

Think Tank 20

Growth, Convergence and Income Distribution: The Road from the Brisbane G-20 Summit

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CONTENTS

Introduction: Growth, Convergence and Income Distribution [1](#)

Kemal Derviř

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REGIONAL PERSPECTIVES

AFRICA

Is Africa at a Historical Crossroads to Convergence? [11](#)

Amadou Sy

Senior Fellow, Global Economy and Development, Africa Growth Initiative, The Brookings Institution

ASIA

Economic Growth in Asia: Performance and Prospects [22](#)

Montek Ahluwalia

Former Deputy Chairman of the Planning Commission of India

LATIN AMERICA

Latin America's Decade of Development-less Growth [33](#)

Ernesto Talvi

Nonresident Senior Fellow and Director, Brookings Global-CERES Economic & Social Policy in Latin America Initiative, The Brookings Institution

MIDDLE EAST

Growth and Convergence in the Arab Region [44](#)

Hafez Ghanem

Senior Fellow, Global Economy and Development, The Brookings Institution

COUNTRY CONTRIBUTIONS

ARGENTINA

A Case of "Reverse Convergence" [51](#)

Miguel Kiguel

Former Under Secretary of Finance and Chief Advisor to the Minister of the Economy, Argentina; Former President, Banco Hipotecario; Director, Econviews; Professor, Universidad Torcuato Di Tella

AUSTRALIA

Australia, Emerging Asia And Global Cooperation [54](#)

Peter Drysdale

Emeritus Professor of Economics, Crawford School of Public Policy, Head of the East Asian Bureau of Economic Research and Co-Editor East Asian Forum, Australian National University

BRAZIL

Demography, Technology, and All Other Things Considered [58](#)

Claudio Frischtak
President, Inter.B Consulting

CANADA

Secular Stagnation is Not Destiny: Faster Growth is Achievable with Better Policy [64](#)

Jean Boivin
Deputy Chief Investment Officer, Blackrock Investment Institute; Former G-20 Finance Deputy, Canada; Former G-7 Finance Deputy, Canada

Tiff Macklem
Dean, Rotman School of Management, University of Toronto; Former Senior Deputy Governor, Bank of Canada

CHINA

A New Normal, but with Robust Growth: China's Growth Prospects [71](#) in the Next 10 Years

Yang Yao
Dean, National School of Development, Peking University

EUROPEAN UNION

How Can Europe Avoid Secular Stagnation? [77](#)

Guntram Wolff
Director, Bruegel

FRANCE

Growth, Convergence and Social Conditions: Where is Europe Headed? [81](#)

Jacques Mistral
Nonresident Senior Fellow, The Brookings Institution; Special Advisor, Institut Français des Relations Internationales; Former Economic Advisor to the French Prime Minister

GERMANY

Quantitative Easing and Deflation in a Creditor Economy [87](#)

Daniel Gros
Director, Centre for European Policy Studies

INDIA

Secular Stagnation: Can India Buck the Trend? [92](#)

Rakesh Mohan
Executive Director, International Monetary Fund

Muneesh Kapur
Adviser to Executive Director, International Monetary Fund

INDONESIA

Growth, Convergence and Income Distribution: A View from Indonesia [99](#)

Maria Monica Wihardja
Economist, World Bank Office Jakarta

ITALY

Sluggish Growth in the Eurozone: The Long Journey Ahead [107](#)

Paolo Guerrieri

Professor of Economics, University of Rome, Sapienza; College of Europe, Bruges

JAPAN

Defining Exit from Deflation [116](#)

Yoshio Okubo

Vice-Chairman, Japan Securities Dealers Association (JSDA)

KOREA

From Rapid, Shared Growth to Slow, Unshared Growth? [124](#)

Wonhyuk Lim

Director and Vice President, Department of Competition Policy, Korea Development Institute (KDI)

MEXICO

The Challenges to Achieving Sustainable Growth in Latin America [129](#)

Guillermo Ortiz

Chairman, Grupo Financiero Banorte; Former Governor, Bank of Mexico; Former Secretary of Finance and Public Credit, Mexico; Former Chairman of the Board of the Bank for International Settlements

RUSSIA

Russia: Prospects for Growth and Convergence [138](#)

Sergey Drobyshevsky

Scientific Director, Gaidar Institute for Economic Policy; Managing Director, Russia's G-20 Expert Council

SAUDI ARABIA

Economic Convergence in Saudi Arabia [142](#)

Ali Al-Sadiq

Economist, International Monetary Fund

SOUTH AFRICA

South Africa: Perspectives on Divergence and Convergence [149](#)

Haroon Borat

Professor, Development Policy Research Unit, School of Economics, University of Cape Town

Alan Hirsch

Professor and Director, Graduate School of Development Policy and Practice, University of Cape Town

TURKEY

The Growth Debate Redux [157](#)

Galip Kemal Ozhan

Henry T. Buechel Fellow, Department of Economics, University of Washington

UNITED KINGDOM

Convergence Determines Governance — Within and Without [167](#)

Danny Quah

Professor of Economics and International Development, London School of Economics;

Director Saw Swee Hock Southeast Asia Centre, London School of Economics

UNITED STATES

US Economic Growth is Over: The Short Run Meets the Long Run. [173](#)

Robert Gordon

Stanley G. Harris Professor in the Social Sciences, Northwestern University; NBER

Growth, Convergence and Income Distribution: An Introduction

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With world leaders gathering for the G-20 summit in Brisbane, three big debates will impact their ability to plot the right course to achieving inclusive, sustainable growth.

Introduction

In 2014 the finance ministers of the G-20 set themselves an objective of increasing world GDP by 2 percentage points—or about \$1.5 trillion—over the next five years, over and above the current “business as usual” trend. The Brisbane leaders summit is to endorse that objective and perhaps elaborate on it. This has inspired the authors contributing to this collection to comment on the ongoing debates about growth, convergence and income distribution.

