation of family policy should be based on a multiplicity of entities of defined jurisdiction:

- the state-responsible for the creation of long–term economic and social strategy as well as the creation of legal, institutional, as well as financial conditions for the realisation of family policy objectives;
- local government-active where social needs are created and capable of direct application of instruments adapted to needs actually present in the given area;
- non-governmental organisations (citizens)-in addition to direct and complementary actions with respect to those undertaken by the state and local government, NGOs serve to activate through moulding social stance, awakening aspirations, and assisting in self-help efforts; the workplace-undertaking actions aimed at employees within the framework of work organisation and actions aimed at the broader local community (*e.g.* by sponsoring institutions providing care and upbringing or direct aid through scholarships for talented children).

Conditions vital for the implementation of social and family policy objectives are:

- the development of a family policy strategy on various levels within the framework of national development, regional development, and local development strategies;
- the creation of mechanisms fostering the integration of the efforts of many local family policy entities, increasing community mobilisation, and using all resources (including social ones) for the realisation of tasks;
- the restructuring of public expenditure.

A general debate on the needs and aims of family policy could prove favourable.

References

Bagavos C. and C.Martin, 2000, *Low Fertility, Families, and Public Policies,* Synthesis Report. Seminar, Seville, Spain, September 15–16, 2000.

Balcerzak-Paradowska B., 1999, *Polityka rodzinna. Między dwoma modelami* (Family policy between two models), Prepared by PBZ, ILSS, Warsaw.

Balcerzak-Paradowska B. (ed.), 2002, *Praca kobiet w sektorze prywatnym. Szanse i bariery* (The work of women in the private sector. Opportunities and barriers), ILSS, Warsaw.

CBOS, 1999, *Plany, dążenia i aspiracje życiowe młodzieży* (The life plans, desires and aspirations of young people), Research communique. Warsaw, June.

European Observatory on Family Policies, 1996, *Development on Family Policy*.

Gauthier A. H., 2000, *Public Policies Affecting Fertility and Families in Europe: a Survey of the Fifteen Member States,* Seminar, Seville, Spain, September 15–16, 2000.

Government Population Council, 2002, *Sytuacja demograficzna Polski. Raport 2000–2001* (The Demographic Situation of Poland. 2000–2001 Report), Warsaw.

GUS, 1997, Uwarunkowania zachowań prokreacyjnych rodzin polskich (Determinants of procreative behaviour of Polish families), Central Statistical Office, Warsaw.

GUS, 2002, *Aktywność ekonomiczna ludności Polski, IV kwartał 2002* (Labour Force Survey in Poland, IV Quarter 2002), Central Statistical Office, Warsaw.

GUS, 2002a, *Rocznik Statystyczny* 2002 (Statistical Yearbook 2002), Central Statistical Office, Warsaw.

GUS, 2002b, *Aktywność Ekonomiczna Ludności Polski w latach 1992–2001, Informacje i opracowania statystyczne* (Economic activity of the Polish population over the years 1992–2001), Central Statistical Office, Warsaw.

GUS, 2002c, *Warunki życia ludności Polski 2001* (Living conditions of the Poland's population), Central Statistical Office, Warsaw.

Kotowska I.E., 1999, Drugie przejście demograficzne i jego uwarunkowania (The Second Demographic Transition and its Determinants), in: I.E.Kotowska (ed.), *Przemiany demograficzne w Polsce w latach 90 w świetle koncepcji drugiego przejścia demograficznego* (Demographic Changes in Poland in the 1990s from the Perspective of the Second Demographic Transition), Warsaw School of Economics, Warsaw.

Lesthaeghe R. and D.J.van de Kaa, 1986, "Twee demografische transities?", in: D.J.van de Kaa and R.Lesthaeghe (eds.), *Bevolking: groei en krimp*, Deventer: Van Loghum Slaterus, 9-24.

Van de Kaa D.J., 1987, "*Europe's Second Demographic Transition*," *Population Bulletin,* Population Reference Bureau, Inc. Washington D.C.

PART VI POPULATION AND SOCIETAL CHANGE

'Demographies in transition': an essay on continuity and discontinuity in value change

Dirk van de Kaa

1. The parallel between economy and demography

When on the 9th of November 1989 the inhabitants of the DDR were suddenly allowed to cross an until then hermetically closed border and poured into West Berlin in massive numbers, this signified the end of the separate development of the so-called socialist countries of Central and Eastern Europe. Economists and politicians were quick to coin a new term for that group of countries. The collective name given to them has a certain demographic connotation: countries with economies in transition. The message of that term is as straightforward as it is clear. These countries would within a presumably quite limited period of time change from being 'planned' or 'command' economies in the communist tradition to capitalist 'market' economies. The charm of the phrase is that it contains the classic concept of a transition: a movement from one well-defined stage to another equally well-defined stage. Both the beginning and outcome of a developmental process are specified.

Demographers have on occasion used that new term for descriptive purposes. But one cannot say that they embraced it warmly. Understandably so, in demography the word 'transition' had already been usurped to describe a very specific development in population history and the risk of creating confusion obviously was great. Moreover, it was difficult to think of an initial, quite specific and characteristic demographic stage changing into another equally specific stage. In terms of demographic behaviour neither the 'socialist' nor the 'capitalist' countries were particularly uniform at the end of the 1980s. And while the latter group appeared to have entered a 'second demographic transition' no one felt clairvoyant enough to predict that in general terms population trends in the former socialist countries would very quickly start resembling those dominant in the rest of Europe.

We may have been a bit too prudent. Would it not have been reasonable to assume a certain analogy with the approach the economists and politicians took? After all, a standard assumption of demography is that economic and demographic changes are interrelated. So, if a deliberate effort were afoot to make economic and social conditions at both sides of the former Iron Curtain more equal rapidly, expecting a certain degree of demographic convergence would not have been unreasonable. I will argue in this essay that the tendencies to converge to a common European demographic regime are quite remarkable indeed. Post-war demographic developments on the continent, and more particularly the 'leap-frogging' pattern discernible when the countries of Eastern and Central Europe are compared with those in the western part of the continent, are strongly associated with continuities and discontinuities in value change. These have had a direct influence on the tempo and quantum of fertility, they are reflected in partner relations and marriage patterns and they will, more indirectly, generate an effect upon the two other components of demographic growth: mortality and migration.

2. The choice in terminology: demographic 'transitions' or 'revolutions'?

Before developing that line of argument further it is necessary to dwell for a moment on the wisdom of using the term 'transition' when describing the very important change in demographic regime that occurred in Europe starting in France at the end of the 18th century. As most demographers and population scientists are aware of, the term transition was not the first choice of European scholars. The famous French demographer Adolphe Landry (1945) used the term *révolution démographique* to describe the new practice of controlling fertility within marriage, which was the immediate cause of the decline in fertility he observed. When recently Tomas Frejka and Jean-Paul Sardon did me the honour of inviting me to contribute a Foreword to their new book on cohort fertility in industrialised societies (Frejka and Sardon, in press), I had reason to go back to Landry and to read his very precise formulation again. He had not used the term revolution accidentally. On the contrary: he argued that just as in the political history of states a major change in regime is customarily characterised as a revolution, that term should be used to characterise a change in demographic regime even if that change occurs only gradually.

The term selected by Landry was not adopted internationally. During the Second World War the centre point of demographic research switched to the United States. When contemplating the future course of population development in the world, senior researchers there, such as Frank Notestein, Kingsley Davis and Dudley Kirk, favoured 'transition' instead. Its obvious charm was that it suggested a direct link between demographic change and social and economic development. With progress all countries would experience declines in mortality and fertility. With the result that, ultimately, a long-term demographic equilibrium, which combined high levels of mortality and fertility, would be replaced by a new and stable equilibrium based on low levels of both of these two components of natural growth. The population explosion in the Third World that they saw looming would be unavoidable but also not more than a temporary phenomenon. Moreover, appropriate developmental measures would shorten its impact and duration.

As I have argued elsewhere, the story presented by the Princeton group has all the hallmarks of 'good story' (van de Kaa, 1999). I have long been convinced by it. The first doubts crept in when in the mid-1980s Ron Lesthaeghe and I started our editorial work for a special issue of the sociological journal "Mens en Maatschappij" on demographic change in Europe and found that in all the demographic variables we discussed profound changes had taken place since the mid-1960s (Lesthaeghe and Van de Kaa, 1986). As a result the prospect of landing softly at a new balance between the components of population growth had become decidedly dim. Inspired by Philippe Ariès' (1980) wonderful paper on two successive motivations for the decline in the birth rate in the West, we started talking about a concept that would take in a broader range of demographic changes and, somewhat hesitantly at first, spoke of a 'second transition'. That hesitation stemmed partly from the understanding that as the transition story was conceived there could, as Massimo Livi Bacci (2001, 282) recently expressed it, never be more than one 'demographic transition' in world history. In hindsight we should probably have opted for 'second revolution' since there is, obviously, no fixed limit on the number of demographic regime changes, human kind may experience. In fact, the so-called Neolithic revolution of about 15 000 to 20 000 years ago which opened for our species the possibilities of a more settled way of life based on agriculture and animal husbandry,

may well have had a change in demographic regime as a consequence. It is, further, well established that the beginning of the Iron Age some 1200 years ago triggered large-scale population movements that lasted many centuries. So, if the term 'second revolution' is adopted to characterise the profound changes in the European population from the mid-1960s, all that can possibly be in doubt is its rank number. Provided, of course, the differences between the first and second revolutions can be presented convincingly.

3. The contrast between the two 'revolutions'

The starkest way of contrasting the two changes in demographic regime discussed above is to say that the first involved an adjustment of fertility levels as well as the onset of substantial emigration flows triggered by declining mortality. The second appears to lead to a significant level of immigration in response to massive ageing resulting from a combination of continued declines in fertility and mortality; the mortality decline occurring more particularly at higher ages. As I have argued elsewhere (1999), both regime changes involve shifts in all three components of population growth.

I do not want to rehash the endless discussions about the first 'revolution'. Suffice it to say that with regard to fertility and family formation it required value change allowing people to bring marital fertility within the 'calculus of conscious choice', as Ansley Coale phrased it at the IUSSP-conference of 1973. Relatively inefficient means of contraception then enabled parents to prevent the size of their families exceeding their best interests and that of their children. However, the prevailing socio-cultural and family environment expected couples to marry, and to have children within their marriage. Characteristic of the second 'revolution' is that in matters of fertility and procreation the interests of the two individuals constituting a union take central stage. Usually it is either abortion, sterilisation, oral contraception, the IUD, the condom, or some efficient combination of these, that offer them, at least in principle, complete control over their fertility. Value changes allocating family formation decisions exclusively to the couple may be seen as a necessary precondition for the full development of this regime.

4. Interpretation of the historical record: trends in fertility to 1989

4.1. Before the Second World War

The best source of information on historical fertility trends in Europe is contained in the final volume of the so-called Princeton fertility project (Coale and Watkins, 1986). Evidently sustained fertility decline in France preceded that in the rest of Europe by several decades. The estimated date of a 10-percent decline in the index of marital fertility (Ig) for that country was estimated to be 1827, with the second earliest country, Belgium, not following until 1881. The median province date for the nearly 600 provinces studied in the project is given as 1903. Excepting France, the geographical distribution of early dates of the onset of sustained fertility decline shows very little clustering. Provinces where sustained declines commencing early, before 1880 to be more precise, occur in Belgium, Spain, Italy, Germany, Switzerland, Hungary, the former Yugoslavia, and the Baltic region. A great deal of variation between and within countries is apparent. But no pattern is discernable suggestive of a systematic difference in the onset of decline between the provinces and countries of Eastern and Central Europe and those elsewhere on the continent (Coale and Treadway, 1986, map 2.1). By 1930 the continent had experienced the Great War and was suffering from the global economic recession. While fertility in some parts of Ireland, Finland, Russia and the Mediterranean region appears to have been relatively little affected, the Ig values elsewhere then have dropped to below .530. Map 2.4 in Coale and Treadway's article shows that Central and Eastern Europe are no exception in this regard. Thus, as demographers know, the number of births occurring to married women had nearly everywhere in Europe fallen to little more than half the number that would have occurred if they were subject to maximum fertility. Towards the end of the 1930s, almost all European populations became involved in a new global phenomenon: the Second World War. That War and its aftermath generated a great deal of demographic divergence.

4.2. From the Second World War to 1989

As a result of administrative breakdowns, numerous border changes and large-scale movements of refugees and displaced persons, official statistical time series of fertility data tend to start again towards the end of the 1940s. In a recent overview of trends in the total fertility rates in developed countries since then, David Coleman (1996) and Tomas Sobotka (2001) have presented a series of graphs in which the regional differences in Europe are well demonstrated. Evidently, fertility developments in Central and Eastern Europe since the end of World War II diverged from those elsewhere in the region. In fact, while in the other regions one is struck by a remarkable homogeneity, the most striking characteristic of the course of post-war period fertility in the Central and Eastern European countries is their heterogeneity. In each of the countries Coleman has considered Bulgaria, Czechoslovakia, the former GDR, Hungary, Poland, Romania, and Yugoslavia fertility follows a distinct course.

It would seem that the relatively brief period of armed conflict in combination with an aftermath which led to the establishment of communist regimes in Central and Eastern Europe is largely responsible for the regional variation in demographic trends on the continent from 1945 to the end of the 1980s, and even to the present. All Western countries deeply and directly affected by the war and/or German occupation display a pattern typified by a boom in fertility in the first few years after their liberation, followed by a much longer, less strong increase in the TFR from about 1950 to 1965. The decline following the mid-1960s typically lasted two decades, with some 'recovery', always quite limited, occurring in the late 1990s. Post-war trends in the Southern European countries follow a similar pattern. However, steep declines in fertility start about a decade later (after 1975) and continue almost to the present. Understandably, there are a few countries in Western and Northern Europe – Sweden, Iceland, and Ireland where the course of fertility differed from that described above for the region as a whole, possibly because they succeeded in remaining more or less neutral during the conflict.

5. Continuities and discontinuities in value change

5.1 Differences in impact of the continued practice of preventive contraception

In my view it is a plausible, at the very least a defendable conjecture, that the differences in fertility trends and, more generally, population trends between the Central and Eastern European countries and the remainder of the continent do reflect *inter alia* obviously but no less significantly timing differences in the continuities and discontinuities of value change. Without the serious interruption in the formation process of many young families and the postponement of marriages caused by conscription and other causes associated with the war, a gradual further decline in completed family size might have occurred everywhere in Europe. Average desired family size would, presumably, also not have differed much between the two sides of what became the Iron Curtain. Most likely these averages achieved would have exceeded the means desired. The motivation for the continued decline would have remained constant: the concern for the well-being and future of the children. That is to say it would have remained the first of the two successive motivations identified by Philippe Ariès.

The idea that without the division caused by the war achieved family size might have declined everywhere in Europe is based on the trends observed in Central and Eastern Europe. The liberation from the vagaries of war there was soon followed by the establishment of the so-called 'socialist' regimes and/or renewed occupation. This implied a significant shift in ideology and dominant societal forces. The communist regimes forced secularisation and favoured, at least in theory, increased equality between the sexes. One of the demographically relevant consequences of the discontinuity in value orientation inherent to the establishment of communist regimes was that in a majority of countries abortion became available on demand during extended periods since the mid-1950s (David and McIntyre, 1981). As withdrawal and periodic abstinence then were the main methods of contraception practised (Leridon, 1981), the creation of such a new stopgap must have been highly significant. It made the practice of preventive contraception, which I would define as trying to 'assure that the size of the family does not exceed the maximum acceptable', much easier. At a time when traditional contraceptives, such

as the condom, tended to be in short supply (Frejka, 1983), abortion offered a simple way out in situations where otherwise an unwanted birth would have occurred (David, 1982; Tietze and Henshaw, 1986). Even after the mid-1960s when the introduction of modern contraceptives was much delayed, or very imperfect, having access to abortion remained of crucial importance for too many individuals and couples. The experience of Japan after 1948, the year in which the so-called Eugenics Protection Law was promulgated, has shown that making abortion freely available can be an extremely effective way of lowering fertility levels. The case of East Germany also is illustrative in that regard. Fertility fell below replacement level only a few years after in 1970, in comparative terms, very late change in abortion legislation had been adopted. Given the general political, social and economic conditions prevailing in these societies, it is not surprising that 'baby crises' leading to abrupt (population) policy interventions have been reported for several of 'socialist societies' and, most notably, for Bulgaria (TFR of 2.02 in 1966), the GDR (1.54 in 1974), and Romania (1.91 in 1965). In Hungary the NRR fell below replacement as early as in 1960. Measures aimed at raising fertility became quasi-universal. Governments began to expound the virtues of family life, the value of children to society, and became somewhat puritanical in sexual matters. There certainly was no room for a value transformation, *i.e.* a new value orientation that would give central stage to the personal interests of the partners in a union. Raising children was placed in a positive light; frequently the retirement age of working mothers would decline with each additional child. Fluctuations in period fertility in individual Central and Eastern European countries between the early 1950s and 1989 are clearly directly attributable to such population policy measures and interventions (Macura, 1981).

Excepting Sweden, no such liberal abortion policies were adopted in the rest of Europe in the immediate post-war period. On the contrary, abortion was strictly prohibited. Sometimes it was not even allowed in circumstances when the life of the mother was in danger. Moreover, while condoms could customarily be bought from under the counter in drugstores or at the hairdressers, advertising contraceptives was normally illegal and punishable by law. Churches frequently condemned the practice of birth control on religious grounds, while governments either felt that more births were welcome or that emigration would offer a good solution if pressures on the labour market mounted. In this time non-

governmental family planning organisations tried to circumvent such restrictions and saw their membership rise rapidly until the year doctors could prescribe the pill. Trained nurses fitted diaphragms, advised on the use of the rhythm method and spermicidal pastes in combination with these, and more generally attempted to provide a measure of sexual education. Just as in the US where in 1965 in *Griswold versus Connecticut* the Supreme Court ruled that prohibiting the use of contraception was unconstitutional, this didn't change until after the mid-1960s. With the age at first sexual intercourse steadily falling, it is hardly surprising that up to that date period fertility in the West generally rose while the age at first marriage tended to decline. Many of the marriages were forced; many of the pregnancies were unwanted, at the very least unintended. A great deal of circumstantial evidence points in that direction.