There are new dimensions in the debate on growth. Some eminent economists are arguing that an era of “secular stagnation” may lie ahead unless vigorous policy actions are implemented, while others, a minority among economists, argue that ongoing and pending technological change is likely to lead to an acceleration of growth. This “secular stagnation” debate is sometimes conducted purely in the context of the U.S. economy, sometimes in the context of advanced economies as a whole, and sometimes in terms of the world economy. Some authors shift back and forth between these three contexts.¹

There is a second debate on “convergence” between average incomes in the lower- and middle-income emerging economies, and average income in the rich, advanced economies. Until the post-World War II period, there is no doubt that the industrial revolution and colonialism led to a “divergence, big time.”² As put recently by Ricardo Hausmann, “when Adam Smith wrote *The Wealth of Nations*

in 1776, per capita income in the world’s richest country—probably the Netherlands—was about four times that of the poorest countries. Two centuries later, the Netherlands was 40 times richer than China, 24 times richer than India and 10 times richer than Thailand.”³

In the *aggregate*, this divergence slowed markedly in the 1950s, with average incomes in all rich economies growing in per capita terms and no longer widening the divergence significantly, as the average income in all the EMDEVs (emerging and developing economies) picked up pace, of course with a lot of variation by country, region and specific time period. Then, starting in the late 1980s, for the first time in two centuries, a process of convergence seems to have taken hold, with average income in the EMDEVs taken as a whole growing faster, in fact much faster, than income in the rich countries, for about two and a half decades now (1989-2014). Coming back to Hausmann’s example, today the Netherlands is only five times richer than China and Thailand and 11 times richer than India (although he refers to individual countries, not aggregates). Is this convergence going to last, or was rapid aggregate convergence a temporary phenomenon? This question is at the center of a “second growth debate,” which also includes observations beyond the averages, looking at particular countries and regions.

Finally, there is the increasingly intense debate about income distribution, with the latest bestseller by Thomas Piketty⁴ having added more data, more passion and more controversy to a topic that was already at the forefront of policy debates in many countries. Is growth relevant if increases in income largely accrue to the top 10 or even 1 percent of

the population, as seems to have been the case recently at least in the United States and the United Kingdom? Is there, as Piketty argues, an “inherent” long-run tendency towards greater inequality in a market economy? Is there a link between possible secular stagnation and income distribution? How does inequality in the world relate to inequality in particular countries?

Overview of the Three Interlinked Debates

The “secular stagnation” debate about slow growth in advanced countries can be confusing, because the perceived slowdown may refer to slower *potential* output growth or slower growth of *actual* output. Potential output growth may be slowing down because of trends in technological change, educational advancement, aging, and debt-induced underinvestment in public goods and infrastructure. But a slowdown in observed output growth can also be due to *gaps between actual and potential output*. Secular stagnation as defined by Larry Summers building on Alvin Hansen,⁴ may threaten the U.S. economy, or advanced economies as a whole, because desired aggregate savings has increased compared to desired aggregate investment, to the extent that the real interest rate needed to restore macroeconomic equilibrium may be negative. This may not be a feasible target for policymakers because of the zero lower bound on nominal interest rates imposed by the possibility of holding currency and prevailing low inflation. For example, if there can only be sufficient investment to absorb desired savings at a real interest rate of minus 2 percent, and if inflation is 1 percent, the zero nominal lower bound means the *real* interest rate can only decline to minus 1 percent, not low enough for full employment.

What is often less clear in the presentation of secular stagnation is whether it also applies to the world economy as a whole. Has global investment demand and the global supply of savings shifted so that there is a “global savings glut” and so that the required “global” real interest rate is negative

in an environment where global inflation is very low? It is desirable, therefore, to link the “secular stagnation” debate to the “convergence” debate, which focuses much more strongly on developing countries’ growth prospects. If secular stagnation affects all countries, then convergence may disappear. But if it is more a phenomenon threatening the rich countries, then convergence could continue. In this case, it may also be that growth in the emerging world might actually provide the demand impulse needed for laggard advanced economies.

The income distribution debate is itself linked to both the growth and the convergence debate. If we take the population of the world as a whole (as Surjit Bhalla did in his book *Imagine There’s No Country*⁶) and focus on an inequality indicator for that population, increasing inequality within countries (broadly speaking, the Piketty story) will lead to *increases* in the global inequality index. But convergence—catch up by the developing country—will lead to a *decrease* in the world inequality index. This has an important bearing on global demand. While we see the stress on the struggling middle class in advanced countries resulting from wage stagnation and growing within-country inequalities, we also see the emergence of a global middle class in the rest of the world, particularly in Asia. So one has to be careful and define what one refers to precisely.

Whether inequality is good or bad for growth has long been debated. There is a strong strand in classical economics that has argued that as savings are needed to finance investment, inequality is good for growth because it increases savings which are then invested. Those theories focus on changes in potential output as the real determinant of growth. Recent empirical work has on the whole supported the opposite view. Jonathan Ostry, Andrew Berg and Charalambos Tsangarides of the International Monetary Fund have shown that there have been more episodes of sustained rapid growth in societies that are relatively more equal and hence more stable, socially, politically and financially.⁷ These factors seem to outweigh the classical link to savings.

Finally there is the direct “Keynesian” link between income distribution and growth which is diametrically opposed to the classical link. One reason for secular stagnation of actual output (rather than potential output) may be that income keeps shifting to the very rich who save more. If because of excess savings the equilibrium real interest rate is negative, we are in a liquidity trap. Here the constraint on growth is demand for investment, not the supply of savings, and rising inequality makes the problem worse.

Secular Stagnation in the Advanced Economies?

The argument for the possibility of secular stagnation in the advanced economies thus has several potentially mutually reinforcing parts.

The argument can relate to the supply side as such and to a slowdown in the growth of “potential GDP” with, as mentioned above, major drivers of such a slowdown thought to be (i) a declining labor force growth rate, (ii) the exhaustion of the education dividend as the share of the uneducated has shrunk, (iii) a slowdown in the pace of total factor productivity growth (TFP) and (iv) a prolonged period of underinvestment.

The first of these factors may seem uncontroversial given slower demographic growth and the already high level of participation reached by women, but it is subject to moderation through immigration or the lengthening of healthy working lives. The second factor could be offset through a higher quality of, or more appropriate, education. The third factor relates to the pace of technological change and its translation into factor productivity growth. The bottom line here is that there is huge disagreement about the prospects for growth-enhancing technological change. Nobody can be sure about the impact of current innovations, because this is something full of uncertainty that will take place in the future. The historical pattern is that it takes decades before the diffusion of new technologies happens across the economy and before their impact can be

assessed. The last factor, a prolonged period of underinvestment, can be due to financial sector problems and debt, and/or, itself linked to the third factor of slowing down technological change, reducing profitable investment opportunities.

Note that Larry Summers defines the possible “secular stagnation” phenomenon not in terms of *potential* GDP itself, but in terms of a *decline in the equilibrium real interest rate into negative territory* constraining *actual output*. If the real interest rate is “blocked” by a zero nominal bound and low inflation, equilibrium cannot be reestablished and there will be chronic, or “secular” stagnation of actual output. One of the key reasons, however, for declining investment demand, could be declines in potential output triggered by the factors enumerated above, reducing the profitability of investment. There is a strong link, therefore, between Gordon’s “secular stagnation of potential income” and Summers’ “frustrated general equilibrium” version of secular stagnation.