5.2 Differences in the impact of the emergence of self-fulfilling conception

A telltale sign that in Western Europe unwanted fertility was rather common is that as soon as around 1965 oral contraception and the IUD became available, the numbers of higher order births declined very sharply - Finland and The Netherlands are prime examples of this pattern. Fewer births occurred within seven months of the marriage; fewer brides were pregnant. After half a decade more, many governments somewhat reluctantly had to conclude that public pressure to permit abortion under certain circumstances could no longer be resisted. Similarly, they could no longer disallow sterilisation for contraceptive purposes on the grounds that it was causing the client grievous bodily harm. As regards the practice and efficacy of birth control – abortion included the capitalist societies caught up and then surpassed the socialist societies in the decade between 1965 and 1975. Henceforth the choice for marriage and/or children there became to depend entirely on whether the couple felt such a step would enrich their lives. Contraception is interrupted solely when a conception is desired and the partners feel they want to become (married) parents. Henceforth the decline in fertility became motivated by concerns for the well-being and life course prospects of the partners. The second demographic revolution had begun. With numerous national variations on that general theme, fertility dropped sharply after 1965 and again from the early 1970s. Several clearly related shifts in fertility and family formation have been observed while the two other components of population growth

also became affected (van de Kaa, 1999). Considerable improvements in life expectancy at higher ages could be chalked up. These accentuated the ageing process that had already begun and contributed to labour market disparities. Interesting enough, the recruitment of guest workers also started around the mid-1960s; it marked the beginning of a new era in which continued immigration would replace the long tradition of siphoning off excess labour through voluntary, but sometimes assisted emigration.

6. The background of the continuities and discontinuities in value change

It is not surprising that the second demographic revolution began in the West, that is to say in the countries of Europe that after the war embraced the principle of the market economy. Stimulated and aided by the Marshall plan, the post-war 'reconstruction' related primarily to destroyed infrastructures, industry and trade. However, in the views of many a reconstruction of the political system was also badly needed. Substantial minorities clamoring for political renewal were largely unsuccessful although in a few countries (Italy, France) communist parties gained sizeable proportions of the popular vote. Immediately after the war quite a few of the countries with a traditional Atlantic orientation became directly involved in the process of de-colonisation (Belgium, France, Portugal, Spain, The Netherlands, and UK). This forced them to redirect their economies and to industrialise forcibly. Standards of living increased, trade unions became a societal force to be reckoned with and very gradually elaborate social security systems came to be introduced. At first people were so intent on improving their material standard of living that they did not object to the control over their personal life still exercised by the churches, by government authorities at various levels, by traditional political parties resisting value change, and by members of their own families. However, soon richly coloured emancipation movements emerged, those pleading for improved contraception and sexual reform amongst them. Their common theme: resist and challenge authority! Any attempt to sketch that development suffers from the problem of the uniqueness of national settings. Moreover, so many things happened at the same time that defining a sequence is almost impossible. As a rule, trendsetters were found among the students and the better educated. They were both playful and seriously intent on bridging the gap between the

workers and the intelligentsia. Internationally, the student revolt that took place in Paris in 1968 has become the most widely known. It was neither the first, nor the most typical manifestation of dissatisfaction amongst the younger generations. The *Provo's* in The Netherlands came together for their informal, mostly funny, but at the same time riot provoking happenings before 1965. They were a very heterogeneous group moved by sometimes rather weird ideas and intent on putting quite unrealistic plans into practice (Schuyt and Taverne, 2000). They did not turn against democracy but were highly sensitive to the failures of the prevailing political system. Evidently the memory of the havoc World War II had brought played a significant role. One of the *provo's* observed that 'the generation of young people who did not, or did unconsciously,' experience the Second World War had time and again been told that the one attitude that was fatally anti-democratic was one of bowing uncritically to Authority. An attitude he then characterises with the German expression: '*Befehl ist Befehl'* (An order is an order). In a proper democracy, he argues, authority needs to be stripped of its mythological dimensions (Schuyt and Taverne, 2000, 393).

Whatever the ideas of that generation, those in power were quickly alarmed and tried to stop the movement by force. The police, and sometimes the army, were called in. When that failed the hierarchical, authoritarian system of government and administration caved in without a prolonged struggle. New guiding principles giving people a more direct say in questions affecting them, or the organisations they worked in, were put into place. More generally greater freedom was granted to individual citizens independent of their sex, attitude towards marriage and the family, sexual orientation and so on. This signified a clear discontinuity in value orientation. That it happened just about the time oral contraceptives also came on the market in Europe – for the US market the pill had already been approved in 1960 – may or may not have been pure coincidence. Personally I have no doubt that modern, effective contraceptives had a catalytic influence on demographic change. The effect was truly revolutionary. I have seen young women handing down the smallest of their baby's clothes to a pregnant cousin or acquaintance within three months after the birth of what, obviously, was going to be their own last child. Perfect contraception made them perfectly certain of that. A regime based on preventive contraception could be replaced by

one centred on self-fulfilling conception. Ariès' second motivation for the decline of the birth rate had emerged.

7. 'Demographies in transition': the interpretation of demographic change after 1989

As noted above the political system in the countries of Central and Eastern Europe after the Second World War became dominated by communist/socialist ideologies. Consequently the post-war 'reconstruction' was necessarily frequently preceded by a deliberate destruction of existing structures that, conceivably, could have proven to be obstacles to the introduction of communist principles in agriculture, industry and education. Economic growth was sluggish, personal disposable incomes rose slowly. While unemployment was an exception, there also was little opportunity for individual enrichment through industry or advancement in private enterprises. Furthermore, as a rule the new political systems did not encourage the free and unfettered expression of dissenting opinions and turned out to be adverse to the development of voluntary organisations or movements advocating greater individual freedom of choice and personal responsibility in private matters. An oppressive state police system was commonly used to stifle voices pleading for a measure of political and ideological liberation. Under such circumstances it required great courage to speak up or to rattle those in authority. It would almost certainly land you in jail.

Nevertheless, it probably is a mistake to assume that the discontinuity in value change that occurred in the market economies from the mid-1960s left the demand economies completely untouched. Numerous occasions of popular revolt, unrest, student rebellions and similar expressions of dissatisfaction with the existing system of government have been reported. Understandably, these differed in emphasis from those in the West and in no way do I, as an observer looking in, want to suggest that they are fully comparable. There was no room for playfulness and cheerful, adventurous risk-taking as they were primarily aimed at obtaining certain basic freedoms, which elsewhere could be taken for granted. In 1956 the Hungarian population made a serious attempt to free themselves from the communist regime and Russian domination. In the same year the Polish authorities brutally ended a strike by workers in Poznan. Ten years later, when in Warsaw the government had shut down

Kazimierz Dejmek's staging of Adam Mickiewicz's critical play *Dziady* (The Forefathers) mass student protests followed. Major strikes occurred in Gdańsk, Gdynia and Szczecin in December 1970. These were, again, not immediately successful. But, just as those reported for Ursus and Radom in 1976, they contributed to the establishment of the KOR (Workers' Defence Committee) of 1976 which aimed to unite the efforts of the workers and the intelligentsia. In August 1980 renewed large-scale strikes at the shipyards in Gdansk led to an agreement of sorts with the authorities – 'negotiated revolution' and the establishment of the world-famous self-governing trade union *Solidarność*. For various other countries in the region a comparable chain of events has been recorded. Alexander Dubcek's 'Prague Spring' came to an end with the invasion of Warsaw forces in the night of 20/21 August 1968. Yugoslavia had its so-called *Praxis* Group that was active at the University of Belgrade around 1966, while in 1972 the so-called 'Croatian Spring' ended in a purge. Developments in the German Democratic Republic, finally, bring us back to our starting point. In 1961 constructing the Berlin Wall apparently was the only answer the government could think of to contain the widespread dissatisfaction amongst a population who preferred leaving their homes to living under an oppressive regime. After the advent of Mikhail Gorbachev in 1985 all Central and Eastern European countries quickly grabbed the new opportunities to adopt a different political system, to gain their independence from a crumbling Soviet Union and to become 'an economy in transition'. That this major shift in official value orientation in so many countries could occur without significant outside assistance should almost certainly be interpreted as a clear sign of progressive value change prior to 1989 amongst the populations at large. Colleagues living in the region at the time have on numerous occasions explained to me that they were, on the whole, quite well informed about what was happening at the other side of the Curtain even if they themselves were not given permission to go there and to see it with their own eyes.

Excepting the case of Hungary, no internationally comparative value surveys were taken in Central and Eastern Europe at the time. Thus no data sets from between the mid-1960s and 1989 exist to substantiate the above interpretation. However, several of the old and newly independent countries participated in the 1990-91 round of the World Values Studies project. Ronald Inglehart (1997) has listed these by the proportion giving a positive reply to the statement 'The entire way our society is organised

must be changed by revolutionary action'. That proportion varied from 42% in Czechoslovakia to 13% in East Germany, while in Austria, Denmark, Norway, The Netherlands and West Germany it would be a mere 2%. These few figures illustrate marked differences in the mood for change.

Numerous scholars have analysed the first decade of population change after the *Wende.* Some discussed a specific topic for the region as a whole or for the region in the wider context of the industrialised societies (Kuijsten, 1996; Coleman, 1997; Singh and Darroch, 1999; UN 1999a and 1999b; Kučera *et al*., 2000; Philipov and Kohler, 2001; Corijn and Klijzing, 2001; Klijzing and Corijn, 2002; Lesthaeghe, 2002; and Macura and Beets, 2002). Others compared and contrasted two or more countries (Kamarás and Kowalska, 1995; Liefbroer and Frątczak, 1995; Katus and Zakharov, 1997). Others, again, concentrated on a one particular society (Pastor,s.d.; Zakharov and Ivanova, 1996; Rychtariková, 2000; Pongrácz, 2002). So far the most comprehensive efforts to explain the trends and differences have been published by Tomás Sobotka (2001), Ron Lesthaeghe and Johan Surkyn (2002), and by Hans-Peter Kohler and his colleagues (Kohler, Billari and Ortega, 2003).

What would appear to follow from all these efforts? When, after 1989, the existing and newly created Central and Eastern European countries became characterised as having 'economies in transition', they also entered a period of rapid demographic change. In fact, they might as well have been named after their 'demographies in transition'. Fertility declined rapidly. At first this was attributed to crisis conditions. But it soon turned out that these 'changes in fertility are part of a broader transition in reproductive and family life marked by the spread of alternative family forms, non-marital births, postponement of births and decline in marriage rates, which has been taking ground in the Western European societies since the 1960s' (Sobotka, 2001, 26). Sobotka's analysis of abortion statistics and information on contraception drives home the fact that in tandem with the decline in fertility people increased control over their reproductive lives. Commonly abortion rates declined, while the proportion of the population using modern efficient contraception, although still remarkably low in some countries, increased. At the same time sexual behaviour became more free and tolerance increased. While it would be wrong to view the countries of Central and

Eastern Europe as homogeneous in that respect, there evidently is a strong tendency for the region to develop the same trends documented earlier for Western Europe. Of particular relevance to the present discussion is Tomas Sobotka's conclusion that the countries appear to follow two different pathways both strongly related to the economic and social transitions taking place. Where the 'economies in transition' develop favourably, first births are postponed, first marriage rates declined, first birth rates and rates of teenage pregnancies are lowered, abortion rates were much reduced and modern contraceptive methods spread rapidly. The second pathway is characteristic of the countries where the efforts to speed up social and economic transition process have been much less successful. There the previous reproductive regime is still largely intact. Marriage is still rather early, cohabitation is quite limited, many brides are pregnant, first birth rates and abortion rates tend to be high (Leridon, 1999). In their study on quantum changes and tempo distortions in the lowest-low fertility countries in Europe, Hans-Peter Kohler and two colleagues come to essentially the same distinction in their reflection on what the future might have in store for that part of the continent (Leridon, 1999, 669).

It would seem that in general terms, and for the former communist region as a whole, demographic diversity may have increased rather than declined. But this is likely to be a temporary state of affairs. As more and more countries make a successful transformation from planned to market economies population trends are likely to become more similar. In fact, in successful 'economies in transition' the two other components of population growth in Central and Eastern Europe will most likely also resemble those witnessed elsewhere on the continent. Mortality, particularly at the higher ages, will decline and life expectancy will increase to levels previously thought implausible (Kannisto *et al*., 1994). These countries will also attract more and more migrants from elsewhere in the world (Okólski, 1999) and will, consequently, have to face the problems associated with their absorption in society. Obviously, longstanding cultural differences between countries are likely to remain visible for many decades to come, while demographic differentials within these societies will not disappear quickly.

8. What will the future hold?

In 1976 Thomas McKeown published his well-known book "The Modern Rise of Population". It is an interesting study in which the author analyses the different factors which led to the enormous expansion of population which began late in the 17th century and has, as he then wrote on page 1 '… continued to the present day' (1976). Perhaps it is now time for someone to start thinking about writing a sequel to that volume entitled: "The Post-modern Decline of Population". For Europe's demographic future appears to be a thing of the past. Natural population growth is already negative in a substantial number of countries and can be expected elsewhere. As Gérard Calot, my successor as President of the European Association for Population Studies, succinctly explained in one of the last papers he circulated amongst his friends, having a total period fertility rate 30 or 40 percent below replacement level simply implies that the generations now born are proportionally smaller than those giving birth to them. In all likelihood this will make marked declines in numbers inevitable, the more so as there are no signs that policy measures to avert it could be successful. In fact, I doubt that such measures could reasonably be taken, given the 'post-modern' character of the societies in Western Europe, the mass-individualisation that has taken place there, and the very strong emphasis on the rights of individuals this entails (van de Kaa, 2001). I should like to note here that in several of these societies the years since 1989 have witnessed a further strengthening of the individualisation process. More and more freedom is granted to individuals in the vital, even the existential choices they are faced with during their lifetime. In the Netherlands persons of the same sex can now enter legal marriage; this may soon also be the case in Belgium although in that country such couples may remain excluded from adopting children. In a few countries euthanasia is no longer prosecuted if proper procedures have been followed or only in exceptional cases. Quite frequently a blind eye is turned to the possession of small amounts of soft drugs for personal use. It may, in summary, be too soon to conclude that the trend towards the rejection of authority in personal matters has run its full course and that a reversal, leading to renewed emphasis on children and the family, for example, is imminent. All that can be said in this regard is that if the latter ever takes place it will almost certainly be because individuals and couples then see family life as an important aspect of self-realisation.

To me that would seem to be the only argument that could bring people to having more children out of their own volition; certainly in Western Europe (van de Kaa, 2002).

What is likely to happen in Central and Eastern Europe? In 2004 the European Union will be enlarged considerably. Ten new countries will be added to the fifteen that currently form that strong economic entity. Of these ten the former 'socialist' countries make up the lion's share. Given the conditions for entry that were applied, these are typically countries where the social and economic transition process has been successful. It stands to reason that their participation in the Union will act as a catalyst in the social and economic transition process. Personal incomes and levels of education will rise, people will want to participate in decision making at various levels of government, and they are likely to become more anti-authoritarian, and will seek greater individual freedom. In all likelihood this will speed up the process of demographic change. They will accentuate the novel demographic features that have already become visible since 1989. Moreover, in the next decade birth cohorts that have little personal experience of the communist period and were not raised in its traditions and value system will become the main contributors to the reproduction process. This will, no doubt, have a considerable impact on trends in family formation, fertility, leaving home, and so on. This not, because the Western European societies set standards people will deliberately seek to emulate, but simply because the similarity in socio-economic conditions is likely to give rise to similar aspirations and behavioural choices. The postponement of births may gradually come to an end with a small amount of recuperation taking place. Demand for foreign labour and immigration may well become significant.

Other countries of the region, such as Bulgaria and Romania, will be keen to be amongst the second sizeable group admitted to the enlarged Union. Presumably they will do their utmost to meet the criteria for entry. Although these have not been formulated as yet, they will in all likelihood imply that social and economic development will have to be speeded up. Legislation in various domains for example, that ensuring basic freedoms and rights to all members of the population – will have to be brought up to what the Union considers to be the European standard. Levels of personal income are bound to rise; social security will improve. Mass

individualisation will gradually, but inevitably, gain ground. These demographies will, almost certainly, also start moving quickly on the road to the second transition. With Kohler, Billari and Ortega I tend to agree that particularly in those countries of Central and Eastern Europe where social and economic development has been very slow there is still considerable scope for further decline in fertility before it will bottom out. I expect that a rise in life expectancy will occur and that before long these countries will become quite attractive to migrants and asylum seekers. In fact, in Bulgaria the rate of migration is already positive.

This leads me to a more general conclusion. Crisis conditions prevailing in Central and Eastern Europe immediately after 1989 may well have depressed levels of fertility for a while. However, fertility is unlikely to rise when social and economic conditions improve. In fact, the further the 'economies' move through their transitions, the stronger the features of the second demographic transitions will manifest themselves. I feel supported in this assessment by a UN publication that reached me just when I had completed this essay. It concludes that 'the concept of the second demographic transition … is applicable to the Eastern European countries …' (UN, 2002, 7). Vishhnevsky is cited as arguing that 'forced economic modernisation and abrupt secularisation of social life, combined with a rigid system of incentives and taboos shaped particular characteristics of demographic behaviour in the past and delayed the onset of the second demographic transition …'. The paper then notes that more recently '… the "velvet revolutions" spurred similar demographic results to those in the western parts of Europe, in part because it brought market reforms but also because it involved a rejection of authorities and advanced aspirations for freedom.' I read in these sentences a clear recognition of the demographic significance of continuities and discontinuities in value change. The second *révolution démographique* will, if I assess the complex situation in Central and Eastern Europe correctly, soon be an all-European phenomenon and reality.

References

Ariès P., 1980, "Two successive motivations for the declining birth rate in the West", *Population and Development Review* 6 (4), 645-650.

Calot G., 2001, "Mais qu'est-ce donc qu'un indicateur conjoncturel de fécondité?", *Population* 56 (3), 325-327.

Coale A.J., 1973, The demographic transition reconsidered, in: *International Population Conference, Liège,* Vol.1., Liège, IUSSP, 53-72.

Coale A. J. and R. Treadway, 1986, A summary of the changing distribution of overall fertility, marital fertility, and the proportions married in the provinces of Europe, in: A. J. Coale and S. C. Watkins (eds.), *The Decline of Fertility in Europe,* Princeton, Princeton University Press, 31-181.

Coale A. J. and S. C. Watkins (eds.), 1986, *The Decline of Fertility in Europe,* Princeton, Princeton University Press.

Coleman D., 1996, New Patterns and Trends in European Fertility: International and Sub-National Comparisons, in: D. Coleman (ed.), *Europe's Population in the 1990s.* Oxford, Oxford University Press, 1-61.

Coleman D., 1997, Converging and Diverging Patterns in Europe's Populations, paper presented to the European Population Conference, Cracow, 10-13 June 1997.

Corijn M. and E. Klijzing (eds.), 2001, *Transitions to Adulthood in Europe,* Dordrecht etc., EAPS/Kluwer Academic Publishers.

David H.-P., 1982, "Eastern Europe: pronatalist policies and private behaviour", *Population Bulletin* 36 (6), Washington DC., Pop. Ref. Bureau.

David H.-P. and R. J. McIntyre, 1981, *Reproductive Behavior: Central and Eastern European Experience,* New York, Springer.