In the description of the latter, there can also be a purely supply of savings-related argument. Even with no shift in investment demand, an increase in desired saving lowers the equilibrium interest rate and could lead to secular stagnation all by itself. Savings might be rising because of changes in income distribution favoring higher-saving millionaires. Increased post-financial crisis risk aversion and increased regulatory burdens imposed by policymakers may add to the problem by adding to the demand for the *safest assets*, while reducing the supply through tougher accounting standards. Increased demand for safe assets can become another driver of lower real equilibrium interest rates, perhaps to below their lower bound.⁸

We are not really convinced that some of these factors are strong enough to create an almost inevitable long run danger of secular stagnation in the advanced economies. We do not believe that all the gains from education have been fully exhausted or can be exhausted any time soon, although there can be policy failures in improving educational quality. The negative trend in labor force participation may

have to do more with policy than with an inevitable trend; gradually changing retirement of a healthier population and immigration could help. But a possible slowdown in TFP, reflecting inherent obstacles in social organization and bureaucratic institutions that may cause long delays for exploiting the potential that new technologies could deliver might be a real problem. It is also clear that the technology issue is deeply linked to income distribution and the stagnation of real wages. Perhaps one should worry equally about the possibility of the equilibrium real wage moving into socially and politically impossible territory (at least for some types of labor) because of massively labor-saving technical change, rather than concentrate all the worry on the equilibrium interest rate being too low to be practically feasible.

If low aggregate demand or low profitability of investment is contributing to slow growth or secular stagnation in the advanced countries, a possible solution would be for them to run a larger current account surplus by exporting more to emerging and developing countries. But this strategy could only work if developing countries themselves were growing rapidly, thereby converging with income levels in advanced countries. This is where the secular stagnation debate should link up with the global convergence debate.

Convergence of Emerging and Developing Countries?

The issue in the convergence debate is the speed at which poorer countries have been and can be expected to continue to reduce the relative per capita income gap between themselves and the advanced rich economies. Until a few decades ago, there was quite clear divergence: The relative gap was getting bigger and bigger (divergence, big time, as Lant Pritchett put it). But since the 1950s, and particularly since around 1990, the story is much more complex. Just like the discussion on whether TFP has slowed or not, the convergence debate depends in part on the choice of the reference time frame. Dani Rodrik shows that for long time frames (over

50 years), there has been no tendency for unconditional convergence, when we take just the number of countries, unweighted by their population or GDP.⁹ Over the very long term, growth rates have been independent of initial levels of labor productivity. The probability of a country growing fast or slowly seems unrelated to whether it started rich or poor (although even in the individual country data catch-up has increased using the most recent past).

There are a number of explanations as to why convergence of developing countries has not happened, despite the strong prediction of neoclassical theory that it should, and despite the post-war experience of “club convergence” among advanced economies. Some argue that growth depends on overcoming a number of prior conditions, some of which have long historical (or geographical) antecedents, like slavery, colonial traditions of law or lack of access to a seaport. Others suggest that success builds on success. Countries with firms that are more diverse and sophisticated can combine these experiences in new ways to drive additional growth.¹⁰

The story about convergence is a very different one if one weights countries by their population or their GDP, particularly over the last three decades.¹¹ A much larger number of people have lived in “converging countries,” taking the last 25 or 30 years, than in non-converging countries, with China of course dominant in this story, but also many other large countries such as India, Indonesia, Thailand, Turkey, Peru, Vietnam and, more recently, the Philippines. It is of course this “weighted convergence” that has led to a substantial increase in the share of world GDP produced by emerging and developing countries as well as their even more rapidly growing shares in world trade and world investment, and it is this weighted convergence that is of most interest if we are concerned with global aggregate demand. This produces the now well-known observation that EMDEV countries may still be a minority share of global GDP (about 40 percent in current market prices), but already account for more than 60 percent of global growth.

This “weighted convergence” is apparent when observing the trend component of real GDP growth over the last three decades. Increased trade and financial linkages seem to have strengthened the correlation between the *cyclical* components of GDP growth in advanced and emerging countries. But the *trend* component for EMDEVs has been significantly higher than the trend in advanced economies, reflecting aggregate convergence.¹² As the growth differential persists over time, the contribution of global growth by emerging and developing countries has therefore also grown.

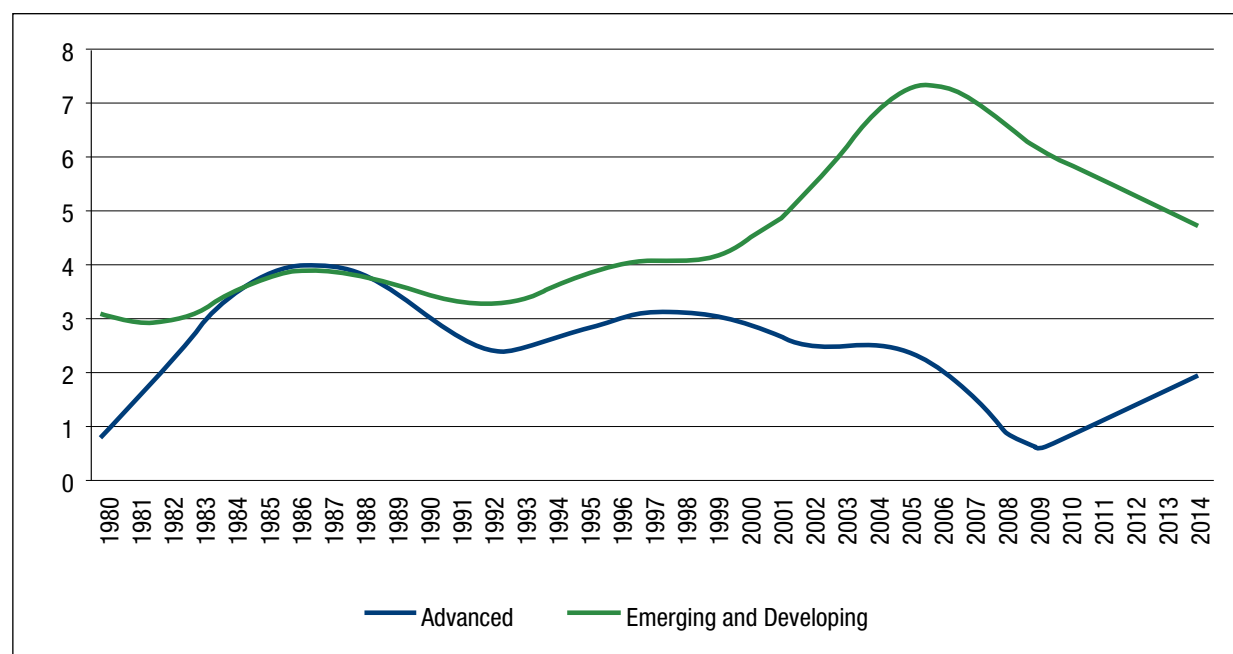
Why would one think that continued aggregate convergence is now more probable than not? As a starting point, the list of countries that have managed to achieve high growth has steadily lengthened in quite a dramatic fashion. When the Growth Commission looked at episodes of very rapid growth after 1950 (7 percent or more for 25 years or longer¹³), it only found 13 cases. Certainly some were large countries, like Brazil and China, but the commission concluded that rapid growth was the exception rather than the norm.