Frejka T., 1983, "Induced abortion and fertility: A quarter century of experience in Eastern Europe", *Population and Development Review* 9(3), 494-520.

Frejka T. and J.-P. Sardon, (in press), *Childbearing Prospects in Low-Fertility Countries: A Cohort Analysis,* Dordrecht etc., Kluwer Academic Publishers.

Inglehart R., 1997, *Modernization and Postmodernization. Cultural, Economic, and Political Change in 43 Societies,* Princeton, NJ, Princeton University Press.

Kamarás F. and I. Kowalska, 1995, Matrimonial and Procreational Attitudes and Behaviors in Hungary and Poland – Comparative Study, Paper presented to the European Population Conference 1995, Milano, 4-8 September 1995.

Kannisto V., J. Lauritsen, A. R. Thatcher and J. W. Vaupel, 1994, Reductions in mortality at advanced ages: several decades of evidence from 27 countries, *Population and Development Review* 20 (4), 793-811.

Katus K. and S. Zakharov, 1997, Demographic Adaptation to Socioeconomic Changes in the USSR Successor States, paper presented at the IUSSP General Conference, Beijing, 11-17 October 1997.

Klijzing E. and M. Corijn (eds.), 2002, *Dynamics of Fertility and Partnership in Europe. Insights and Lessons from Comparative Research, Vol. II,* New York and Geneva, United Nations/UN/ECE.

Kohler H-P., F. C. Billari and J. A. Ortega, 2002, "The emergence of lowest-low fertility in Europe during the 1990s", *Population and Development Review* 28 (4), 641-681.

Kučera T., O. Kučerová, O. Opara and E. Schaich (eds.), 2000, *New Demographic Faces of Europe,* Berlin, Springer-Verlag.

Kuijsten A. C., 1996, "Changing family patterns in Europe: A case of divergence?", *European Journal of Population* 12 (2), 115-143.

Landry A., 1945, *Traite de Demographie,* Paris, Payot.

Leridon H., 1981, Les facteurs de la fécondité dans les pays developpés, in: *World Fertility Conference, Record of Proceedings*, Vol. 1, Voorburg/London, World Fertility Survey, 411-452.

Leridon H., 1999, Les nouveaux modes de planification de la famille en

Europe, in: D.J. van de Kaa, H. Leridon, G. Gesano and M. Okólski, *European Populations: Unity in Diversity*, Dordrecht etc., Kluwer Academic Publishers, 51-77.

Lesthaeghe R. and D. J. van de Kaa, 1986, Twee Demografische Transities? (Two Demographic Transitions?), in: D. J. van de Kaa and R. Lesthaeghe (eds.), *Bevolking: Groei en Krimp* (*Population: Growth and Decline*)*,* Deventer, Van Loghum Slaterus, 9-24.

Lesthaeghe R. (ed.), 2002, *Meaning and Choice: Value Orientations and Life Course Decisions,* The Hague, NIDI/CBGS Publications.

Lesthaeghe R. and J. Surkyn, 2002, *New Forms of Household Formation in Central and Eastern Europe: Are they related to Newly Emerging Value Orientations?,* Interuniversity Papers in Demography, 2002-2, IPD, Brussels.

Liefbroer A. C. and E. Frątczak, 1995, *The Family Formation Process in Poland during the Early Years of Socio-economic Transition: Evidence from the Polish Family and Fertility Survey 1991,* paper presented to the European Population Conference, Milano, 4-8 September 1995.

Livi Bacci M., 2001, Comment: desired family size and future course, in: R. A. Bulatao and J. B. Casterline (eds.), *Global Fertility Transition*, Supplement to PDR, Vol. 27, New York, Population Council, 282-290.
Macura M., 1981, Evolving population policies, in: H.-P. David and R. J. McIntyre (eds.), *Reproductive Behavior: Central and Eastern European Experience,* New York, Springer.

Macura M. and G. Beets (eds.), 2002, *Dynamics of Fertility and Partnership in Europe. Insights and Lessons from Comparative Research, Vol. I*, New York and Geneva, United Nations/UN/ECE.

McKeown T., 1976, *The Modern Rise of Population,* London, Edward Arnold Ltd.

Okólski M., 1999, Migration pressures on Europe, in: D. J. van de Kaa, H. Leridon, G. Gesano and M. Okólski, *European Populations: Unity in Diversity*, Dordrecht etc., Kluwer Academic Publishers, 141-194.

Pastor K., (s.d.), *Determinants of Abortion Rate: Slovak Republic Data 1958-1997,* MS, Bratislava and Trnava.

Philipov D. and H.-P. Kohler, 2001, "Tempo effects in the fertility decline in Eastern Europe; evidence from Bulgaria, the Czech Republic, Hungary, Poland and Russia"*, European Journal of Population* 17 (1), 37-60.

Pongrácz M., 2002, *Birth out of Wedlock,* Working Papers on Population, Family and Welfare No. 2, Demographic Research Institute, Budapest, CSO.

Rychtaříková J., 1999, "Is Eastern Europe experiencing a second demographic transition?", *Acta Universitas Carolinae 1999 Geographica*, 1, 19-44.

Schuyt K. and E. Taverne, 2000, *1950: Welvaart in Zwart-Wit (Welfare in Black and White),* Den Haag, Sdu Uitgevers.

Singh S. and J. Darroch, 1999, Current Level and Recent Trends in Teenage Pregnancy in Industrialized Countries, paper presented to the European Population Conference, The Hague, 30 August-3 September 1999.

Sobotka T., 2001, Ten Years of Rapid Fertility Changes in European Post-communist Countries: Evidence and Interpretation, paper presented at the EAPS Conference, Helsinki, 1-9 June 2001.

Tietze C. and S. K. Henshaw, 1986, *Induced Abortion: A World Review 1986,* New York, Allan Guttmacher Institute.

United Nations, 1999a, *World Abortion Policies 1999,* New York, United Nations.

United Nations, 1999b, *World Contraceptive Use 1998,* New York, United Nations.

United Nations, 2002, *Partnership and Reproductive Behaviour in Low-*

Fertility Countries, New York, United Nations Population Division/ESA/P/WP.177.

Van de Kaa D. J., 1996, "Anchored narratives: the story and findings of half a century of research into the determinants of fertility", *Population Studies* 50 (3), 389-433.

Van de Kaa D. J., 1999, Europe and its population: the long view, in: D. J. van de Kaa, H. Leridon, G. Gesano and M. Okólski, *European Populations: Unity in Diversity*, Dordrecht etc., Kluwer Academic Publishers, 1-194.

Van de Kaa D. J., 2001, Postmodern fertility preferences: from changing value orientation to new behavior, in: R. A. Bulatao and J. B. Casterline (eds.), *Global Fertility Transition*, Supplement to PDR, Vol. 27, New York, Population Council, 290-332.

Van de Kaa D. J., 2002, Is low fertility postmodern and beyond the action of governments?, in: M. Macura and G. Beets (eds.), *Dynamics of Fertility and Partnership in Europe. Insights and Lessons from Comparative Research, Vol. I*, New York and Geneva, United Nations/UN/ECE, 13-16.

Zakharov S.V. and E. I. Ivanova, 1996, Fertility decline and recent changes in Russia: on the threshold of the Second Demographic Transition, in: J. DaVanzo, *Russia's Demographic 'Crisis',* Santa Monica, Rand Conference Proceedings, 36-82.

Fertility in times of discontinuous societal change

Dimiter Philipov

1. Introduction

The transition in Central and Eastern European countries began with the sudden collapse of the socialist regime that left space for the gradual emergence of a market-based social order. The transition thus achieved the form of discontinuity that encompassed drastic changes in all spheres of life. Reorganisation of state institutions during this period caused its weakening. Replacement of old laws with new ones caused a deterioration in the legal system and its application. The economy was restructured on the basis of rising private property and free market relations. Some people came to know impoverishment, others enrichment. At the beginning of the transition people hoped that the transition would last a couple of years. It took longer. Nowadays some countries are close to its end while others have still a long way to go.

The entire change in life did not overlook demographic events. Marriages and births decreased and were postponed, the share of non-marital unions and extra-marital births increased. Some of the demographic changes, such as the abrupt fall in fertility, are unprecedented in the history of mankind in peaceful times. The total fertility rate (TFR) decreased to 1 and the total first marriage rate (TFMR) went down below 0.5 in some countries from the region. Analogous drifts were observed in all countries in the region. The populations in the region experience similar fertility and union-formation trends during times of political, social and economic divergence.

Demographers explain these tendencies in diverse ways. Some find the economic difficulties of the transition as the primary cause for the new demographic trends. Others argue that they are basically the result of long-standing ideational changes that have started developing before the start of the transition. The latter has only contributed to their rise at the surface and accelerated their intensity and diffusion. Both approaches give a valuable insight into the understanding of recent fertility changes in countries from the region.

This paper argues that the two grand approaches need elaboration to incorporate better the quintessence of the transition. One way towards such elaboration is the consideration of the impact of individuals social capital and coping strategies on the formation of fertility decisions in times of discontinuity and anomie.

The transition as a discontinuity threatens job security and income and hence supports the rise in economic hardship and impoverishment. It affects norms, values, preferences, attitudes, and behaviour. The break of norms and values creates social anomie. Disorientation and uncertainty increase in societies where normlessness prevails. Affected people may decide to postpone and even reject crucial and irreversible life events, such as marriage or birth of a child. Hence discontinuity, along with other factors, causes a fall in fertility.

While increase in personal disorientation and economic hardships cause a decrease in fertility, the question remains open as to why people have children under significantly worsened conditions of life. People react to disorderliness, anomie, deinstitutionalization and the consequent rise in uncertainty in diverse ways. Some may remain passive, while others undertake diverse actions, or coping strategies. Persons who manage to develop successful coping strategies may lower their burden of uncertainty and hence be less willing to postpone or reject a birth. Under the reign of disorderliness people rely mostly on their social networks, either for achieving successful coping strategies or just to make ends meet. One can get from a friend or a relative a loan or some key information for finding a job. The more the social resources one is able to mobilise out of the social network, the higher the chances for coping with the difficult living situation. Mobilisation of social resources is characteristic of the individuals social capital. Social capital thus helps survival, and for some creates prosperity, in times of social anomie and discontinuity in social order. These people are more likely to decide positively on a non-reversible event such as a birth of the child.

The lack of data is a significant obstacle to in-depth comparative research and assessment of any theoretical approach to the recent fertility changes in the region. This paper relies on supportive indication derived by survey data for Bulgaria and Russia.

2. Basic approaches to the explanations of fertility changes

The sudden change in fertility behaviour has been a topic of hot debate in the mass media as well as among scientists from countries in the region. The prevailing explanations can be broadly collected into two groups. One relates to the direct social and economic effect of the transition (the economic approach), while the other emphasises ideational changes (the ideational approach).

2.1. The economic approach

This approach relates to the social and economic hardships experienced by large groups of the population. Although this view to reasoning the fertility drop is widely held, it has received surprisingly little scientific support. Scientific publications are country-specific and descriptive. UNECE (2000) provides a useful study on the effect of the transition's economic hardship on fertility in Central and Eastern Europe. Using vital statistics data, the report reached a positive conclusion for the existence and significance of such an effect. Cornia and Paniccià (1995, 1996) provide other relevant studies.

The economic explanation of the reduction in fertility is based in general on the escalation in the direct costs of children as a consequence of the collapse in income. A more rigid formulation is found in Michevska and Zak (2002). They discuss the fall of the perceived level of subsistence below a certain threshold level as a cause of the decline in fertility.

Relative deprivation is a social and economic aspect that is supposed to have a significant impact on fertility behaviour. Lesthaeghe, in several of his papers (1998, for example), provides a discussion of the case of Western European countries and in the context of relative cohorts. Relative deprivation acquired a different aspect in the CEE countries, namely a cross-sectional one. Many people did not experience a significant drop below a threshold of subsistence but considered themselves economically deprived relative to others. For example, some people with higher education than others felt deprived because they received lower income. Another example is provided by the disappointment in people who had expected a more significant

improvement of their economic situation with the arrival of a more democratic regime.

The impact of longer education on fertility in Western European countries has been widely studied. In the light of the economic versus the ideational approach it is considered as the result of ideational shifts. In the CEE countries, extensive rise in education is the result of increased demand of human capital during the restructuring of the economy. Hence it is considered here in its socio-economic aspect rather than as the result of ideational change.

UNECE (2000) indicates the importance of increase in education on postponement and level of fertility. The discussion on education in the first section revealed that there is a significant rise in the enrolment ratio and in the length of education in the CEE countries. A higher level of education is likely to strengthen an individual's preference for a career. Therefore an increasing number of women is expected to postpone family events, including births.[1] This aspect of the transition could be an important reason for the recent fertility drop. Given the structural change on the labour market and the increased demand for highly qualified professionals it can be expected that educational expansion and its concomitant effect on job commitment will keep fertility low for quite some time in the future, at least where young adults are considered.

Economic uncertainty is another aspect of the economic approach whose relevance to the fall in fertility in Eastern Europe is of particular importance because of its significant rise during the transition. Rising uncertainty is especially pertinent to countries that did not experience a profound economic recession. Ranjan (1999) discusses the topic in the CEE countries, and Bhaumik and Nugent (2002) provide a detailed study of the case of Eastern Germany.

Lack of housing has been a traditional reason for preference for small family size in the CEE countries. Its significance has increased during the recent decade, due to the lower incomes of people who therefore cannot afford to buy a dwelling. Frątczak (2000, 32) indicates the need for housing and its impact on fertility in Poland.

[1] Billari and Philipov (2002) discuss the interrelationship between education and entry into first union.

The deteriorating economic situation, education expansion, expensive housing, and rising economic uncertainty were discussed here as causes for the drop in fertility. It is likely that couples placed under the pressure of any of these factors will take a decision to postpone fundamental life events, such as birth. Thus the explanation of the fertility trends discussed in the previous section may well rest on the economic approach.

2.2. The ideational approach

This approach refers to changes in norms, values, preferences and attitudes that cause consequential behavioural modifications.

The impact of ideational shifts on fertility behaviour has been extensively studied where Western European and other developed societies are considered (Lesthaeghe 1983, Lesthaeghe and van de Kaa 1986, and van de Kaa 1987, are among the first publications). These factors have a long-standing effect and have been developing for many decades and even centuries. Secularisation, rising female autonomy, and rising expressive individualism, are among the most relevant. They contribute to a lessening pressure of traditional norms pertaining to high fertility.

Lesthaeghe and van de Kaa (1986) and van de Kaa (1987) suggested the term "second demographic transition" to denote significant changes in demographic trends that occurred in Western Europe since the mid-60s. Where fertility is considered, these trends are like those described in the previous section, except that the speed of change was not as high. The authors emphasise the importance of ideational and particularly value changes as explanation of these trends. The term has gained great popularity among demographers in the CEE countries and particularly in the Central European countries. A recent book entitled Demographic change in Poland during the 90s in the light of the second demographic transition provides a vivid example (Kotowska (ed.), 1999). The FFS SCRs provide country-specific discussions. The issue is often addressed in publications in the national population journals. There is a debate on the soundness of the approach, though. Rychtaříková (2000) observes fertility changes as the result of crisis rather than of "intentional" change.
The impact of ideational changes on fertility decline in the CEE countries is discussed usually in the same way as for Western countries. Long-term

secularisation, rising individualism and female autonomy are seen as trends that have developed during the years of the totalitarian regime. The latter may only have hindered the fall in fertility through population policies. The start of the transition accelerated the ideational changes and the consequent fertility decline.

Studies on the second demographic transition in the CEE countries usually link it to the trends exhibited by vital statistics data. Since these trends are similar to those observed earlier in Western European countries, it is a straightforward analogy that the second demographic transition has been as effective in the eastern part of Europe as in its western part, although exhibited with some delay.

The implementation of the "second demographic transition" approach to CEE countries is usually set in the framework of the overall changes in life and society. Thus it comprises more than simply pure ideational changes. For example, the discussions evolve around female and young adults' labour force participation, the conflicting roles of a working mother, and rising education. As a consequence it interacts with the economic approach discussed above. Such an interaction is not surprising given the commonality between social, economic, and ideational change. Lesthaeghe (1998) discusses this topic from the theoretical viewpoint and his inferences serve as a theoretical justification of a similar approach.

3. Economic or ideational shifts?

The availability of two distinct explanatory approaches to the drop in fertility raises a number of questions. Which approach is the dominant one? Do they interact and how? Are the approaches applicable to distinct sub-populations or do both refer to the same individuals at the same time?

The search for an answer to similar questions encounters a significant problem, namely the lack of data. Research directed towards verification of the approaches is based on aggregate demographic data that describe general trends like those discussed above. It comes out that both of the two basic theoretical approaches finds support in one and the same kind of data. Such a result indicates that the data are insufficient. No country in the region disposes with panel fertility surveys. The FFS are the only ones available in the region. They have been designed and used for the purpose

of enriching the knowledge on demographic behaviour and life course, and less so for its explanation.[2]

Thus the lack of adequate data hinders the obtaining of an answer to the question posed in the title of this section. Beside the data problems the formulation of the two approaches needs additional clarification.

Consider the economic approach. It is based mainly on the impact of rising costs of children (direct costs in particular), as well as the rise in relative deprivation and economic uncertainty. These economic aspects differ among countries and among sub- groups within a country, specified by geographical regions, for example. In addition, some people experienced a significant improvement of their economic situation. According to the economic approach it can be conjectured that fertility should be higher in countries or regions where the economic crisis is less pronounced, and that the people that are better off would have higher fertility. No indication of the validity of any one of these conjectures has become known.

Consider the ideational approach. How did ideational shifts arise overnight? Changes in norms and values are long-standing and must have started their development well before the start of the transition period. Then one may ask how modern value orientations could develop in a suppressive regime like the totalitarian one. The features of the totalitarian regime resulted in the rise in conformism and alienation, rather than in individualism and autonomy. Some modern values, such as female autonomy and secularisation, were indeed wide spread in the region. The reason is in that they were imposed to the people. Female autonomy rose due to the significant increase in the share of working women. This increase was a consequence of the constitutionally guaranteed right of labour and the availability of jobs. Hence female economic autonomy was a status achieved through the specifics of the regime, rather than through changes in values. The regime imposed restrictions on practising religion. Although one may suppose that religiosity remained an internal value, unshared with others for the fear of

[2] The FFS data contain practically no information of the economic status of the respondents. Questions on values and norms refer to the time of survey and therefore cannot be used to study the impact of ideational shifts on fertility.

sanctions, norms based on religion gradually weakened. Thus the regime contributed to the development of secularisation.

Therefore both the economic and the ideational approaches need additional elaboration for their application to the countries in transition.