Redoing those calculations just five years later (and assuming that IMF projections through 2019 come to pass) would add another 16 cases to the list. If the criterion was softened to include episodes of over 6 percent growth for 25 years, 14 more cases would be added, including Ghana, India, Nigeria, Panama and Tanzania. In other words, exceptional high growth by global standards has become far more common today than before.¹⁴ The last 25 years has seen the most rapid, and most broad-based, growth in developing countries, ever.

There are other ways of looking at the data. For those who believe the secret of long-term growth is in avoiding recessions and crises, it is heartening to see that 14 countries in Africa have had positive growth for the last 20 years consecutively. So, recent data suggest that the rapid growth story is extending beyond Asia to include several countries in Africa. Is this the new normal?

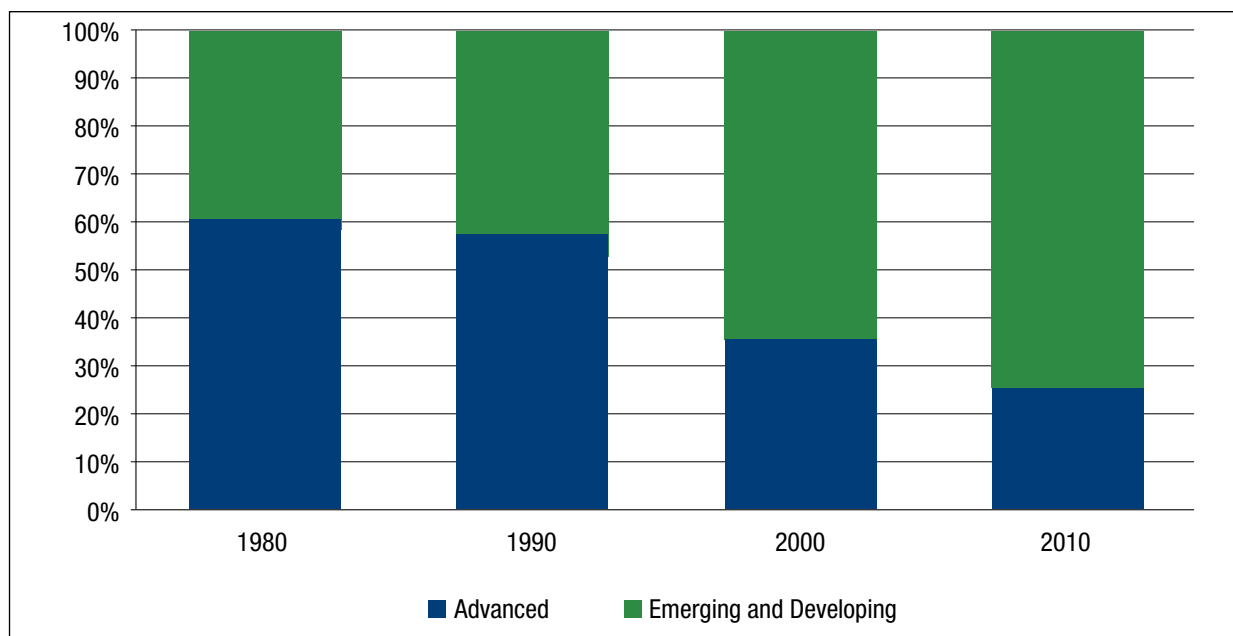
Viewed from a supply-side perspective, the drivers of potential output growth in developing countries seem sound. Investment rates are at an all-time

FIGURE 1. TREND GROWTH, GDP GROWTH RATE (PERCENT)



Source: Author's calculations based on International Monetary Fund World Economic Outlook, April 2014.

FIGURE 2. CONTRIBUTIONS TO GLOBAL GDP GROWTH



Note: Each period represents the area's contribution to growth over the following decade. 2010 incorporates contributions to growth for 2010-2014.

Source: Author's calculations based on International Monetary Fund World Economic Outlook, April 2014.

high, averaging about 33 percent in developing countries, compared to 25 percent in 1990 (and far higher than the 20 percent investment rate in advanced economies). Reducing large inefficiencies in land, labor and capital allocation in developing countries also provide scope for fast productivity growth. For example, Chang-Tai Hsieh and Peter Klenow estimate that better factor allocation added 2 percent per year to China's productivity growth, while worse use of resources subtracted an equivalent amount from India's growth. They suggest that China and India still have scope to raise productivity in manufacturing by 50 percent just from reallocating capital and labor to achieve the same degree of variance in marginal products across firms as observed in the United States.¹⁵

The idea that TFP growth in developing countries has more to do with the within-country efficiency of resource use than with the import of technology into a country from abroad is consistent with empirical patterns found by Diego Comin. He distinguishes between two components of TFP growth: cross-country diffusion of technology and the intensity of the use of the technology within a country.

High productivity growth in developing countries results when technology is quickly imported and spreads rapidly throughout the economy. He finds that modern technologies are being more quickly imported throughout the world but that the intensity of use of new technologies in developing countries is catching up to advanced countries at the same slow pace as in the 19th century.¹⁶

Another driver of rapid productivity change is the continued movement of people from rural to urban areas (urban populations are still growing at over 2 percent per year) where they are far more productive. In fact, rural populations are expected to peak soon after 2020 and then start to decline in absolute terms. Some analysts are concerned that structural shifts in labor from low to higher productivity jobs are becoming harder due to technological job losses and a premature peaking of manufacturing employment, but others see substantial scope in high value added services.¹⁷

Other factors that have been found important in conditional convergence, such as improved macroeconomic policies, higher levels of initial education (and

continued growth in education), sharply lower infant and child mortality and disease prevalence, more openness to trade and capital flows, and improving governance also suggest better prospects in more places.

Through quite dramatic scale effects, the demand side of growth in developing countries also suggests improved prospects. Households in developing countries now account for 40 percent of total global consumption. The middle class in developing countries, defined as households whose consumption lies between \$10 to \$100 per person per day (2005 PPP), is expanding by 150 million people per year, generating a market for many products which face stagnant demand in the rich countries.¹⁸

All this means that potential growth in emerging and developing countries should continue to be rapid, particularly if a steady stream of efficiency-improving structural reforms can be pursued. With regard to potential obstacles to actual output due to zero bound real interest problems, on average, developing countries' inflation is averaging 5.5 percent so they have more leeway than advanced economies to avoid being trapped by the threat of a zero lower bound on interest rates. In fact, the papers in this volume show more concern for the bubbles and distortions likely to come from excessively low real interest rates than for the difficulties in lowering real rates to equilibrium levels.