4. The transition as a period of discontinuity, disorderliness and anomie

Discontinuity is a major characteristic of the transition period. It is manifested through the reconstruction in political, social, economic, and civil structural organisations and institutions from totalitarian to democratic ones. Old institutions are entirely reorganised or even demolished and new ones are constructed. The abolition of the old is a momentous event, while the construction of the new is not. The new institutions emerge in an environment that is not exactly suited to their functioning, nor are they constructed free of errors. Their perfection may thus need a long time. Discontinuity refers to this time period when the old institutions do not exist and the newer ones are still too poor for regular functioning.

Kozul-Wright and Rayment (1997) studied the economic aspects of discontinuity, terming the latter hiatus a hiatus existed in all spheres of society. Consider for example the legal system. The transition required changes in hundreds of laws. An enormous change of this magnitude requires a long period of time. New laws are often imperfect and need further amendments. As a consequence diverse niches in life experience the impact of lawlessness. Such a state of legal anomie has been described by Sztompka (1996, 55): "The legal system is a fragmented mosaic of partial regulations, old and new, often inconsistent, repeatedly changed, arbitrarily interpreted. …The rule of law is compromised by extra-legal decisions taken by the highest authorities…including retroactive legislation... by the parliament. Trust in continuity, stability and the orderliness of social life is effectively undermined." This description was relevant at the time to nearly all, if not all, countries in the region.

Discontinuity refers to the period of time that starts with the destruction of the totalitarian society and is expected to end with the construction of a functioning democratic one. Discontinuity is the essence of the transition.

Discontinuity is pronounced in ideational shifts as well. The sudden overthrow of a totalitarian ideology brings about breaks in traditions, norms, and values. From the point of view of ideational shifts it represents a relatively short period of time when previously existing norms and values are broken and newer ones have still not settled. This is a state of deinstitutionalization and normative deregulation, known as *social anomie* (normlessness), following Durkheim's tradition in sociology. It has been a subject of research among social scientists in CEE countries during the 90s. Genov (1998) studied the impact of anomie on quality of life in Bulgaria. Using survey results he found high levels of reported uncertainty, anxiety, and fears. He classified the latter as characterising an anomic situation. Rousselet (1994) discussed the lack of identity of the Russian society in the context of anomie, and the role that religion could play in the search for identity. Arts, Hermkens, and Van Wijck (1995) viewed disorderliness in the CEE countries in the light of the theory of anomie. The Czech journal Sociologický časopis devoted one of its issues to the topic of societal transformation as social anomie (Buriánek, 1994). Rabušic and Mareš (1996) used Srole's (1956) index of anomie to find from two independent surveys that while in November 1994, 29% of the studied population was anomic, in June 1995 this share rose to 36%. They found also that anomie increased with age and decreased with education. Their conclusion is that the longer the time period since the "velvet" revolution of 1989, the less enthusiasm the people have with respect to the transformation of society. Sztompka (1996) viewed social disruption as the "deficiency of cultural resources, the central of which is trust". "Widespread anomie" and "relative deprivation" have brought about the spread of a "culture of distrust". Detailed studies of anomie have been carried out in Hungary. The Hungarian household panel survey includes a battery of questions on anomie and related subjects such as alienation. Although the battery has been changing it has been established that during the 90s there has existed considerable anomie among the Hungarian people (Spéder *et al.,* 1999; Andorka, 1999).

Arts, Hermkens and Van Wijck (1995) base their analysis on the Durkheimian theoretical framework of anomie. In their words, "anomie… is a particular form of deinstitutionalization, … a sudden normative deregulation of society… …a particular form of individual disorientation. In a situation of anomie people are thrown back upon their own

elementary behavioural propensities. This is due to the absence of a stable, external frame of reference which can restrain their needs and desires." (Arts, Hermkens and Van Wijck, 1995, 2). Individual disorientation arises when "individual attitudes and actions have been disconnected from shared values, norms and behavioural standards" (Arts, Hermkens and Van Wijck, 1995, 3). The breakdown of societal rules brings about social disruption. "Uncertainty will increase because people no longer know what is still feasible or not, or what is or is not just, or what demands and desires cannot be justified." (Arts, Hermkens and Van Wijck,1995, 3).

Discontinuity, anomie, or disorderliness are not specific to the CEE countries only. They have been a subject of discussion in the broader context of development (see for example Goulet, 1992).

This section described the transition as a time of disorderliness, discontinuity, anomie, and disorientation. One can add to this list other relevant terms, such as alienation and dissatisfaction. Psychological items such as worry and depression are also relevant. I further use the term discontinuity as seemingly the most general one.

5. Discontinuity and fertility

The impact of discontinuity on the abrupt fall in fertility in the CEE countries has not been studied in the demographic literature, although some authors have discussed it in general terms. Nauck and Joos (1995) for example, briefly point to the primary importance of "unstable expectations for the future and shifts in life orientation" for the explanation of the abrupt fall of fertility in the former GDR, but their indications seem not to have evolved further.

The link between discontinuity and fertility is not directly evident. It becomes more transparent when viewed through the prisms of the economic and particularly the ideational approaches to the study of fertility.

Consider first the economic approach. Discontinuity results from the grand restructuring of the economy and the market links to fall in income and therefore higher costs of children. It also has an impact on fertility

through the high level of uncertainty in life and insecurity of jobs and income. As was discussed in the previous section, under the pressure of uncertainty, people are likely to postpone irreversible events such as births. Some individuals will postpone until complete rejection. Uncertainty thus causes postponement of births and fall in fertility. Uncertainty affects marriage in a similar way: people may prefer the less risky state of cohabitation, not subject to a legal bond like marriage. Extra-marital fertility may rise in such non-marital unions.

Consider now the ideational approach. Firstly, the sudden weakening of normative regulations and restrictions opens the way to a wide range of changes in demographic behaviour, including those that are typical for the second demographic transition: increase in extra-marital unions, postponement of marriage and births, rise in extra-marital fertility, decrease in births. Secondly, people that cling to common values and norms will feel disoriented under conditions of anomie. For example, such people may have chosen a family formation through marriage and hold to the two-child norm that prevailed until the start of the transition. Instead, being disoriented by the lack of a norm, they may feel uncertain in the decision taking regarding family size and timing and therefore postpone births. Analogously one can expect the spread of other forms of new demographic behaviour. Thus demographic changes and value changes develop in parallel.

Ideational changes observed during the 90s in the CEE countries differ from the long-standing ideational shifts towards a modern society as observed in the Western countries. The latter develop smoothly through the diffusion of new behaviour. The way the former developed is a topic that remains to be studied.

The loss of desire to have a child is another important impact of anomie on fertility. It comes through Srole's measurement of anomie that rests on a scale constructed on several survey questions. One of them asks about agreement with the statement: "It is hardly fair to bring children into this world with the way things look for the future". (Srole, 1956). This paper will not consider the topic of measuring the impact of anomie on fertility; it is simply indicative from Srole's scale that anomic people may have less desire for children.

Discontinuity does not distress all the people in a population to the same extent. Rabušic and Mareš (1996) discuss *eunomie* and *semi-anomie* as denoting weaker states of anomie. As mentioned above, they identified different groups of the population according to the level of anomie.

Discontinuity is hence expected to exercise a negative impact on fertility. A theoretical framework of the links between fertility and discontinuity needs to answer the following question: who are the people that have children under such conditions of life? The framework developed by now in this paper explains why fertility should decrease but does not explain why it is positive. There exist at least two theoretical explorations that address this problem where the economic and ideational approaches are considered. Friedman, Hechter and Kanazawa (1994) argue that having a child reduces uncertainty. Schoen *et al.* (1997) fined that Americans want children because they want to increase their social capital. The topic of social capital and family demography is elaborated further by Astone *et al.* (1999).

This paper discusses uncertainty and social capital from a different perspective. It brings forward the following hypothesis: the higher the social capital that an individual can raise, the lower his or her uncertainty in life and therefore the less likely a negative decision for childbearing. This link does not contradict the theories raised by Friedman *et al.* (1994) and Schoen *et al.* (1997). They view decrease in uncertainty and rise in social capital, as a consequence of a birth. In the framework considered here, lower uncertainty and higher social capital are preconditions for having a child.

People react differently to worsened economic situation, weakened state institutions, break-up of norms and values, and uncertainty in general. Some of them remain passive, others take up specific actions, or coping strategies. Examples of widely spread coping strategies are finding additional work (second and often a third job), emigration, increase in education, or entrepreneurship. Other examples of coping strategies are theft, tax evasion, corruption and bribery.[3] Individuals that develop

[3] An example of an economically passive coping strategy is working on one's own plot of land. The EBRD (2000), table 5.3, p.103, finds a high significance of subsistence informal work among ex-USSR countries and some countries situated in South-Eastern Europe.

successful coping strategies ease the economic pressure on themselves and their families. They may feel less uncertain about the future. Therefore successful coping strategies may weaken the impact of uncertainty and low income on fertility.

Discontinuity and deinstitutionalization significantly decreased the support that the state and the community could provide to the citizens. People cannot count on these institutions for the development of successful coping strategies. It is natural that under such conditions they will rely more on their social ties and networks. A person can receive through his or her social network a loan, information, or in general, help of any kind. The more help one can receive the higher the chances that the person will be able to develop successful coping strategies and that uncertainty will be lower. Such a person is more likely to decide to have children. Coping strategies can be developed and uncertainty is likely to decrease even only when the person is aware that, were he or she in need, help could become available through the existing network and relationships. That is to say, the more the social resources a person can mobilise when necessary, the higher the chances for successful coping strategies, lower uncertainty, and therefore the higher the chances of not postponing or rejecting a birth. Mobilisation of social resources refers to individual social capital. Hence higher social capital may lead to relatively higher fertility, and vice versa.

One has to maintain his or her social ties in order to rely on help whenever the need arises, *i.e.* to keep the individual social capital high. Ties require reciprocity in the relationship. In case one wants to be sure that help will be provided, one should be ready to provide help to others. Giving and getting help need not be viewed as an exchange between the same persons. They are two general links in the social network of the self.[4]

The concept of social capital is a topic of debate in social sciences (see for example Portes, 2000 and Lin, 2001). An important aspect of this discussion is whether it is an attribute of an individual or of a group, *i.e.* whether social capital is individual or collective. The latter can be at the

[4] Reciprocity closely relates to trust: a value that is closely associated to social capital. The higher the trust, the higher the reciprocity and therefore the easier the flow of help among people. Hence it is easier to accumulate social capital.

level of relatives and friends, communities, cities, or a whole nation (Putnam 1993). Studies of social capital in CEE countries are scarce and the dimensionality aspect is not discussed in detail. Putnam (1993) and Fukuyama (1995) mention albeit briefly that the collective social capital in the CEE countries is low and that this is an important reason for the lower level of wellbeing of their populations. Nichols (1996) and Rose (1999) discuss the negative impact of the lack of social capital on the transition to a modern society in Russia.

Individual-level social capital has hardly been discussed in the context of the transition in the CEE countries. There is hardly any indication as to whether it has grown or decreased during the transition period. The context of the discussion in the preceding paragraphs suggests that a decrease in individual social capital might be a cause for a decrease in fertility. This conjecture remains to be studied.

6. Empirical evidence: Bulgaria and Russia

The theoretical approach described in the previous section implies that fertility change can be associated with economic, social, and ideational factors, as well as with factors related to discontinuity and particularly to anomie, individual social capital and coping strategies. Two surveys supply some relevant information: the Russian Longitudinal Monitoring survey (RLMS) and the Fertility Survey that accompanied the 2001 Population census in Bulgaria. Round 8 of the RLMS from 1998 was the first one to include questions on coping strategies and exchange of help that make possible the construction of variables related to individual social capital (Philipov and Shkolnikov, 2001). The Bulgarian Fertility Survey (BFS) included similar variables. Neither survey includes variables explicitly related to anomie.

The data were studied by using logistic regression with fertility intentions of women as the dependent variable. The two surveys have the following question: "Do you want to have (another) child)?" Binary answers to the question were used to supply observations of intentions. Schoen *et al.* (1997) used this modelling approach. They also discuss the adequacy of fertility intentions as a proxy variable of fertility. In Russia, fertility intentions are known to respond closely to observed fertility (see Andreev *et al*., 1998 for a recent discussion).

Philipov and Kohler (2001) present fertility-related data for the two countries, including estimates for the tempo-adjusted TFR. The TFR for first births in both countries was around or higher than 0.9 before the start of the transition. During the 90s it decreased abruptly. A significant part of its decline was due to a tempo effect. The latter resulted from postponement of first births as indicated by a significant rise in the mean age at first births. The tempo-adjusted TFR (Bongaarts and Feeney, 1998) during the 90s was considerably higher than the observed one, being often close to 0.9. Therefore it can be expected that the proportion of women wanting a first child can be very high, among cohabiting women in particular. For this purpose parity 0 is missed here. The data indicate that the proportion of women wanting to have a third or higher-order child is very small. For this purpose the focus of discussion here is on the intentions to have a second child.

The explanatory variables are presented in three groups, outlined according to the basic approaches to fertility change: A: Social and economic, B: Cultural, and C: Social capital variables. The surveys do not contain variables that explicitly measure discontinuity or anomie. The selection of the variables was decided by having as much the same variables for each country as possible. Table 1 gives the observed percentage distribution and the odds ratios for both countries.

The first group, social and economic variables, includes level of education and occupational status as social variables according to the scientific tradition in these countries. In studies of demographic change, level of education is often considered as a cultural variable indicating ideational change. These two social variables have also an economic significance, insofar as human capital is a proxy for the level of income. Unemployed persons receive fixed-term benefits that are usually far below the subsistence level. The third variable in Russia measures family income, with individual-level responses being aggregated into three groups. In Bulgaria, no variable measures income directly. Among possible substitutes, preference was given to measurement of behaviour rather than to subjective assessment of material situation. The selected binary variable is expected to demarcate low-level income: "Did you or your partner sell property to meet basic everyday necessities in the last two years?"

The second group of cultural variables includes settlement type and religiosity. Traditionally fertility is higher in rural areas and hence it can be expected that intention of having a second child should be higher. Urban and rural settlements maintain a traditionally significant difference in both countries with respect to norms and values; diffusion of new behaviour runs in the direction from towns to villages. More religious persons are also expected to have higher fertility intentions. Measurement of religion is based on self-assessed belief in God in Russia and level of religiosity in Bulgaria. The number of siblings was additionally used in Bulgaria. The results are not reported because of the lack of comparison to Russia, although they were statistically significant. The selected variables reflect traditional aspects of culture; no variables were available that could reflect ideational changes such as increase in autonomy.

The third group comprises two variables referring to social capital. In line with the discussion above, getting help from relatives, friends, and others is a behavioural measure of raising resources embedded in social networks. Giving help is conceived as a measure of reciprocity that maintains the social ties and hence represents investment in social capital. A variable referring to coping strategies was used in the case of Russia. It is not included in Table 6 because of the lack of statistical significance. This variable was constructed using information about starting a new job, working on own plot of land, pursuing increase in education, etc. Philipov and Shkolnikov (2001) give more details. They find it significant for the study of intentions of having a first child.

Age and marital status are not reported in Table 6 but they have been considered in the estimations. Age effects were controlled using five-year age groups. The age span is 18-39 completed years.

The first block of variables reveals that the socio-economic status is associated significantly with fertility intentions, thus supporting the economic approach to fertility decline. Unexpectedly rise in education in Bulgaria increases significantly the intention of having second child. My estimations show that the data from the Bulgarian FFS disclose the same association between educational level and intentions for a second child. Additional studies are necessary for the understanding of this association. Unemployed women are less likely to plan a second birth than the

employed. The growth of income is associated positively with fertility intentions.

The second block shows that type of settlement is insignificant, but in Russia the odd ratio changes towards the expected direction. Lower religiosity is linked to lower intentions for a second child, although statistical significance was achieved in Bulgaria only.

The two variables in the group of variables representing social capital are statistically significant. This supports the theoretical approach presented in the previous section. During times of discontinuity people rely on social capital and it is an important precondition in the formation of decisions about births.

The two variables referring to Bulgaria are highly correlated (correlation coefficient equal to 0.48). Omitting either one from the model would increase the statistical significance of the other one to make it the most significant in the whole variable set ($p=0.0003$), while the odds ratios for the other variables change only slightly. The same was observed when the two variables were factored into one (Table 1). The correlation is not surprising in the light of the discussion in the previous section; it is the result of reciprocity in social relations, provided measurement of giving and receiving help is one and the same. The corresponding two variables in the Russian data are defined for different periods of time (help received during the last year, and help given during the last 30 days) and objects (help received by the respondent, help being given by any family member). Hence they measure different levels of giving and getting help, and the correlation between them is very low.

This empirical investigation provides support to the importance of social capital in the formation of fertility intentions. The variable related to receiving help from others alone can be seen as supporting the economic theory of fertility, while the variable related to giving help to others is out of the scope of both the economic and the ideational approaches, at least where their conventional formulations are considered. The two variables taken together represent a measurement of social capital, although a crude one.

Table 1. Variables and logistic regression results, Bulgaria 2001 and Russia 1998

	Bulgaria		**Russia**	
variables and categories	Observed percentage distribution (N=815)	Odds Ratios	Observed percentage distribution (N=659)	Odds Ratios
Dependent variable				
-Intention to have a second child				
Does not want	42.0		53.2	
Wants	58.0		46.8	
A. Social and Economic characteristics:				
- Achieved education				
incomplete secondary	9.4	0.45 **	7.9	1.22
secondary and semi-higher	57.0	1	73.2	1
higher	33.6	1.86 **	20.2	1.13
- Occupation				
works	64.6	1	57.2	1
does not work	34.7	0.68 **	38.7	0.74
studies	1.2	small n.o.	4.1	small n.o.
- Family income (in Russia only)				
Below 750 Roubles	-	-	28.9	1
Between 750 and 1500 Rbls	-	-	28.1	1.65 ***
Above 1500 Roubles	-	-	43.0	1.96 ***
- Sold property to satisfy basic needs (in Bulgaria only)				
yes	14.7	1	-	-
no	81.3	1.90 *	-	-
B. Cultural characteristics:				
- Settlement type:				
urban	84.1	1	81.3	1
rural	15.9	1.02	18.7	1.34
- Religiosity				
believes in God	54.6	1	72.7	1
does not believe in God	45.4	0.60 *	27.3	0.91
C. Social capital: [(i)]				
- Help received by relatives, friends, others (last year in Russia, last two years in Bulgaria):				
No	28.0		53.4	1
Yes	72.0		46.6	1.38 *
- Help given to relatives, friends, others (family provided help last 30 days in Russia, respondent provided help last two years in Bulgaria):		1.72 *		
To none	15.5		79.4	1
To one or more	84.5		20.6	2.15 *

*p<0.01; ** p<0.05; *** p<0.1

[(i)] The two variables are highly correlated in Bulgaria (correlation coefficient equal to 0.48). They were factored into one, considered as continuous and growing with the growth of help. Its odds ratio is exhibited. Using instead each one of them separately would give equally high and statistically significant odds ratio without changing considerably the odd ratios for the other variables. See also the text.