Investments and technological catch-up remain strong drivers of demand in developing countries. Even though investments are at historical highs, they could probably rise further in most countries and still produce decent economic returns, except in China where there is general agreement that aggregate investment has overshoot the optimal investment rate. Back-of-the-envelope calculations suggest that returns to investment in energy, particularly cleaner energy, in other infrastructure, in modernizing agriculture, in public transport, education and health could account for trillions of dollars in incremental profitable investment spending per year.¹⁹ These investments may have high financial as well as social rates of return, but they

are hampered in one way or another by a global economic, political and financial system that fails to achieve the required term transformation from short-term savings into longer-term investments, that fails to pool or exaggerates risk, and that, at times, suffers from policy inconsistencies in the advanced countries themselves. There are also obvious deficiencies due to the absence of adequate sovereign debt restructuring frameworks.

History teaches us to be careful of “this time it is different” arguments, and certainly the track record of convergence of a large number of developing countries is uneven. We do not know whether success will blunt the edge of reform efforts and undermine the single-minded determination to grow that has been behind many of the Asian miracle stories. Looking at fundamentals, there are reasons to be optimistic that conditions remain good today for development and convergence, perhaps not at the aggregate speed of the last two decades, but nonetheless at a pace likely to lead to growth in the emerging countries exceeding that in the advanced countries by several percentage points.

Global Secular Stagnation?

While we cannot tell what the future will bring for any individual country, it seems, therefore, that the arguments for secular stagnation become weaker when thinking about the global economy as a whole. This has implications for policy.

Secular stagnation poses problems for monetary policy. It implies that very low nominal rates should be held for a long period of time, but that risks a build-up of financial bubbles and future crises. So another instrument is needed. Janet Yellen, in her inaugural Camdessus Lecture, called for greater use of macroprudential regulations to safeguard financial stability, thereby creating policy space for extended loose monetary policy as a counter to secular stagnation.²⁰

But in an open economy, there is another possibility. If long-term capital would flow more strongly

from advanced to developing countries where returns remain high, then the real exchange rate in advanced countries would depreciate, net exports would rise, and the equilibrium real interest rate would rise, helping escape the zero lower bound problem.

For their part, many developing countries (although not China) would welcome such capital flows because they are starved for capital and cannot exploit all the investment opportunities that are available, many of which are in infrastructure.

Investments in developing countries would be all the more profitable if technology was more accessible and more widely used. Policies to accelerate the within-country diffusion of technology, and greater competition to force the pace of reallocation of capital, land and labor to more efficient firms would help. So would better science and technology institutions in developing countries that could accelerate the pace of technology diffusion within the economy.

Investments are also more profitable when there is sufficient aggregate demand to pay for goods and services. The developing world today has a sufficiently large middle class to drive the global economy. By 2020, there could be 2.4 billion middle class people living in developing countries consuming \$21 trillion per year. Unleashing that spending power will depend on local financial deepening—universal access to financial services, and access to insurance, risk pooling and consumer finance products.

Income Distribution

Finally, some words in this context on income distribution. The first point worth stressing is that citizens, whether in advanced or emerging countries, care about the pace at which *their* income grows, not about the pace at which *average* income grows. In a recent piece, Roy van der Weide and Branko Milanovic explain that the traditional focus on growth and average income seems paradoxical. Measures of inequality are used to summarize the

distribution of income across a population. This should drive an interest in how individuals in *different* parts of the income distribution would fare in societies with different levels of inequality rather than how it affects average incomes. They conclude that high inequality hurts income growth of the poor while having a positive effect on growth which is exclusively reserved for the top of the income distribution. Overall, growth that inequality stimulates is the type that further advances inequality.²¹ There is no doubt that there has been good news over the last three decades for worldwide income distribution: The stronger “aggregate” convergence described above, has not only helped lift hundreds of millions of people out of poverty, but the gap between the “average” citizen living in an emerging country and her counterpart in the advanced countries has diminished, for the first time in centuries. This has been a momentous historical shift and we believe that it will continue, although the speed of this likely convergence is subject to very legitimate debate.

Nonetheless, income distribution is perceived as becoming more unequal, because most *national* distributions are indeed becoming more unequal and, in particular, income concentration at the top is increasing markedly. Moreover, an increasing part of the income at the top is a return to inherited wealth as argued by Piketty. Given that the world is still one of nation states and national communities, it is natural that citizens of the United States, India, China, or South Africa, for example, perceive and develop political opinions on the income distribution in their countries and communities, rather than on the “world income Gini coefficient” or the distance of their income to the average income in Japan or Bolivia. The debates on national growth policies, therefore, have to take into account ever more strongly, not only the performance of average per capita income, but also of median per capita income and the shares of the top and bottom income groups. Moreover, as repeatedly mentioned in the secular stagnation debate, changes in the distribution of income can have macroeconomic effects on the pace of aggregate growth.

Conclusion

The essays contributed in this volume, in various ways tackle three fundamental interrelated debates, with different emphases on the “secular stagnation-excess saving” theme, the “convergence-divergence” theme and the “income distribution and growth” theme. The authors approach the issues in specific ways from their country, regional or even global perspective, but it is possible to place their thoughts into the broader context outlined above. Each country and regional context has economic, historical, geographical and political specificities. We hope that bringing them together at a difficult time for international cooperation will be helpful in promoting better understanding of key constraints and a better design for growth-promoting policies.

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 12. Derviş (2012b) further discusses the increased global interdependence that has resulted in stronger cyclical movements in GDP growth between emerging and developing economies and advanced economies and uses the Hodrick-Prescott filter to separate cyclical variation from trends.
 13. Commission on Growth and Development (2008)
 14. The new cases are: Angola, Azerbaijan, Bhutan, Cambodia, Equatorial Guinea, Ethiopia, Lao PDR, Liberia, Macao, Mozambique, Maldives, Mongolia, Qatar, Rwanda, Sudan, Turkmenistan. Data from IMF WEO, April 2014. Includes IMF projections until 2019.
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4. Piketty (2014)
5. Hansen (1939)
6. Bhalla (2002)

Is Africa at a Historical Crossroads to Convergence?