Source: the data for Russia are taken from Philipov and Shkolnikov (2001).

The empirical findings are restricted to the two countries only and the results cannot be superimposed on other countries from the region. They indicate that empirical studies in other countries would benefit from including social capital-related variables. It is particularly challenging to study the impact of social capital in countries from Central Europe where the economic situation is better than that in Bulgaria and Russia.[5]

7. Conclusion

Economic hardship and ideational change dominate the explanations of the abrupt fertility decline in Central and Eastern Europe during the transition. Both approaches have been considered without taking into account the specific features of the overall changes in life. They need to encompass otherwise neglected fundamental characteristics of the transition, such as discontinuity, disorderliness, and anomie. The latter enforce the impact of economic hardship through increased insecurity of jobs and income, unemployment and impoverishment, as well as through increased ineffectiveness of state, community and other support institutions.

Discontinuity and anomie create conditions for a sudden ideational change, different from diffusion or any long-term development. The break-up of norms and disruption of values raise disorientation and thus obstruct the decision-making process with respect to family size. People prefer to avoid making decisions under conditions of uncertainty, and thus postpone births and later perhaps reject them completely. Hence discontinuity and anomie connect the effect of economic and ideational factors on fertility. Economy and culture cannot be easily discerned. One of them may dominate in its impact on fertility, but the effect of the other one is present as well.

Discontinuity affects differently births of different order. Its effect is weak on decisions about first births, but considerably stronger for births of higher orders. The problem remains as to who are the people who give births of order higher than one, *i.e.* who are the people less affected by discontinuity. Under conditions of discontinuity and societal desinstitutionalization, a way to cope is to make use of the social capital accumulated in social ties and networks. Raising this capital may ease the

[5] Recent fertility surveys in Hungary and Poland, unavailable for research as yet, included similar variables.

burden of economic hardship and disorientation. A plausible way of measuring individual-level social capital is by considering giving help to, or getting help from relatives, friends, neighbours, colleagues, and others. Survey data for Bulgaria and Russia support this conjecture.

The impact of social disorderliness on demographic change has rarely been discussed in the demographic literature. Leasure (1992) discusses the start of the decline in marital fertility in Eastern Europe during the first half of the XX century, raising a closely related hypothesis. He hypothesises that the growth of autonomy was the main factor that caused political reforms and revolutions that accelerated the spread of new ideas, and also increased control over ones reproductive life. The roots of growing autonomy are found in the XVIII Century Enlightenment and therefore his discussion refers to secular, long-term changes. In contemporary Eastern Europe, it is necessary to explain the 'suddenness' of fertility change and this is where the study of discontinuity helps. (It may be conjectured that an analogous situation existed in France at the onset of the demographic transition in this country. It is known that France is an exception from the general pattern of demographic transition because the fertility decline preceded that of mortality. Possibly disorderliness and normlessness that resulted from the French Revolution at the end of the XVIII Century might have triggered the drop in fertility.)

The theoretical framework discussed here needs further evolution into a rigid theory, or a set of theories. The availability of the latter would ease the search for empirical data and the choice of relevant models of analyses. The discussion in this paper and the presented empirical support serve as an initial step in this direction. Kohler (2001) and Kohler *et al.* (2002) provide a relevant theoretical background where social interactions are considered. They study the impact of social interaction and social networks on social norms and particularly norms related to childbearing.

Acknowledgement

The main ideas in this paper resulted from my joint work with Vladimir Shkolnikov. They were first exposed in a conference paper (Philipov and Shkolnikov, 2001), in the context of Russia.

The research reported in this article was done while the author worked as a leader of a team at the Max-Planck Institute for Demographic Research, Rostock, Germany. I gratefully acknowledge the research support of the Max-Planck Institute for Demographic Research.

References

Andreev E., G. Bondarskaya and T. Har'kova, 1998, "Fertility decline in Russia: hypotheses and facts" (in Russian), *Voprosi Statistiki* 10.

Andorka R., 1999, "Dissatisfaction and alienation", in: R. Andorka, T. Kolosi, R. Rose and G. Vukovich: *A Society Transformed (Hungary in Time-Space Perspective*), Central European University Press, Budapest, 147-154.

Arts W., P. Hermkens and P. Van Wijck, 1995, "Anomie, distributive justice and dissatisfaction with material well-being in Eastern Europe", *International Journal of Comparative Studies* 36 (1-2), 1-16.

Astone N. M., C. Nathanson, R. Schoen and Y. Kim, 1999, "Family demography, social theory, and investment in social capital", *Population and Development Review* 25 (1), 1-31.

Bhaumik S. and J. Nugent, 2002, Does economic uncertainty have an impact on decision to bear children? Evidence from Eastern Germany, paper presented at the Annual Meeting of the Population Association of America, Atlanta, 2002.

Billari F. and D. Philipov, 2002, Interrelationship between Education and Timing of First Unions: The Case of Central and Eastern Europe, paper presented at the Annual Meeting of the Population Association of America, Atlanta, 2002.

Bongaarts J. and G. Feeney, 1998, "On the quantum and tempo of fertility", *Population and Development Review* 24, 271-292.

Buriánek J., 1994, "The transformation as a social anomie - introduction" (in Czech), *Sociologicky casopis* 30 (2), 131-133.

Cornia G. and R. Paniccià, 1995, *The demographic impact of sudden impoverishment: Eastern Europe during the 1989-94 transition*, UNICEFF, Florence, Innocenti Occasional Papers EPS 49.

Cornia G. and R. Paniccià, 1996, *The transition's population crisis: An econometric investigation of nuptiality, fertility and mortality in severely distressed economies*, Most, N.1.

Council of Europe, 2001, *Recent Demographic Developments in Europe 2001*, Strasbourg: Council of Europe Publishing.

Frątczak E., 2000, "Changes in fertility pattern in Poland during the transformation period", *Polish Population Review* 16.

Friedman D., M. Hehcter and S. Kanazawa, 1994, "A theory of the value of children", *Demography* 31, 375-401.

Fukuyama F., 1995, *Trust: The Social Virtues and the Creation of Prosperity*, New York: Free Press.

Genov N., 1998, "Transformation and anomie: problems of quality of life in Bulgaria", *Social Indicators Research* 43, 197-209.

Goulet D., 1992, "Development: creator and destroyer of values", *World Development* 20 (3), 467-475.

Kohler H.-P., 2001, *Fertility and Social Interactions: An Economic Perspective*, New York, Oxford University Press.

Kohler H.-P., J. A. Ortega and F. C. Billari, 2002, "Towards a theory of lowest-low fertility", Forthcoming in: *Population and Development Review*.

Kotowska I.E. (ed.), 1999, *Demographic change in Poland during the 90s from the perspective of the second demographic transition* (in Polish), Warsaw School of Economics, Warsaw.

Kozul-Wright R. and P. Rayment, 1997, "The institutional hiatus in economies in transition and its policy consequences", *Cambridge Journal of Economics* 21 (5), 641-661.

Lesthaeghe R., 1983, "A century of demographic and cultural change in Western Europe: an exploration of underlying dimensions", *Population and Development Review* 9 (3), 411-434.

Lesthaeghe R., 1998, "On theory development and applications to the study of family formation", *Population and Development Review* 24 (1), 1-14.

Lesthaeghe R. and D. van de Kaa, 1986, Twee demografische transities, in: R. Lesthaeghe and D. van de Kaa (eds.), *Bevolking, groei en krimp*, Deventer: Van Loghum Salerus, 19-68.

Lin N., 2001, *Social Capital (A Theory of Social Structure and Action)*, Cambridge University Press.

Nauck B. and M. Joos, 1995, *East Joins West: Child Welfare and Market Reforms in the Special Case of the Former GDR,* UNICEFF, Florence, Innocenti Occasional Papers EPS 48.

Nichols T., 1996, "Russian democracy and social capital", *Social Science Information*, 35 (4), 629-642.

Philipov D. and H-P Kohler, 2001, "Tempo effects in the fertility decline in Eastern Europe: evidence from Bulgaria, the Czech Republic, Hungary, Poland and Russia", *European Journal of Population* 17 (1), 37-60.

Philipov D. and V. Shkolnikov, 2001, Fertility intentions and social capital-based coping strategies: results from the Russian longitudinal monitoring survey, paper presented at the PAA meeting, Washington D.C, 2001.

Putnam R., 1993, "The Prosperous Community: Social Capital and Public Life", *American Prospect* 13, 35-42.

Rabušic L. and P. Mareš, 1996, "Is Czech Society Anomic?" (in Czech), *Sociologický časopis* XXXII (2), 175-187.

Ranjan P., 1999, "Fertility Behaviour under Income Uncertainty", *European Journal of Population* 15, 25-43.

Rose R., 1999, Getting things done in an antimodern society: social capital networks in Russia, in: P. Dasgupta and I. Serageldin, *Social Capital (A Multifacetted Perspective)*, The World Bank, Washington D.C., 147-171.

Rousselet K., 1994, "Anomie, recherche identitaire et religion en Russie", *Social Compass* 41 (1), 137-150.

Rychtaříková J., 1999, "Is Eastern Europe experiencing a Second Demographic Transition?", *Acta Universitatis Carolinae, Geographica* 1,19-44.

Schoen R., Y. Kim, C. Nathanson, J. Fields and N. M. Astone, 1997, "Why do Americans want children?", *Population and Development Review* 23 (2).

Spéder Zs., B. Paksi and Zs. Elekes, 1999, Anomie and Satisfaction at the Beginning of the Nineties, in: T. Kolosi, I. Tóth and G. Vukovich (eds.), *Social Report 1998*; Social Research Informatics Center, Budapest; 483-505.

Srole L., 1956, "Social integration and certain corollaries: an exploratory study", *American Sociological Review* 6, 709-716.

Sztompka P., 1996, "Trust and emerging democracy", *International Sociology* 11 (1), 37-62.

United Nations Economic Commission for Europe, 2000, Fertility Decline in the Transition Economies, 1989-1998: Economic and Social

Factors Revisited, Chapter 6 in: *Economic Survey in Europe*, 2000/1, 189-207, Geneva.

Van de Kaa D., 1987, "Europe's Second Demographic Transition", Population Bulletin 42 (1).

Understanding lower and later fertility in Central and Eastern Europe

Tomáš Sobotka

1. Introduction

"The notion that the recent fertility decline reflects more than a reaction to the economic crisis, increased opportunity costs for women, or large cohorts following small ones gains further support from the observation that other changes in the family followed in the wake of this fertility decline and they too have the appearance of a fundamental transition." (Lesthaeghe 1983, 416, on Western Europe).

Over the 1970s and 1980s trends in fertility, reproduction and living arrangements in Central and Eastern Europe were increasingly contrasting with the dynamic developments taking place in other parts of Europe. This contrast was one of the relative stability, high uniformity and relatively ordered life courses in the 'East' vs. rapid changes and increasing 'disorder' in the life courses among the populations in the 'West'. Postponement of marriage and childbearing, rise in non-marital cohabitation and significant increase in childlessness and extra-marital fertility seemed to be phenomena which ceased to spread east of the border delineating the communist countries of Central and Eastern Europe. A radical transformation of fertility and family patterns has begun after the collapse of the state-bureaucratic systems in 1989-1991, which considerably changed the demographic map of Europe within a decade. Major changes, such as rapid decline in fertility and nuptiality rates, progressed with a breathtaking speed, providing space for a plethora of explanations. These can be divided into two major streams; the first proposing that fertility changes were driven mostly by social and economic crisis of the 1990s (*e.g.* UN, 2000) and the second perceiving fertility changes stimulated dominantly by a complex political, social and cultural shifts, bringing the institutional structure of the post-communist societies closer to that of the Western European countries. Although many scholars recognised that the constraining 'crisis factors' and broad cultural changes operated in tandem (*e.g.* Lesthaeghe and Surkyn, 2002), a great deal of discussion focused on the dichotomy between the

'economic difficulties' vs. 'cultural and ideational shifts' explanations (see Philipov in this volume).

This distinction has important theoretical implications: if the crisis-related factors had a prominent influence upon fertility trends, we could expect recuperation of fertility and, at least to a certain extent, restoration of the previous childbearing patterns once the economic and social recovery takes place. However, if, the ideational changes or cultural and social transformation in general were driving the fertility and family shifts, their influence is likely to be long lasting and irreversible. There are, naturally, possible combinations of these two explanations. The intensity and duration of the economic and social crisis have extremely varied across the region (UN, 1999b; Ellman, 2000; UNICEF, 2001) and thus we may suspect that in societies which experienced sharp increase in poverty and income inequality, a collapse of the social protection system and severe economic crisis, fertility declined primarily due to these factors. Furthermore, the influence of different factors may change over time, with cultural change gaining in importance once the economic situation starts improving (Lesthaeghe and Surkyn, 2002).

This contribution discusses specific features of societal framework, within which the decision-making concerning childbearing, reproduction and family life among people in Central and Eastern Europe took place before 1990 and contrasts it with the current situation, when radically different forces shape the life courses of individuals. This is to a certain extent sketchy, speculative and generalising. The former communist countries of Europe have many contrasting features in terms of their cultural diversity, history, religious tradition, social structure and economic development, including the major cultural fault between Catholicism and Christian Orthodoxy, which delineates the traditional East-West division of Europe. Nevertheless, the shared experience of strongly bureaucratised regimes with the power monopoly of the communist party, almost entirely nationalised economy and centralised planning, means that the overall institutional framework was becoming fairly similar across countries of Central and Eastern Europe over the four decades following the World War II. Likewise, there are many common features in their shared experience of the collapse of the previous political system and struggles to implement democracy and market economy.

This paper is organised around the following three questions:

- Why was Central and Eastern Europe until the end of the 1980s largely unaffected by the transformation of fertility and family patterns occurring in the 'West'?
- Why did the changes taking place over the 1990s proceed so fast?
- How to interpret increasing differentiation of fertility and family patterns in this region? The main idea is that the whole institutional structure before 1990 was supportive of an early and almost universal pattern of childbearing and marriage. Subsequently, the dramatic restructuring taking place during the 1990s within a short period of time has transformed the structure of Eastern European societies in the way which is conductive to later childbearing and increased diversity of individual fertility and family strategies. This study outlines major factors contributing to this pattern reversal, among which ideational changes form just one part of a complex puzzle. While the paper concentrates mostly on social and cultural factors, which are likely to be durable and have long-lasting influence, this is not to neglect the importance of the recent economic crisis, which affected to a certain extent almost all countries in the region.

Addressing changes in the post-communist societies of Europe, this article is mostly focused on the following countries and regions: Central European countries (Czech Republic, Hungary, Poland, Slovak Republic, Slovenia and the region of East Germany (former GDR)), two countries of South-Eastern Europe (Bulgaria and Romania), Baltic states (Estonia, Latvia and Lithuania) and the four remaining European countries of the former Soviet Union (Belarus, Moldova, Russia and Ukraine). Section 2 outlines main factors influencing childbearing decisions during the era of state socialism, Section 3 discusses major causes of dramatic changes of fertility after 1990 and the concluding Section 4 addresses some factors contributing to the increasing diversity of fertility patterns in Central and Eastern Europe.

2. The family-oriented era of an early and almost universal childbearing

2.1. Fertility and family patterns in the 1970s and 1980s

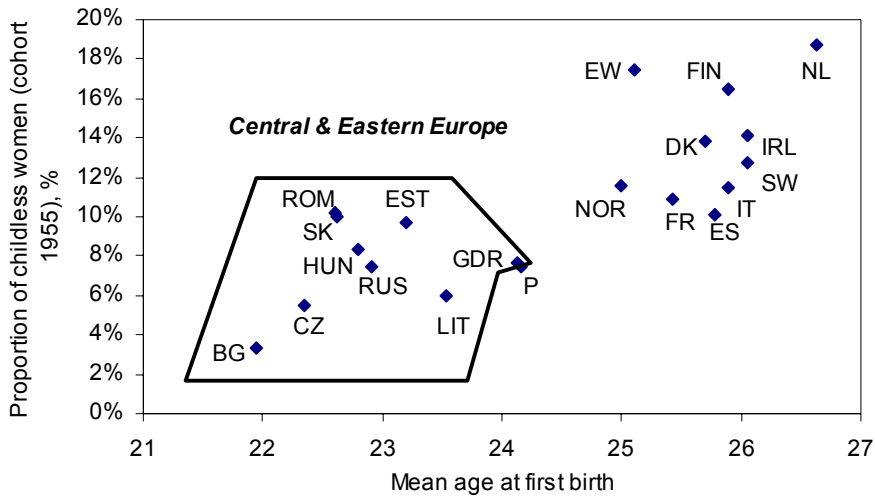
Besides their repressive and totalitarian character, the communist regimes initially "stimulated cultural changes important for modernisation and, in

certain aspects, favourable for the population" (Machonin, 1997). Many developments taking place after the World War II in Eastern Europe, such as extensive industrialisation and related, partly forced, labour participation of women, strong anti-religious ideology, expanding health and educational system and rapid urbanisation without doubt contributed to the fall in fertility rates, increase of divorce rates, decline in the age at marriage and childbearing in some countries of Central Europe and an establishment of a two-child family norm. Liberalisation of abortion laws between 1955 (Soviet Union) and 1960 (Yugoslavia) enabled women to avoid unwanted births. As a result, a spread of several features typical of the 'second demographic transition' (for the concept see *e.g.* van de Kaa, 1994 and Lesthaeghe, 1995) took place in Eastern Europe already during the 1950s, well ahead of other European countries. Around 1960, during the era of the 'Golden age of family' in the West, the total fertility rate declined below 2.0 in Estonia, Latvia and Hungary, the proportion of extra-marital births in East Germany, Estonia, Latvia and Russia reached over 10%, the number of abortions exceeded the number of births in Hungary, Romania, Bulgaria and most of the Soviet Union, and the total divorce rate was as high as 20% in Romania and several republics of the former Soviet Union. If one were to expect a decline of traditional family during the coming decades, Eastern Europe would be an obvious candidate.

However, it was Central and Eastern Europe where strong familism prevailed until the end of the 1980s, where values like 'happy family life' and 'having children' retained overwhelming popularity and where people who did not enter family and did not have children were often looked at with incomprehension. Despite the initial radical modernisation, communism in fact preserved many traditional features of patriarchal society, such as the perception that child-rearing and most of the household obligations are almost exclusively women's tasks. Gradually introduced social and family policies together with the whole fabric of society, considerably limiting alternative choices and opportunities, made a decision for an early marriage and childbearing logical option for the overwhelming majority of people. Thus, within the European context Central and Eastern Europe increasingly stood out as a region with relatively high fertility rates, early transition to marriage and childbearing, very low childlessness and proportion of never married people, and strong orientation toward a two-child family model. Most people followed the

same standardised pathway of life transitions marked by completed education, employment, marriage and subsequent move to own apartment followed by childbearing. However, increasing divorce rate gradually made living arrangements among the middle-aged people more diversified.