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Africa's Growth

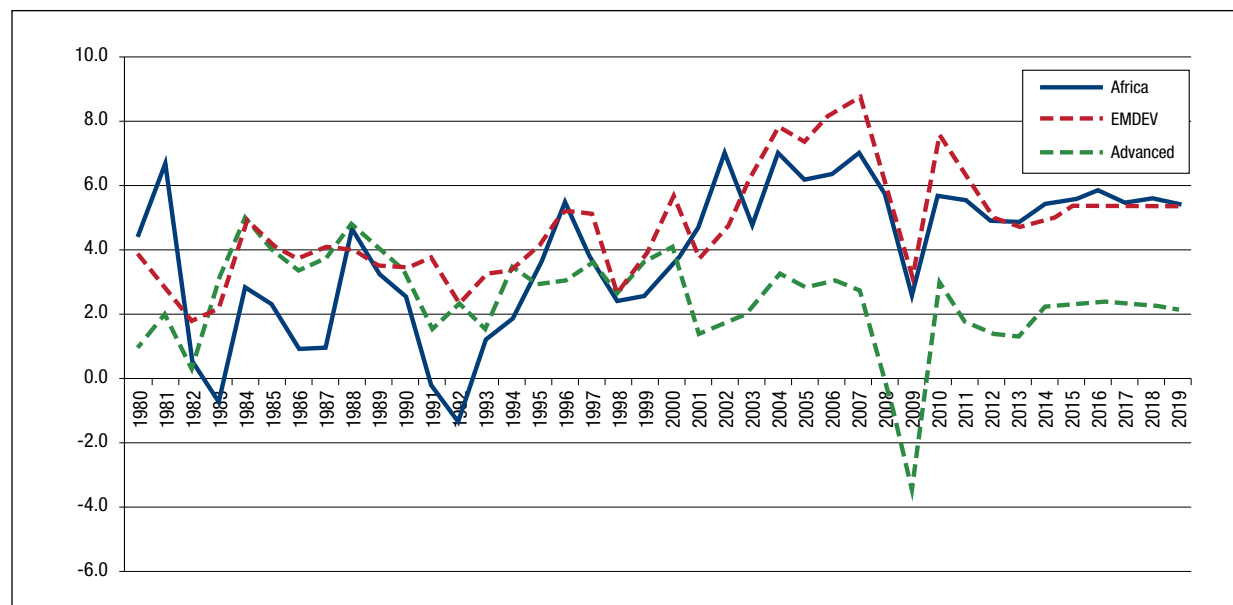
In 2008, the Growth Commission established a list of “growth miracles,” countries that had experienced 7 percent or more growth in their GDP for 25 years or longer. The list of 13 countries included only two from Africa: diamond-rich Botswana and the island-nation of Mauritius. Five years later, more than half of the new 16 “growth miracles” are expected to happen in Africa and in countries as diverse as Angola, Equatorial Guinea, Ethiopia, Liberia, Mozambique, Rwanda, and Sudan. The list could even include Ghana, Nigeria, and Tanzania if they manage to slightly accelerate their growth.²

Africa's recent growth performance can be attributed to both a favorable global external environment

and improved economic and political governance (Figure 1). The so-called commodity “supercycle,” in part fueled by China's demand for natural resources, has led to higher export and fiscal revenues for commodity exporters. Low global interest rates have helped reallocate international investment and portfolio flows to the continent. But it is clear that improved economic governance, increased investment and positive total factor productivity—for the first time since the early 1970s—and better political institutions have also played a role in the continent's recent economic performance.³

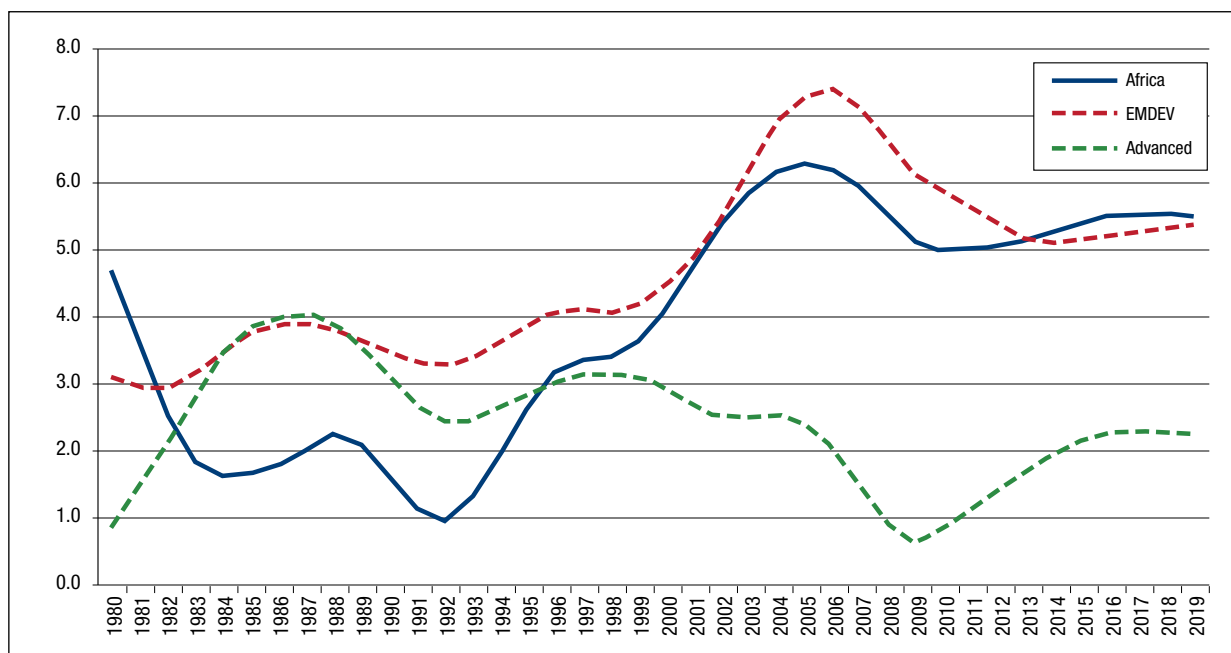
Africa's impressive growth performance has led to unprecedented optimism about the continent's economic prospects. However, separating the long-term trend of growth from its cyclical movement shows that Africa's growth took off in the early 1990s, about a decade later than other emerging

FIGURE 1. GDP GROWTH (%), 1980-2019 (PROJECTED)



Source: IMF WEO, April 2014.

FIGURE 2. TREND COMPONENT IN GDP GROWTH (%), 1980-2019P



Source: IMF WEO, April 2014 and HP filter used for trend and cyclical components.

markets and developing countries (EMDEV) (Figure 2). Furthermore, although Africa has been growing at a rapid pace since the 1990s, it grew systemically at a slower average pace than other emerging markets and developing countries. However, Africa could slightly overtake them if IMF forecasts for 2014-2019 are realized.