Figure 1. Proportion of women born in 1955 remaining childless and the mean age of women at first birth in 1985 in 20 European countries.



Notes: BG – Bulgaria, CZ – Czech Republic, DK – Denmark, ES – Spain, EST – Estonia, EW – England and Wales, FIN – Finland, FR – France, GDR – East Germany, HUN – Hungary, IRL – Ireland, IT – Italy, LIT – Lithuania, NL – The Netherlands, NOR – Norway, P – Portugal, ROM – Romania, RUS – Russian Federation, SK – Slovak Republic, SW – Sweden.

Sources: Mean age at first birth: Council of Europe (2001 and 1998 (for East Germany)). Proportion of women childless: Author's calculations based on EUROSTAT (2002), CDEC (2000) and unpublished data. Values for Denmark are taken from DS (2000), data for Estonia, Finland, Norway, Bulgaria and Hungary from Frejka *et al*. (2001). Mean age at first birth in England and Wales was estimated on the basis of the 1990 value (Smallwood, 2002) and change in the mean age at childbearing between 1985 and 1990.

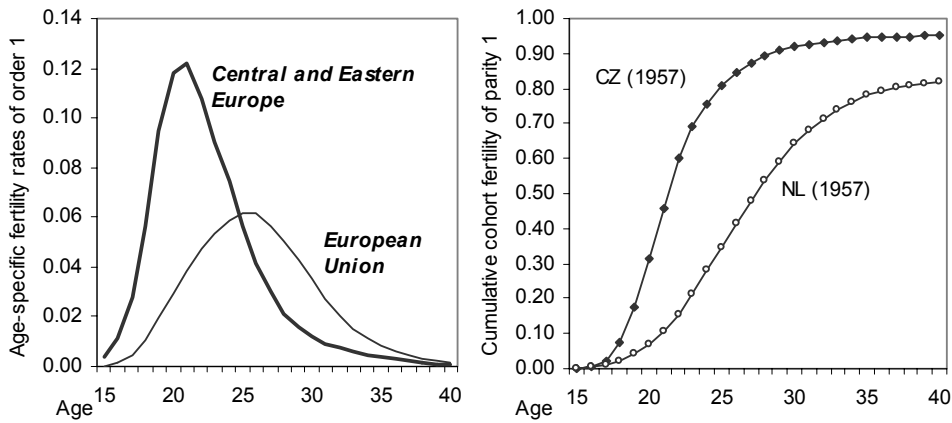
By the mid-1980s demographic contrasts between the 'East' and the 'West' of Europe were fairly pronounced. Mean age at first marriage in Central and Eastern Europe was between 21 and 23 years, with the first birth usually following very soon afterwards (Sardon, 1991; Council of

Europe, 2001). Among women born in 1955 only 3% to 10% remained never married and childless. Figure 1 displays the East-West contrast in the case of the proportion of women born in 1955 who remained childless after age 40, and the mean age of women at birth of first child in 1985.

Portugal is the only country of the 'West' where women were having children at a relatively young age and fewer than 10% remained childless. Interestingly, the position of Portugal is almost equal to that of East Germany, which had the latest childbearing pattern among the communist countries.

Figure 2a. Age specific fertility rates of birth order 1 in Central and Eastern Europe (average values of the Czech Republic, Hungary, Lithuania and Slovakia) and the European Union (average values of Italy, the Netherlands and Sweden) in 1985.

Figure 2b. Cumulative cohort fertility of parity 1 among women born in 1957 in the Czech Republic (CZ) and the Netherlands (NL).



Source: Figure 2a: EUROSTAT (2002), CR POPIN (2001), FSU (1986b) and unpublished data. Figure 2b: EUROSTAT (2002) and author's calculations based on CSU (2000), FSU (1976a-1989a).

In Central and Eastern Europe, childbearing was concentrated in the very narrow age span. Figure 2a shows mean values of age-specific fertility rates of birth order 1 in four countries of Central and Eastern Europe (Czech Republic, Hungary, Lithuania and Slovakia) compared with three

countries of the European Union (Italy, the Netherlands and Sweden) in 1985. In the 'East', the modal age of women at first birth was between 20 (*e.g.* Bulgaria, Slovak Republic) and 22 (Lithuania) years and up to 60% of first births took place among women aged 19-23. In the 'West', the modal age at first birth was typically between 25 and 26 years and childbearing was considerably more dispersed across age groups, with many women having first birth after the age of 30. Most women in the 'East' finished their reproduction at a relatively young age. A comparison of the cumulative fertility of parity 1 among women born in 1957 in the Czech Republic and the Netherlands (Figure 2b) clearly illustrates this pattern: four out of five Czech women gave birth to their first child by age 25 and 90% by age 29. At the same time, only a third of Dutch women gave birth to their first child by age 25, two out of three by age 30 and 80% by age 37.

2.2. Main factors shaping decision-making on childbearing and family life before 1990

To understand the outlined differences, this contribution discusses several factors that mutually contributed to the childbearing and family patterns in the communist countries of Europe. It pays attention to the small influence of education and career on childbearing decisions, to the effects of pronatalistic policies, high predictability of the life course and the lack of opportunities, to the function of the family, and a low spread of modern contraception coupled with relatively easy-accessible abortion.

Education and career did not have much influence on family life

While gradually lengthening education and increasing participation in paid labour presented women in Western Europe with a growing dilemma of how to combine their professional life with childbearing and childcare, in Eastern Europe education and career did not constitute such a strong obstacle for women's childbearing plans. A large majority of people finished education before reaching adulthood. The motivation for prolonged education or studying later in life was limited, since the effect of education on professional career was pretty small; frequently other principles– such as membership in the communist party– were more decisive for the position on the labour market. The system in which manual workers were often paid better than university professors

generated "a depreciation of the intristic value of broad education as a requirement for leadership" (Macek *et al.,* 1998). The career did not have much influence on reproductive decisions. Extensive and ineffectively managed economy created need for additional workforce which, together with a necessity to have two incomes in order to secure a decent living standard within the families, led to the almost universal labour participation of women. Due to the small differences in income, generally low-demanding work environment and non-existent unemployment coupled with a permanent shortage of the workforce[1], most women could easily return to their jobs shortly after giving birth to a child. A fairly common childbearing strategy among women was to give births to two closely-spaced children in their early twenties and start or resume working within two or three years afterwards.

Social and family policies often had pronatalist motivation

Facing declining birth rates and trying to encourage childbearing and labour participation among women, governments responded by implementing a number of diverse measures (David, 1999). Since the second half of the 1960s, a comprehensive pronatalist policy had been evolving particularly in Central European countries. Childcare provided by a dense network of crèches, kindergartens and elementary schools was relatively cheap, with subsidies including meals and textbooks. In most countries, women were granted a paid period of maternity leave and families obtained child benefits, which were often progressively increasing with the number of children. Retirement age was often linked to the number of children a woman had; for instance in the Czech Republic, childless women were eligible for the retirement at age 57, while women with three or more children at age 54 (Wynnyczuk and Uzel, 1999). Housing, which was always in a short supply, was prominently distributed to married couples with children.

[1] Carlson (1992) argued that Easterlin's (1968) "scarcity" theory linking the difficulties of large cohorts on the labour market with their successive lower than expected wages and resulting relative deprivation and lower fertility worked in the opposite direction in Eastern Europe. Large cohorts helped to reduce the shortage of labour and therefore stimulated better performance of economy, which in turn contributed to their increased well-being and higher fertility.

Frequently, restrictive measures intended to encourage childbearing were enacted as well. Access to abortions was often limited in various ways, including limitations based on family status of women, minimal age limit, minimal number of children or the establishment of special commissions deciding upon each request for an abortion (*e.g.* in Bulgaria and the Czech Republic). The tax system often penalised childless and unmarried people, with some countries imposing a special tax on unmarried persons over age 25 (*e.g.* Romania and most of the republics of the Soviet Union)[2].

Despite many differences, a great share of the family-related policies was motivated by the official pronatalist agenda, often connected with chronic shortages of the labour force. Zakharov (2000) pointed out that in the former Soviet Union "the totalitarian State regarded quantitative growth of human resources, particularly in the labour force, as a specific means to escape economic problems as well as a source of continued expansion of military and geopolitical power". In Bulgaria, state population policy "focused on pronatalist goals, echoing the motto 'More children, more working power for the Fatherland'" (Vassilev, 1999). The fiercest pronatalism had been enacted in Romania, where a severe limitation of abortion since 1967 was later combined with a ban on importing contraceptives and even with forced pregnancy checks among women (Harsanyi, 1993).

Lack of opportunities and overarching social care made people's lives predictable

Gradually, a strongly egalitarian system of social security, accompanying people from the cradle to the grave was developed. This framework of overarching state paternalism created an important connection between the state and the citizens. The extensive care made the lives of people more secure and predictable, therefore less subjected to uncertainty and less in need of careful life planning; in turn, however, people were increasingly dependent on the state and more easily controllable. With

[2] Comprehensive information on abortions and abortion politics during the communist era is provided in Frejka (1983), Blayo (1991), Stloukal (1996), and David (1999). For a discussion on various family and fertility policies, see also Monnier (1990) and Klinger (1991).

regard to child rearing and economic security, Adler (1997) noted that under state socialism women exchanged "traditional private dependence on men for a new public dependence on state". While the opportunities for career, consumption, travelling, personal development and leisure activities as well as the ability of people to decide freely about many facets of their lives were limited, the price of establishing family and having children was relatively low. Conformity, obedience, passivity and hypocrisy were rewarded and often formed a part of successful life strategies. Distinctiveness and own initiative were considered troublesome, alternative lifestyles were hardly possible. Bauman (Bauman, 1992, 163) put forward a view of the functioning of communist societies as a 'trade-off' between freedom and security:

"Under the rule of the patronage state, freedom of individual choice in all its dimensions was to be permanently and severely curtailed, yet in exchange the less prepossessing aspects of freedom - like individual responsibility for personal survival, success and failure were to be spared".

Family as a refugee from the outside world

Despite widespread secularisation and tolerant attitudes toward abortion, divorce and non-marital sex, 'happy family life' was one of the most strongly emphasised life goals among people in Central and Eastern Europe. Family life had different functions and was fulfilling different needs than in Western societies. In a system of bureaucratic housing distribution, starting a family was for young people the easiest option to obtain an apartment and leave the parental home; paradoxically marriage and childbearing formed the early road to independence (van de Kaa, 1994)[3]. State subsidies in the form of loans for the newlyweds, youth saving schemes and family allowances further strengthened the attractiveness of marriage, suggesting that the only possible obstacle to family life - money - is easily solved (Rabušic, 1990). Thus, the 'economy' of marrying and establishing a family in the 'East' was radically different from the 'West', where one had to save enough money

[3] The situation in Russia was described by Avdeev and Monnier (1995, 7) in the following way: "housing shortage paradoxically resulted in earlier marriage and parenthood: it was necessary to waste no time in starting a family, to stand a chance of having one's own home by the age of 30".

in order to move into own apartment and to be able to support his or her family and children.

Moreover, family provided space for authenticity, individual fulfilment and self-realisation. This was in a contrast with western democracies, where the responsibilities and restrictions of the family life were often seen as inhibiting the quest for individual fulfilment (Ní Bhrolcháin, 1993). Many people lived a dual life, with a sharp divide between public and private behaviour and morality (Macek *et al.,* 1998). It was only within the small circle of family and friends that people felt free to talk and express themselves openly. Widespread familistic behaviour in Eastern Europe can be seen as a specific reaction to the outside environment, an escape into the "private heaven away from the state control" (Adler, 1997)[4]. Furthermore, family ties and mutual help of family members were important for providing informal services and substituting thus the underdeveloped service economy.

Very high economic activity among women, which was ideologically supported by equating emancipation with employment, coexisted with a traditional model of family, where women's role was seen mainly as that of a wife and a mother (Kotowska, 2003). Marriage and childbearing were considered to be a part of normative life pattern (Adler, 1997). Official communist morality pursued the idea of parental 'duty' and responsibility of women to the society to bear children. Voluntary childlessness was not generally approved. Official support for families, leading even to the 'idolization of family', developed in some instances to a 'morality' similar to the most orthodox Catholic morality (Ferge, 1997). Thus, instead of being 'liberated', women faced a multiple burden of combining full-time jobs with the household and child-rearing obligations, and doing the shopping in between. Panova *et al.* (1993) coins women's position as a 'double slavery'.

[4] In his insightful book about the Russians, Smith (1976, 137) discusses a schizophrenic dichotomy between public and private behaviour, ascribing it to the political pressure for conformity, hypocrisy of public life and the hassle of the marketplace, where people spent hours in the queues to buy basic necessities: "So they adopt two very different codes of behaviour for their two lives – in one, they are taciturn, hypocritical, careful, cagey, passive; in the other, they are voluble, honest, direct, open, passionate".

Lack of reliable contraception and widespread reliance on abortion

Lack of information regarding sex and contraception, lack of sex education and shying about words 'sex' and 'sexual' created an environment, in which ignorance regarding sex and reproduction was widespread (Stloukal, 1996). Eradicating sexuality from education and official publications is sometimes seen as another example of institutional control over personal life (Vassilev, 1999; Stishova, 1996). Despite the official puritanism, young people experienced sex relatively early and usually before marriage (Sobotka, 2003). Due to both insufficient information and inadequate supply[5], contraceptive use was low, in particular among adolescents and young people. As a result, early pregnancies and 'shotgun marriages' were common in all communist countries of Europe; up to 60% of first marriages were concluded by pregnant brides. Abortion became widely available before the modern contraception was developed and paradoxically, often served as a symbol of personal freedom in a society which regulated all aspects of individuals' lives (Popov and David, 1999). Abortions were, however, only rarely used by adolescent women or in the case of first pregnancies in general. They mostly served as a means of fertility limitation among married women, who already reached their desired number of children[6]. Widespread use of abortions coupled with the 'contraceptive fatality' strongly contributed to the prevailing fertility patterns, namely to the early childbearing and relatively high birth rates, since the fertility inhibiting effect of abortion was lower than that of contraception (Frejka, 1983).

[5] In several countries, in particular East Germany, Hungary and Slovenia, supply of modern contraception, including the pill, was fairly good. In contrast, in the Soviet Union, condoms were inconvenient and the use of the pills, which were virtually unavailable, was further discouraged by health authorities (Popov and David, 1999).

[6] In the Czech Republic there were 26 induced abortions per 100 live births among the childless women as compared with 370 induced abortions per 100 live births among women with two children in 1989 (FSU, 1990a). Similar pattern was prevailing in all European communist countries.

3. A shift to the pattern of low and later fertility

3.1. A brief overview of major changes over the 1990s

Dramatic changes of fertility patterns in Central and Eastern Europe over the 1990s have been described and analysed in a number of publications dealing with the whole region (*e.g.* Sardon, 1998; UN, 1999; UN, 2000; Philipov and Kohler, 2001; Sobotka, 2003; Kotowska, 2003; and contributions by Frejka and Sardon, Philipov in this volume) or individual countries (*e.g.* Kučera *et al.,* 2000; Avdeev and Monnier, 1995; Conrad *et al.,* 1996; Zakharov, 2000; Konietzka and Kreyenfeld, 2002). Therefore, the major trends are only briefly summarised and more space is devoted to the debate on some underlying factors behind them.

The decline of the total fertility rates (TFR) is the most widely discussed feature of fertility changes after 1990. With the exception of Croatia, Slovenia and East Germany, where the notable fertility decline started already during the 1980s, all (post)-communist countries had the TFR above 1.8 in 1990, forming a relatively high-fertility region in Europe. During the following decade, the TFR dropped to the level of 1.1-1.4, moving the position of post-communist countries to the lowest-fertility region in Europe. This shift went hand in hand with the following changes:

- Increase in the mean age of women at birth of first child, which was gaining momentum in the second half of the 1990s. Changes in the timing of childbearing were partly responsible for the fall in the total fertility rates (Philipov and Kohler, 2001; Bongaarts, 2002; Kohler *et al.,* 2002; and Sobotka, 2003).
- Changes in the parity distribution of births, which were characterised in South-Eastern Europe and the Post-Soviet countries by an increasing share of births of first order on the total number of births. This development indicates a growing number of families with only one child in many post-communist countries.
- A steep increase in the proportion of extra-marital births, in particular in Bulgaria, Slovenia, Latvia, East Germany and Estonia, where 37% (Slovenia) to 54% (Estonia) of births occurred outside marriage in 2000.
- Increasing diversity of fertility patterns across countries.

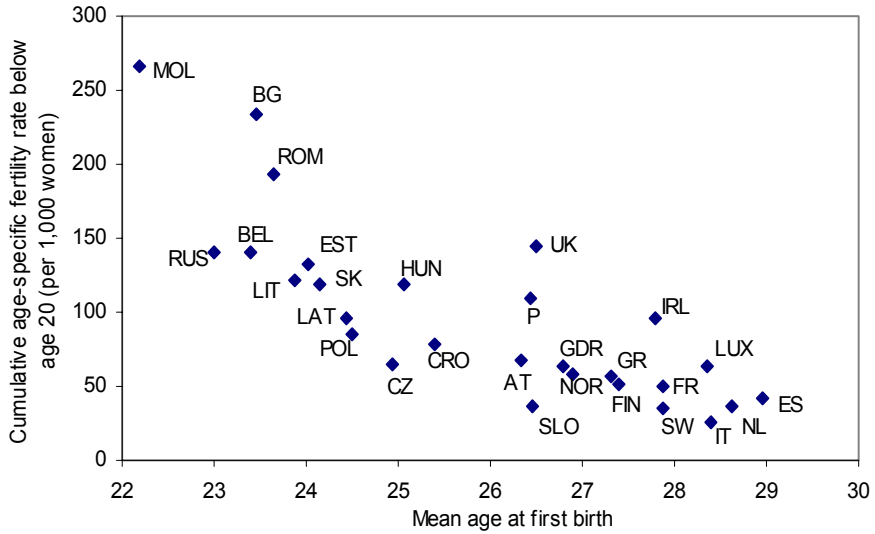
- Rapid transformation in the patterns of union formation, living arrangements (Lesthaeghe and Surkyn, 2002) as well as birth control. Marriage rates declined to the very low levels and marriages have been delayed to a later age. Cohabitation has gained on popularity and partly substituted for the decline in marriage rates. Living arrangements and life transitions have become more diverse. Abortion rates declined, while modern contraception has become increasingly available.

Uneven changes in fertility timing contributed to the increasing differentiation within the group of Central and Eastern European countries. Postponement of first births was particularly intensive in East Germany, Czech Republic, Hungary and Slovenia, where the mean age at first birth increased by 2-3 years between 1990 and 2000. Figure 3 displays mean age of women at first birth and cumulative age-specific fertility rates among women below age 20 in European countries in 2000. While it shows that the post-communist countries still generally form a group characterised by early childbearing and high teenage fertility, it also indicates increasing diversity in fertility timing in Central and Eastern Europe and between European regions in general. Early childbearing and high teenage fertility rates remain typical of countries in South-Eastern Europe and the former Soviet Union. Central Europe has become fairly heterogeneous, with women in Slovenia and East Germany having their first child about the same age as women in Norway, United Kingdom, Portugal and Austria and having lower fertility rates of teenage women than most countries of 'West'. On the other hand, childbearing among women below age 20 is more common in the United Kingdom than in most post-communist countries. A comparison with Figure 1 further reveals the extent of the postponement of childbearing in a number of countries as well as the increasing diversity within Europe, especially in the case of the post-communist countries: while in 1985 women in Central and Eastern Europe had their first child on average at the age of 22 to 24 years, in 2000 these values were dispersed roughly between 22.5 (Moldova) and 27 years (East Germany).

The ongoing profound transformation of childbearing patterns in Central and Eastern Europe is also clearly manifested in cohort fertility trends. Figure 4 compares fertility rates among women aged 15-26 born in 1960 and 1974 in five post-communist countries. The age schedule of

childbearing of the 1960 cohort is characteristic of the previous pattern, with a pronounced peak at ages 20-23 (somewhat later in Lithuania and less pronounced in Hungary).

Figure 3. Mean age of women at birth of first child and cumulative age-specific fertility rate among women below age 20 in 28 European countries in 2000



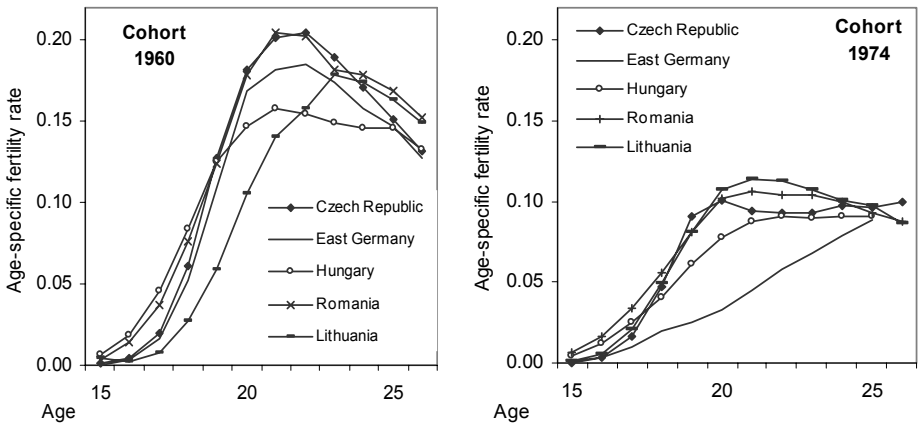
Notes: AT – Austria, BEL – Belarus, BG – Bulgaria, CRO – Croatia, CZ – Czech Republic, ES – Spain, EST – Estonia, FIN – Finland, FR – France, GDR – East Germany, GR – Greece, HUN – Hungary, IRL – Ireland, IT – Italy, LAT – Latvia, LIT – Lithuania, LUX – Luxembourg, MOL – Moldova, NL – The Netherlands, NOR – Norway, P – Portugal, POL – Poland, ROM – Romania, RUS – Russian Federation, SK – Slovak Republic, SLO – Slovenia, SW – Sweden, UK – United Kingdom.
Data for Moldova are for 1996 (mean age) and 1997 (fertility rate) respectively; data for Italy are for 1997, mean age in Russia refers to 1998; data for East Germany, France and Croatia pertain to 1999.
Mean age for the United Kingdom refers to England and Wales only (Source: Smallwood, 2002).

Sources: Mean age at first birth: Council of Europe (2001), author's calculations based on EUROSTAT (2002). Data for Russia were taken from CDEC (2000), data from Moldova come from DASS (1999). The figure for East Germany (26.8 years) is author's estimate based on changes in the overall mean age and age distribution of childbearing since 1990. Fertility rate of women below age 20: Council of Europe (2001).

The 1974 cohort, which reached adulthood under the new social and economic conditions, displays considerably lower fertility rates at ages

18-25, without any marked peak in the prime-childbearing years. In fact in the Czech Republic and Hungary, fertility rates are 'flat' among women aged 21 to 26 years. The most radical decline of childbearing rates at young ages took place in East Germany, where the prime age at childbearing has moved into the late 20s. The relatively low fertility among women born in 1974 does not, however, indicate how low their ultimate cohort fertility may be. Most probably, in many countries there will be a notable recuperation of fertility rates among women after age 28.

Figure 4. Cohort age-specific fertility rates at age 15-26 among women born in 1960 and 1974 in the Czech Republic, East Germany, Hungary, Lithuania and Romania.



Sources: author's calculations based on EUROSTAT (2002), CSU (2000), FSU (1976a-1989a), SB (1991-2000), CNPS (1996) and unpublished data.

3.2. Factors contributing to lower fertility and later childbearing pattern

With the breakdown of the state-bureaucratic regimes, many social and institutional influences contributing to the distinctive East European pattern of childbearing gradually diminished. Pronatalist incentives were replaced by the social and family policies, whose importance often dwindled due to inflation and cutbacks in governmental spendings. The system of centralised housing distribution was abandoned. With the exception of Poland and East Germany, access to abortion was retained or further liberalised and modern contraceptives have become widely available. Once secure jobs became precarious as the new private owners

tried to boost the productivity of decrepit factories. Education gained on importance as it started to be a decisive factor for obtaining a good job and building one's career. A plethora of new opportunities opened up, competing with childbearing decisions. Opening of the markets to western consumer goods, easier travelling and cultural globalisation have facilitated value changes among the young people. All this evidence points out that the whole societal structure was radically transformed, which created a very different set of constraints and incentives for childbearing. While the above-listed developments could ultimately lead to a sort of 'Westernisation' of the post-communist societies, they form only part of the factors influencing people's decision-making. The scope of the economic crisis of the 1990s was horrific in some countries and relatively moderate in others. The new phenomena of hyperinflation, unemployment, rising poverty, in many countries followed by a dramatic decline in the living standards and governments' inability to guarantee even the very basic social security, confronted people with an unprecedented degree of uncertainty. For many, the previous relatively safe and predictable world has turned upside down into a jungle, where one has to struggle to meet his or her basic needs. There was also an enormous differentiation in the degree of failures and relative successes of the whole economic transition. Especially the Post-Soviet countries got trapped in a severe economic and social crisis, marked by a dramatic decline in GDP and wages, by 50% to 70% in Moldova and Ukraine. In contrast, many countries of Central Europe have experienced a relatively successful transition to market economy.

While the likely effects of the 'crisis factors' on fertility have been extensively discussed from various standpoints, this paper concentrates on some of the deep social changes, which are likely to have long-lasting influence, ultimately prevailing over the short-term shocks and uncertainties. Most of the discussion focuses on the broad social, economic and institutional changes, which could be interpreted as supportive of lower fertility and generally late and more variable fertility pattern. Particular attention is paid to prolonged education, more flexible and insecure nature of work, contraceptive and sexual revolution, and on the new culture of consumption, choice and opportunities.

Expansion of higher education

A rapid growth of participation in secondary and university education could be perceived as one of the most significant effects of social changes in the 1990s. Before 1990, typically some 10% to 15% of young people were enrolled at the university. Apprenticeship or practical training followed by early employment constituted a typical pathway toward first job. In 2000, the proportion of young people studying at age 20-24 was between 19% (Romania) and 37% (Poland), *i.e.* roughly two times higher than at the end of the 1980s (EUROSTAT, 2002)[7]. Education has become the primary strategy to increase the chances of finding a stable job with a sufficient income (Kohler *et al.,* 2002). At present, in most of the countries, considerably more women than men are studying at the university; in Slovenia, Bulgaria and the Baltic states participation in education at age 20-24 is by 30 to 50% higher among women. In addition, thousands of applicants in some countries (*e.g.* in the Czech Republic) are not admitted to the university due to the lack of funding, rooms and qualified teachers.

The extension of education influences the long-term fertility changes in several ways. In the first place, the status of 'being in education' is not compatible with childcare and family life. Young students usually lack time and resources (housing and money) to have children. Start of childbearing is clearly linked to educational attainment (Schoenmaeckers and Lodewijckx, 1999). As a result, an increasing proportion of women who study after age 20 may partly account for the recent trend towards the postponement of first births. Equally important are prevailing fertility differences by educational level. Women with university diploma are putting more emphasis on career and non-family interests and have on average fewer children than those who are less educated. Since the educational level has been increasingly linked with the work position, income and career prospects, the 'opportunity costs' of childbearing among the more educated women are considerably higher as well. In

[7] Comparable data are not available for the Post-Soviet countries. Data based on the CIS official statistics (UNICEF, 2001) indicate that in the former USSR the proportion of young people studying at university around 1990 was higher than in Central Europe and the enrollment in higher education over the 1990s has increased only gradually, reaching 21% (Moldova) to 31% (Russia) by 1999.

addition, prolongation of education and democratisation of access to high education have an independent effect for spreading values favouring individual freedom and gender equality (Lesthaeghe, 2000). In the post-communist countries, university students are often the pioneers of 'libertarian culture' and the new forms of behaviour, such as cohabitation and living-apart-together relationships.

New character of work: uncertainty, flexibility and growth in income inequality

Access to employment and easy combination of career and childcare is one of the critical issues for the future fertility development in the region. During the communist era, more than 85% women in the productive age participated in the labour force. Although most countries experienced considerably steeper decline in the labour force participation among women than among men over the 1990s (UN, 2000), women still accounted for 43%-49% of the total labour force in 1998. While some women may prefer to stay outside the labour market[8], a large majority will pursue their labour participation to experience self-realisation, to make use of their education and above all to support themselves financially. It is highly unlikely that once women gained economic autonomy and hence also increased personal freedom by participating in the paid labour, many of them would seek to become housewives. Lasting attachment to work was also found among East German women after the German unification: despite high unemployment rates and unstable labour market, they continued to have much stronger work orientation than their West German counterparts, particularly in pursuing full-time employment (Konietzka and Kreyenfeld, 2002).

High unemployment rates and poor employment prospects, pronounced among young and less educated people, have impact on the decisions concerning long-term commitments. In 2000, some Central European countries (Poland, Slovakia and East Germany) as well as Bulgaria and Lithuania registered unemployment over 15%, reaching over 30% among people aged 15-24 (EUROSTAT, 2002). In the Post-Soviet countries, official unemployment remained low. In fact, unemployment is frequently

[8] Stankuniene (2000, 211) proposed that in Lithuania, "a new social group of housewives, that did not and could not exist in the Soviet period of full employment, is being formed".

hidden and many people are officially employed or on a 'temporary leave' in bankrupt firms without obtaining a salary [9].

Reconciliation of work and motherhood is difficult in all 'transitional societies'. As the private firms emphasise flexibility, reliability and work commitment, a possibility of future pregnancy complicates the labour prospects of young childless women; gender competition on the labour market disfavours female applicants and reduces their promotion changes (Lesthaeghe, 1995). The legal protection of women against labour discrimination is weak; opportunities for part-time work are scarce and insufficient. Many scholars perceive the increasingly competitive nature of labour in the market economies as interfering with childbearing plans and family life, with the risk-averse individuals avoiding life-long commitments and remaining childless (McDonald, 2002). As Beck (1992) puts it, "the labour market demands mobility without regard to personal circumstances. (…) The market subject is ultimately the single individual, 'unhindered' by a relationship, marriage or family. Correspondingly, the ultimate market society is a childless society".

Delayed sexual and contraceptive revolution

Though Eastern European countries are highly differentiated with respect to the contraceptive practice, sexual behaviour and sexual morality of their populations, delayed 'contraceptive revolution' as well as 'sexual revolution' have taken place in most of them over the 1990s. The decline in abortion rates occurred hand in hand with the fall in fertility rates and increase in the use of modern contraception. Contraceptive use among the young people has been replacing the old 'norm' of unprotected sex followed by an early marriage and subsequent childbearing. A rather open and liberal approach towards sexuality paved the way to the introduction of sex education and to the boom of news regarding contraception and sexual behaviour. Media that were careful during the communist era to discuss sex and reproduction have competed in spreading messages on sexuality, pornography, and contraception. Women's journals promoting

[9] According to the ILO enterprise survey of Ukrainian industry (1999), quoted by Nesporova (Nesporova, 2000, 143), over 20% of workers were on short-time work and 18% on administrative leave. Women were forced to take extended maternity leave: "As a result, at any time, about one third of all employees were actually laid-off although formally employed".

'lifestyle sex' (Hawkes, 1999), special sections in magazines for teenagers, TV shows with well-known sexologists, easily accessible pornography and books on *Kamasutra* all contributed to the rapidly increasing knowledge and awareness about sex and contraception, particularly among young men and women.

Increasing use of contraceptives reduced the number of unwanted pregnancies and consequently also of unplanned and 'mistimed' births. The increase in the availability and use of the contraceptive pill is the most significant change in contraceptive behaviour. With the exception of East Germany, Hungary and Slovenia, the pill use was very low before 1990. Besides the inability of the centrally planned economies to produce or import sufficient amount of cheap and reliable oral contraception with minimal side effects, some researchers see the low availability of the pill as an effort of the authorities to keep substantial state control over women's reproductive behaviour, allowing them to undergo abortions instead (Popov and David, 1999). The widespread use of the pill is often viewed not only as enabling the extension of women's autonomy and control and freeing them from the fear of unwanted pregnancies, but it is also associated with the broad behavioural changes leading to the 'second demographic transition', affecting norms governing sexual and reproductive behaviour (van de Kaa, 1994). Perhaps the most important is its contribution to the postponement of childbearing by shifting the nature of decision-making in this matter. Until the 1980s, contraception and abortion in Eastern Europe was mostly used to prevent additional births once the couples reached their desired number of children. The continuous pill use, which usually starts with the onset of sexual activity, shifts the decision about childbearing into a conscious decision to discontinue contraceptive use and to have children (van de Kaa, 1997).

Choice and opportunities: coming of consumer society

Bauman (1992, 169) considers the inability of communist regimes to provide consumer choice to be one of the major reasons for their collapse. In Western societies, choice has become the criterion of good life and personal success: "choice of the kind of person one would like to become, choice of pleasures one would like to enjoy, choice of the very needs one would like to seek, adopt and gratify". In the 'East', consumer values had spread considerably before 1990; nevertheless the channels to satisfy

them were limited and were not competing with the family life. In fact, consumerism was "interconnected with 'familism', as many people evaluated their standard of living in terms of family welfare" (Stloukal, 1996). After 1990 once omnipresent posters celebrating the 'achievements' of socialism quickly gave way to billboards with images of young, attractive and happy people enjoying powerful cars, exotic holidays and new mobile phones. For many young people, the new world of freedom and choice– to study, to switch jobs, to travel, to consume– is intoxicating. The old standards of behaviour are disappearing and are being replaced by individualistic lifestyles in which "people make their own choices about marriage or cohabitation, where they are free to have children in or outside marriage, to have them alone or with a partner, and where they can have them early or late in life" (van de Kaa, 1999, 31). Bearing and rearing children gradually becomes just one of the possible lifestyles – an expression of one's chosen identity (Kuijsten, 1996).

In all Eastern European countries, a large number of consumer goods became suddenly available since the marketisation of their economies at the beginning of the 1990s. Easterlin and Crimmins (1985) establish a direct link between the introduction of new goods and decline in fertility: "The enjoyment of new goods tends to require life-styles other than those centering on children, since new goods are typically substitutes for, rather than complementary with, children."

The growth of consumerism is closely related with an increasing importance of leisure time, increased individualism and the avoidance of long-term commitments. Keyfitz (1986) proposed that childbearing as an activity is less able to compete not only with work, but also with leisure. Presser (2001) perceives a direct connection between the birth control technology, which enables women to postpone childbearing, and the growing sense of the entitlement to the leisure time among them. The pressure of increasingly uncertain and flexible work, discussed above, may together with consumerism contribute to the instability of partnerships and avoidance of lasting commitments. Bauman (2001, 156-157) makes this link explicit: "Since present-day commitments stand in the way of the next day's opportunities, the lighter and the more superficial they are, the less is the damage. (…) Bonds and partnerships are viewed, in other words, as things to be consumed, not produced".

4. Discussion: diversity of economic change and cultural influences

This article outlined major factors jointly sustaining the pattern of early and almost universal childbearing in Central and Eastern Europe until the 1980s and contrasted them with the new social phenomena emerging over the 1990s, which shape people's lives in a radically different way and are supportive of late childbearing, low fertility level and generally more diverse fertility patterns. The presented pieces of evidence, necessarily partial and far from being complete, point out that fertility changes of the 1990s, which are sometimes simplistically perceived as a crisis-driven fertility decline, form a part of a complex transition in reproductive and family patterns, linked to the "entire restructuring of society" (Lesthaeghe and Surkyn, 2002). However, it is unlikely that all countries will ultimately converge to a sort of common European fertility pattern. In spite of the fact that many fertility trends, such as increase in the proportion of extra-marital births and postponement of parenthood, have been recently progressing in almost all European countries, a large variation in fertility patterns persists across Europe.

The macro-evidence shows that the differences in the intensity of the postponement of childbearing in Central and Eastern Europe are to a large extent linked with the success in economic transformation, level of well-being, and degree of control people feel over their lives[10]. These findings

[10] Correlation coefficients (Pearson's correlation coefficient, bivariate correlation) of the change in the mean age of women at birth of first child between 1989 and 1999 in 15 countries of Central and Eastern Europe with the selected social, economic and cultural indicators are as follows: +0.87 with the GDP level (adjusted for the purchasing power parity) in 1999, +0.88 with the spread of modern technology in 2000 (index based on the number of mobile phones per 1,000 people and Internet connections per 10,000 people), and +0.82 with the index of real wage change between 1989 and 1999. Furthermore, correlation was also high with the mean values of responses to two questions asked in the European Values Study survey in 1999 (see below): +0.87 with current life satisfaction and +0.79 with the degree of freedom of choice and control people feel over their lives. Each correlation is significant at the 1% level.

The compilation of national data from the 1999 European Values Study was published in Halman (2001). *Current life satisfaction*: "All things considered, how satisfied are you with your life as a whole these days?"; the value shows the mean country score on the 1 to 10 scale (1= dissatisfied, 10=very satisfied). *Freedom of choice and control*: "Please use the scale to indicate how much freedom of choice and control you feel over the way your life turns out?" Mean country score on the 1 to 10 scale (1=not at all, 10=a great deal).

suggest that the 'ageing of fertility' may be a manifestation of an increased choice and opportunities, whereas the profound social and economic crisis has led to a drastic fertility decline, but also to the preservation of the pattern of early childbearing. One possible explanation is offered by the 'theory of the value of children' proposed by Friedman *et al.* (1994). In their view, marriage and childbearing are 'global strategies' available to reduce uncertainty regarding future, pursued especially among women, whose "alternative pathways for reducing uncertainty are limited or blocked". Thus women, who do not see any prospect in pursuing education and have very low chances of finding a job, may decide to marry and have children early in life.