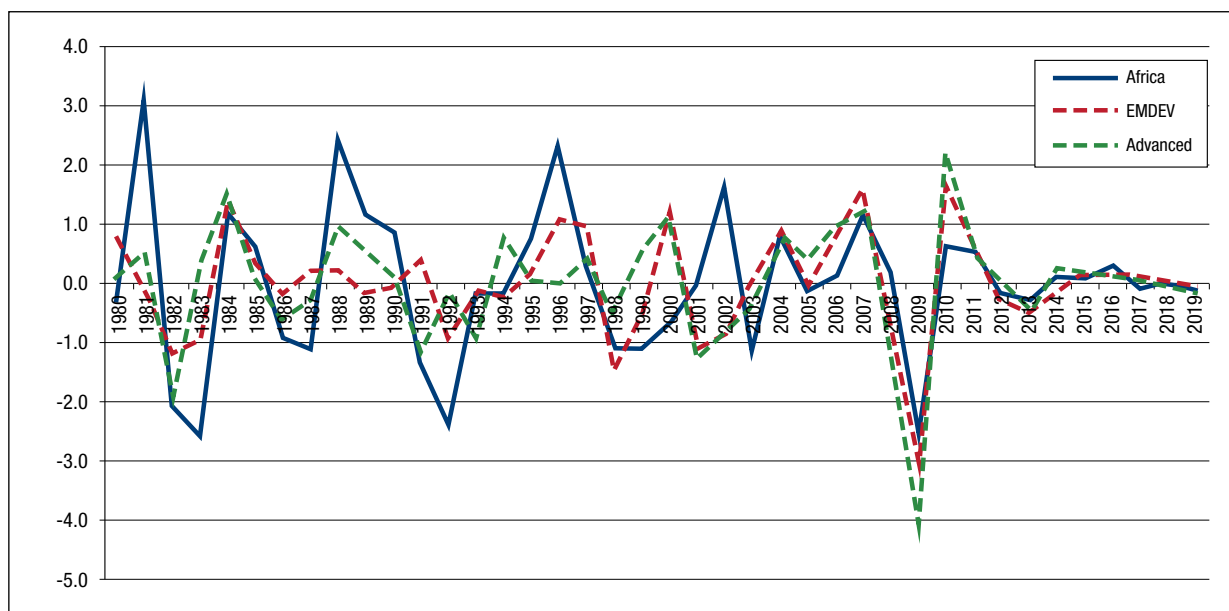
The cyclical component of Africa's growth shows that the interdependence with advanced economies that other emerging markets and developing countries have experienced has changed. Prior to the Asian crisis, Africa's cyclical interdependence with advanced economies was stronger than other emerging markets and developing countries, with periods of global booms and busts amplified in the region (Figure 3). After the Asian crisis, however, Africa's cyclical interdependence seems to have been lower than other emerging markets and developing countries. Africa's growth was even countercyclical in the early 2000s and was more resilient to the effects of the 2008-2009 crisis, although it recovered less strongly than the rest of the world. The typical channels of emerging markets and developing countries cyclical interdependence include trade, financial markets and spillover

channels.⁴ However, African countries are significantly less financially integrated to the rest of the world than other emerging markets and developing countries, given their relatively low financial depth. This does not mean that they are immune to global financial crises but that the severity of financial shocks has typically been less.

In fact, an increasing channel of Africa's integration to the rest of the world is its rising trade with emerging markets and developing countries, and in particular, China. The EU has been a major traditional trading partner of Africa, and over the last decade its trade with the continent has more than doubled: In 2013 it amounted to over \$200 billion. However, China started from a smaller base but has seen much more explosive growth—moving from \$10 billion in 2000 to over \$170 billion in total trade in 2013. Japan trails the U.S. in its total trade with Africa but, unlike Japan, the U.S. has actually seen its total trade decline in recent years, in 2013 amounting to about \$60 billion—importing about \$40 billion from the continent and exporting around \$20 billion.

Rising Chinese investment in the continent is another channel of Africa's integration to the global

FIGURE 3. CYCLICAL COMPONENT IN GDP GROWTH (%), 1980-2019P



Source: IMF WEO, April, 2014.

economy. The stock of FDI in sub-Saharan Africa (SSA) from the EU, China, Japan and the U.S. grew by nearly five times between 2001 and 2012, from \$27.2 billion to about \$132.8 billion. This growth was primarily driven by China, whose FDI grew at an annual rate of 53 percent, compared with 29 percent for Japan, 16 percent for the EU and 14 percent for the U.S. China's stock in SSA amounted to \$18.191 billion in 2012.⁵ In addition to China, other partners such as Brazil, India, Malaysia, Mauritius, Singapore, South Africa, and the United Arab Emirates are increasingly investing in the continent.

As Africa becomes increasingly integrated to the global economy through China and other emerging markets and developing economies, it is likely that its cyclical interdependence with the rest of the world will depend more on Chinese economic developments and policies. For instance, a rebalancing of the Chinese economic engine from investment towards domestic consumption could spur increased Chinese investment in Africa, with positive growth-enhancing opportunities. At the same time, lower demand for commodities in China could soften their prices with a negative impact on the growth of many African countries. Furthermore,

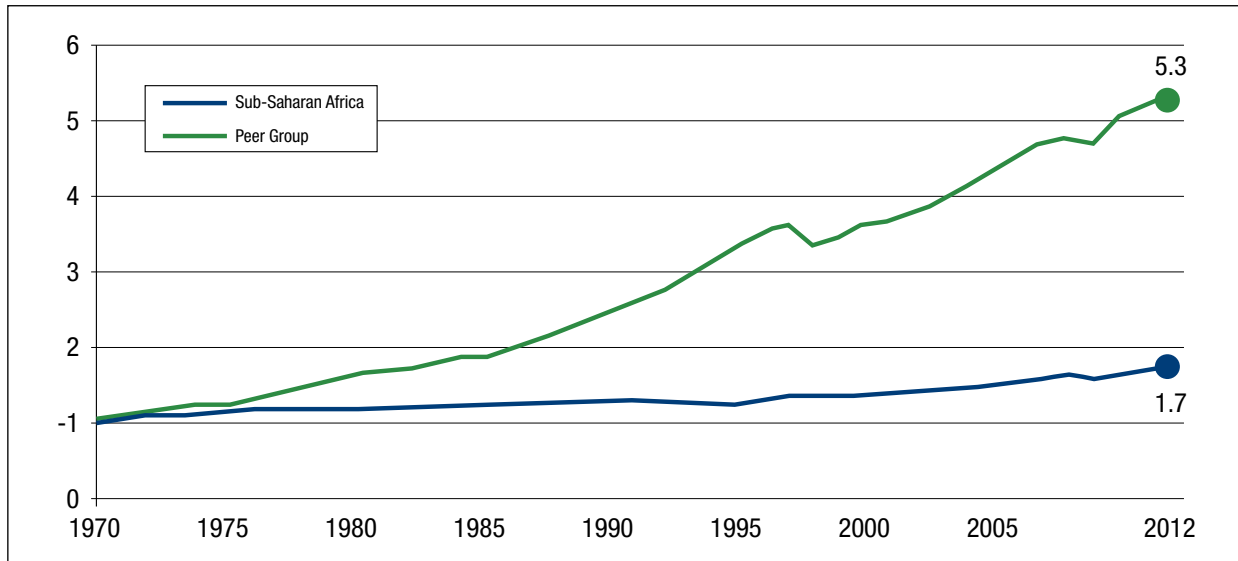
Africa could become more or less cyclically interdependent with advanced economies depending on how China amplifies or dampens shocks in such countries.