Previous sections left largely unexplored many facets of cultural tradition and the effects of ideational change, which shaped the character of recent fertility changes and contributed to the increasing heterogeneity in fertility patterns in Central and Eastern Europe. Religious tradition, varying degree of secularisation and the imprints of communist ideology form a colourful cultural mixture of the region. Especially the Catholic Church is known for its emphasis on 'traditional family values' and frequent interventions into the domain of human reproduction, trying to influence sex morality, sex education, family planning and abortion laws. In Poland, the Church was the main active force promoting the ban on abortions established in 1993, it opposed the spread of modern contraceptives and made obstructions to the introduction of sex education (David and Titkow, 1994). Lesthaeghe and Surkyn (1988) perceive the secularisation dimension as the main factor of ideational changes: "Secularization, in its institutional sense, is a *conditio sine qua non* for pluralism and tolerance". In Europe, Protestantism was more conductive for the progression towards libertarian culture than the Catholic or Orthodox tradition (Lesthaeghe and Moors 2000). These findings may partly explain rapid spread of extra-marital births and cohabitation in the three secularised and traditionally mostly Protestant societies of East Germany, Latvia and Estonia.

Despite the persistent influence of the old cultural and religious tradition, Eastern Europe was subjected to many decades of the official promotion of communist ideology aiming to eradicate traditional religious believes and to gain complete control over society. Inglehart (1997, 38) proposed that it "provided a functional equivalent to religion, furnishing an

explanation of how the universe functioned and where history was going". Although Eastern European countries display a small degree of traditionalism and generally high level of rationalism and secularisation, they rank much lower than the other countries on the 'self-expression dimension' (Inglehart and Baker, 2000). Values like trust, tolerance, subjective well being, political activism and self-expression, which are often associated with profound demographic changes in Western Europe (van de Kaa, 2001) are much less present in the post-communist countries. The low emphasis put on 'postmodern' values may be caused by general feelings of insecure and unpredictable life as well as by the past influence of the repressive authoritarian regime (Inglehart and Baker, 2000). Especially in the Post-Soviet Republics, totalitarian socialism is still enjoying a considerable popularity. There, the social and economic transformation brought about economic and social collapse, which resembles "a caricature of the vicious capitalism the old Communist propagandists warned the masses about" (The Economist, 6.11.1999).

In the past, an inconsistent mix of traditional and modern values was strongly rooted among the people living in Eastern Europe. Recent evidence, provided by the 1999 round of the European Values Study surveys, reveal that especially in the Baltic states and Central Europe the demographic changes over the 1990s occurred simultaneously with the ideational change, characteristic also for the earlier demographic shifts in Western Europe. Lesthaeghe and Surkyn (2002) found a substantial increase in the tolerance toward new living arrangements and procreation outside marriage between 1990 and 1999 in all regions of Central and Eastern Europe. Many of these value changes have their roots already in the communist era; nevertheless, their rapid progression over the 1990s clearly marks the complex transformation of reproductive patterns in Central and Eastern Europe. With an increasing stratification of post-communist societies, facing broadening differences in educational level, income disparities and employment chances among different sub-populations, people will employ a broader range of behavioural strategies in order to achieve their goals. Increasing acceptance of childlessness, extra-marital childbearing, cohabitation and homosexuality has an important 'enabling' effect, facilitating the spread of previously less tolerated behaviour, and thus ultimately leading to an increasing variability in childbearing patterns and living arrangements.

The new forces, which play an important role in shaping fertility changes after the collapse of the state-bureaucratic socialism – expansion of higher education, instability of work, contraceptive and sexual revolution, increasing choice and opportunities coupled with consumerism, declining importance of family and discontinuation of many previous policies which had pronatalist effects – will continue to be moderated by the cultural differences. Moreover, the enormous social and economic differentiation between the post-communist countries is likely to continue, with some societies, in particular in the former Soviet Union, experiencing the inability of their governments to provide basic social security for their citizens. This may have some unexpected consequences, such as potentially increasing the value of marriage and family, which may substitute for the dysfunctional welfare system. Nevertheless, to some extent, postponement of childbearing, increase in childlessness and extra-marital childbearing as well as the ultimate decline of cohort fertility will probably continue in all societies of Central and Eastern Europe.

Acknowledgements

This study was realized under the framework of the project "Towards a dynamic scenario model of economic determinants of European population development", funded by the Netherlands Organization for Scientific Research, project number A 510-03-901. This paper is partly based on the working paper "Ten years of rapid fertility changes in the European post-communist countries: evidence and interpretation", published by the Population Research Centre, University of Groningen (WP 02-1). An earlier version was presented at the European Population Conference held in Helsinki on 7-9 June 2001. I appreciate useful comments and suggestions from Frans Willekens, Leo van Wissen, Michaela Kreyenfeld and Sabu S. Padmadas.

References

Adler M.A., 1997, "Social change and declines in marriage and fertility in Eastern Germany", *Journal of Marriage and the Family* 59, 37-49.

Avdeev A. and A.Monnier, 1995, "A survey of modern Russian fertility", *Population: An English selection* 7, 1-38.

Bauman Z., 1992, *Intimations of Postmodernity*, London and New York, Routlege.

Bauman Z., 2001, *The Individualized Society,* Cambridge, Polity Press.

Beck U., 1992, *Risk Society. Towards a Mew Modernity,* London, Sage Publications.

Blayo C., 1991, "Les modes de prévention des naissences en Europe de l'Est", *Population* 46 (3), 527 -546.

Bongaarts J., 2002, "The end of the fertility transition in the developed world", *Population and Development Review* 28 (3), 419-443.

Carlson E., 1992, "Inverted Easterlin fertility cycles and Kornai's 'soft' budget constraint*", Population and Development Review* 18(4), 669-688.

CDEC, 2000, *Naselenie Rossii 1999*, Institut Narodnokhoziaistvennogo Prognozirovaniia RAN, Centr Demografii i Ekologii Cheloveka, Moscow, <http://demoscope.ru/weekly/knigi/ns_r99/sod_r.html>.

CNPS, 1996, *Romanian demographic yearbook 1996,* Bucharest, Comisia Națională pentru Statistică.

Conrad C., M.Lechner and W.Werner, 1996, "East German fertility after unification: Crisis or adaptation?", *Population and Development Review* 22 (2), 331-358.

Council of Europe, 1998 and 2001, *Recent Demographic Developments in Europe 1998 (2001),* Strasbourg: Council of Europe Publishing.

CR POPIN, 2001, *Czech Republic Population Information.* Accessed in March 2001, <http://popin.natur.cuni.cz>.

CSU, 2000, Unpublished data on births by birth order and age of mother, 1989-1999, provided by the Czech Statistical Office, Prague.

DASS, 1999, Unpublished data on births by birth order and age of mother and age structure of women in 1996 provided by the Department of

Statistical and Sociological Analysis of the Republic of Moldova, Chisinau.

David H.P (ed), 1999, *From abortion to contraception. A resource to public policies and reproductive behavior in Central and Eastern Europe from 1917 to the present,* Westport, Connecticut, Greenwood Press.

David H.P. and A.Titkow, 1994, "Abortion and women's rights in Poland", *Studies in Family Planning* 25(4), 239-242.

DS, 2000, *Befolkningens bevægelser 1999. Vital statistics 1999, C*openhagen, Danmarks Statistik.

Easterlin R., 1968, *Population, labor force and long swings in economic growth,* New York, National Bureau for Economic Research.

Easterlin R. and E.M.Crimmins, 1985, *The Fertility Revolution. A Supply-Demand Analysis*, Chicago and London, The University of Chicago Press.

The Economist, 6 November 1999, "Europe after communism. Ten years since the wall fell", 21-23.

Ellman M., 2000, The social costs and consequences of the transformation process, in: *Economic survey of Europe 2000, No. 2/3*, New York and Geneva, Economic Commission for Europe, United Nations, 125-140.

EUROSTAT, 2002, *NEW CRONOS Database.* Accessed in May 2002.

Ferge Z., 1997, "Women and social transformation in Central-Eastern Europe", *Czech Sociological Review* 5(2), 159-178.

Frejka T., 1983, "Induced abortion and fertility: A quarter century of experience in Eastern Europe", *Population and Development Review* 9(3), 494-520.

Frejka T., W.W.Kingkade, G.Calot, J.-P.Sardon and A.Confesson, 2001, "Cohort childlessness and parity in low-fertility countries", paper presented at the *European Population Conference,* Helsinki, 7-9 June 2001.

Friedman D., M.Hechter and S.Kanazawa, 1994, "A theory of the value of children", *Demography* 31(3), 375-401.

FSU, 1976a-1990a, *Pohyb obyvatelstva v České socialistické republice 1975-1989*, Prague, Federální statistický úřad.

FSU, 1986b, *Pohyb obyvatelstva ve Slovenské socialistické republice 1985*, Prague, Federální statistický úřad.

Halman L., 2001, *The European Values Study. A third wave. Source book of the 1999/2000 European Values Study surveys,* WORC, Tilburg University.

Harsanyi D.P., 1993, Women in Romania, in: N.Funk and M.Müller (eds), *Gender Politics and Post-communism. Reflections from Eastern Europe and the Former Soviet Union*, New York and London, Routledge, 39-52.

Hawkes G., 1999, Liberalizing heterosexuality?, in: G. Allan (ed) *The Sociology of the Family. A Reader*, Oxford, Blackwell Publishers, 37-55.

Inglehart R., 1997, *Modernization and Postmodernization. Cultural, Economic and Political Change in 43 societies.* Princeton, Princeton University Press.

Inglehart R. and W.A.Baker, 2000, "Modernization, cultural change and the persistence of traditional values*", American Sociological Review* 65(1), 19-51.

Keyfitz N., 1986, The family that does not reproduce itself, in: K.Davis, M.S.Bernstam and R.Ricardo-Campbell (eds.), *Below-replacement Fertility in Industrial Societies: Causes, Consequences, Policies,* supplement to *Population and Development Review* 12, New York, Population Council, 139-154.

Klinger A., 1991, "Les politiques familiales en Europe de l'Est", *Population* 46 (3), 511-526.

Kohler H.-P., F.C.Billari and J.A.Ortega, 2002, "The emergence of lowest-low fertility in Europe", *Population and Development Review* 28(4), 641-680.

Konietzka D. and M.Kreyenfeld, 2002, "Women's employment and non-marital childbearing: A comparison between East and West Germany in the 1990s", *Population* (English edition) 57 (2), 331-358.

Kotowska I.E., 2003, Fertility and nuptiality in CEE countries in the context of weakening families and a weakening state, forthcoming in: T.Knijn and A.Komter (eds.), *Solidarity Between the Sexes and the Generations: Transformations in Europe.*

Kučera T., O.Kučerová, O.Opara and E.Scheich (eds.), 2000, *New demographic faces of Europe,* Berlin, Springer-Verlag.

Kuijsten A.C., 1996, "Changing family patterns in Europe: A case of divergence?", *European Journal of Population* 12 (2), 115-143.

Lesthaeghe R., 1983, "A century of demographic and cultural change in Western Europe: An exploration of underlying dimensions", *Population and Development Review* 9 (3), 411-435.

Lesthaeghe R., 1995, The second demographic transition in Western countries: An interpretation, in: K. O. Mason and A.-M. Jensen (eds.), *Gender and Family Change in Industrialized Countries*, Oxford, Clarendon Press, 17-62.

Lesthaeghe R., 2000, "Europe's demographic issues: Fertility, household formation and replacement migration", paper presented at the conference *Population studies in Britain and in the Netherlands*, Utrecht, 31.8. - 1.9.2000.

Lesthaeghe R. and G.Moors, 2000, "Recent trends in fertility and household formation in the industrialized world", *Review of Population and Social Policy* 9, 121-170.

Lesthaeghe R. and J.Sukyn, 1988, "Cultural dynamics and economic theories of fertility change", *Population and Development Review* 14 (1), 1-45.

Lesthaeghe R. and J.Sukyn, 2002, New forms of household formation in Central and Eastern Europe: Are they related to newly emerging value orientations*?*, in: *Economic Survey of Europe 2002/1,* New York and Geneva, Economic Commission for Europe, United Nations, 197-216.

Macek P., C.Flanagan, L.Gallay, L.Kostron, L.Botcheva and B.Csapo, 1998, "Postcommunist societies in times of transition: Perceptions of change among adolescents in Central and Eastern Europe*", Journal of Social Issues* 54, 547-561.

Machonin P., 1997, *Social transformation and modernization,* Praha, Sociologické nakladatelství.

McDonald P, 2002, "Sustaining fertility through public policy: The range of options", *Population* (English edition) 57 (3), 417-446.

Monnier A., 1990, "The effects of family policies in the German Democratic Republic: A re-evaluation", *Population* An English Selection 2, 127-140.

Nesporova A., 2000, Discussion of chapter 5, in: *Economic survey of Europe 2000, No. 2/3,* New York and Geneva, Economic Commission for Europe, United Nations, 143-145.

Ní Bhrolcháin M., 1993, East-West Marriage Contrasts, Old and New, in: A.Blum, J.-L.Rallu (eds.) *European population II. Demographic Dynamics*, Montrouge, John Libbey Eurotext, 461-479.

Panova R., R.Gavrilova and C.Merdzanska, 1993, Thinking gender; Bulgarian women's im/possibilities, in: N.Funk and M.Müller (eds.), *Gender Politics and Post-communism. Reflections from Eastern Europe and the Former Soviet Union,* New York and London, Routledge, 15-21.

Philipov D. and H.-P.Kohler, 2001, "Tempo effects in the fertility decline in Eastern Europe: Evidence from Bulgaria, the Czech Republic, Hungary, Poland and Russia", *European Journal of Population* 17 (1), 37-60.

Popov A.A. and H.P.David, 1999, Russian federation and USSR successor states, in: H.P.David (ed.), *From Abortion to Contraception. A Resource to Public Policies and Reproductive Behavior in Central and Eastern Europe from 1917 to the Present,* Westport, Greenwood Press, 223-277.

Presser H.B., 2001, Comment: A gender perspective for understanding low fertility in post-transitional societies, in: R.A.Bulatao, J.B.Casterline (eds.) *Global fertility transition,* supplement to *Population and Development Review* 27, New York, Population Council, 177-183.

Rabušic L., 1990, "Manifestní a latentní funkce Československé populační politiky", *Demografie* 32 (3), 234-238.

Sardon J.P., 1991, "Mariage et divorce en Europe de l'Est", *Population* 46 (3), 547-598.

Sardon J.P., 1998, "Fécondité, bouleversements politiques et transition vers l'économie de marché en Europe de l'Est", *Espace, Populations, Societes* 1998-3, 339-360.

SB, 1991-2000, *Statistisches Jahrbuch für die Bundesrepublik Deutschland 1991–2000* (various volumes), Wiesbaden, Statistisches Bundesamt.

Schoenmaeckers R.C. and E.Lodewijckx, 1999, "Demographic behaviour in Europe: Some results from FFS Country Reports and suggestions for further research", *European Journal of Population* 15 (3), 207-240.

Smallwood S., 2002, "New estimates of trends in births by birth order in England and Wales, *Population Trends* 108, 32-48.

Smith H., 1976, *The Russians,* London, Sphere Books.

Sobotka T., 2003, "Re-emerging diversity. Rapid fertility changes in Central and Eastern Europe after the collapse of the communist regimes", forthcoming in *Population.*

Stankuniene V., 2000, Recent Population Development in Lithuania, in: T.Kučera, O.Kučerová, O.Opara and E.Scheich (eds.) *New demographic faces of Europe,* Berlin, Springer-Verlag, 199-220.

Stishova, E., 1996, 'Full Frontal': Perestroika and Sexual Policy, in: R.Marsh (ed.) *Women in Russia and Ukraine,* Cambridge University Press, 188-195.

Stloukal L., 1996, Eastern Europe's abortion culture: puzzles of interpretation, paper presented at the IUSSP seminar *Socio-culural and political aspects of abortion in a changing world*, Trivandrum, India 25-28 March 1996.

UN, 1999, Fertility decline in the transition economies, 1982-1997: Political, economic and social factors, in: *Economic Survey of Europe 1999, No.1*, New York and Geneva, Economic Commission for Europe, United Nations, 181-195.

UN, 1999b, *Human development report for Central and Eastern Europe and the CIS 1999*, New York, United Nations Development Programme, United Nations.

UN, 2000, Fertility decline in the transition economies, 1989-1998: Economic and social factors revisited, in: *Economic Survey of Europe 2000, No. 1*, New York and Geneva, Economic Commission for Europe, United Nations, 189-205.

UNICEF, 2001, *A decade of transition. Regional monitoring report No. 8 – 2001,* Florence, UNICEF.

Van de Kaa D.J., 1994, The Second Demographic Transition Revisited: Theories and Expectations, in: G. Beets et al. (eds.) *Population and Family in the Low Countries 1993: Late Fertility and Other Current Issues,* NIDI/CBGS Publication, No. 30, Berwyn, Pennsylvania/ Amsterdam, Swets and Zeitlinger, 81-126.

Van de Kaa D.J., 1997, "Options and sequences: Europe's demographic patterns", *Nethur demography paper No. 39*, The Hague.

Van de Kaa D.J., 1999, Europe and its Population: The long View, in: D.J.van de Kaa, H.Leridon, G.Gesano and M.Okólski (eds.): *European Populations: Unity in Diversity*, Dordrecht, Kluwer Academic, 1-49.

Van de Kaa D.J., 2001, Postmodern Fertility Preferences: From Changing Value Orientation to New Behavior, in: R.A.Bulatao, J.B.Casterline (eds.) *Global Fertility Transition,* supplement to *Population and Development Review* 27, Population Council, New York, 290-338.

Vassilev D., 1999, Bulgaria, in: H.P.David (ed), *From abortion to contraception. A resource to public policies and reproductive behavior in Central and Eastern Europe from 1917 to the present,* Westport, Connecticut, Greenwood Press, 69-89.

Wynnyczuk V. and R.Uzel, 1999, Czech and Slovak Republic, in: H.P.David (ed), *From Abortion to Contraception. A Resource to Public Policies and Reproductive Behavior in Central and Eastern Europe from 1917 to the Present,* Westport, Greenwood Press, Connecticut, 91-119.

Zakharov S.V., 2000, "Fertility trends in Russia and the European newly independent states: Crisis or turning point?", *Population Bulletin of the United Nations*, Nos. 40/41 1999, 292-317.