Africa's Convergence

Having taken off both at a later stage and at a slower pace than other emerging markets and developing countries, Africa has made less progress than these countries in reducing its relative per capita income gap with advanced economies. Actually, Africa's GDP per capita has not even grown fast enough to converge to the level reached by "earlier transformers" such as Brazil, Chile, Indonesia, Malaysia, Singapore, South Korea, Thailand, and Vietnam. Starting from a similar starting point of \$100 in 1970, Africa's GDP per capita would have grown to only \$170 in 2012 or about three times less than the \$530 per capita income that would have been achieved by the "earlier transformers".⁶

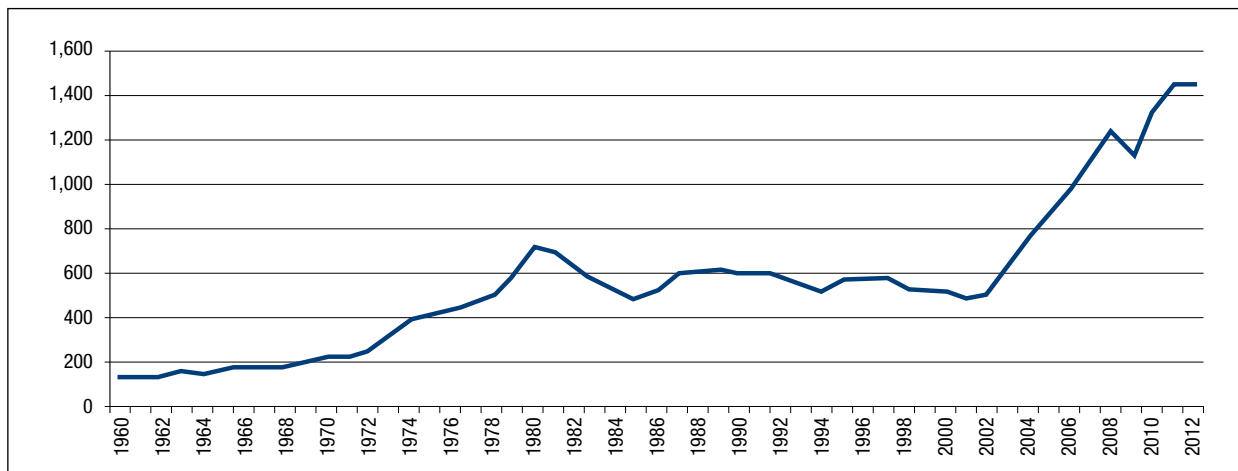
Africa has experienced previous episodes of per capita income growth take-offs, but they have, unfortunately, ended in busts. The first growth episode immediately after independence in the 1960s lasted about 20 years but was halted and even reversed in

FIGURE 4. SUB-SAHARAN AFRICA AND EARLIER TRANSFORMERS: GDP PER CAPITA (1970 =1)



Source: ACET (2014); Earlier transformer countries include Brazil, Chile, Indonesia, Malaysia, Singapore, South Korea, Thailand, and Vietnam.

FIGURE 5. AFRICA'S GDP PER CAPITA, 1960-2012



Source: World Bank Development Indicators.

1980, in the aftermath of the oil crises of the 1970s. It took a little over 20 years for per capita income to recover and surpass its 1980 level, in 2003. Since then, per capita income has been growing at a rapid and sustainable pace of about 3 percent per year.

These aggregate figures mask the fact that some countries may have grown poorer (on a per capita income basis) than they were at independence in 1960. For most of these countries, conflicts (some which are ongoing, as in the Central African Re-

public and eastern Congo) have had severe negative effects on per capita income. In others, the deterioration of terms of trade reversed the gains of the years immediately after independence. Even within countries, income disparities across regions can be high, fueling internal conflicts such as in Nigeria.

When viewed through the prism of the conditional convergence literature, Africa has made progress in lowering some of the country-specific obstacles that have previously held it back.⁷ There is of course

room for improvement in “growth fundamentals” (levels of investment, human capital, and quality of policies) and it is important that policymakers not only continue improving economic and political governance but accelerate the pace of reforms. The current Ebola crisis in West Africa is a stark reminder that underinvestment in health infrastructure bears heavy human and economic costs.

But as noted by Rodrik (2014), investment in growth fundamentals alone has not been shown to lead to rapid and sustainable growth. As a result, the literature on Africa’s convergence is focusing increasingly on dual-economy models, which center on the role of structural transformation and industrialization in the growth process of the continent.

The policy debate is therefore moving toward the possible drivers of Africa’s transformation.⁸ A starting point in this debate is to ask whether Africa can benefit from the same drivers of growth as other emerging markets and developing countries. For instance, Derviş (2012) discusses the potential for emerging markets and developing countries to catch up based on (i) labor reallocation from low-to high-productivity firms; and (ii) their relative demographic advantage (except for China).

Reallocation of labor from low-to-high productivity firms

However, the debate is still open as to whether these drivers of growth can be used. The structure of African economies has not changed much since the 1980s and most African economies remain dependent on extractive industries and low-yield

agriculture. The dependence on export and fiscal revenues from commodities means that many African countries remain vulnerable to a sharp reversal in the prices of such commodities. For instance, about 20 African countries derived more than a quarter of their total merchandise exports in 2000-2011 from natural resources (Figure 6). In fact, Africa’s dependence on natural resources is increasing with new discoveries of oil, gas, and coal in many countries (such as Kenya, Uganda, Tanzania, and Rwanda in the Eastern African Community, Mozambique, and Ghana) as about 30 percent of global oil and gas discoveries in the last five years were in sub-Saharan Africa (Figure 6).⁹

African policymakers will face a number of potential economic challenges stemming from the presence of natural resources. These challenges include a loss of competitiveness in potentially dynamic, non-natural resource sectors leading to a narrowing of the production base; excessive government on reliance on revenues derived from commodities and export earnings; too much macroeconomic and financial volatility; and rent-seeking behavior that can undermine governance and exacerbate the difficulty of building robust, growth-enabling institutions. They will need to look beyond the so-called resource curse and put into action innovative policies and institutions to confront these challenges.¹⁰

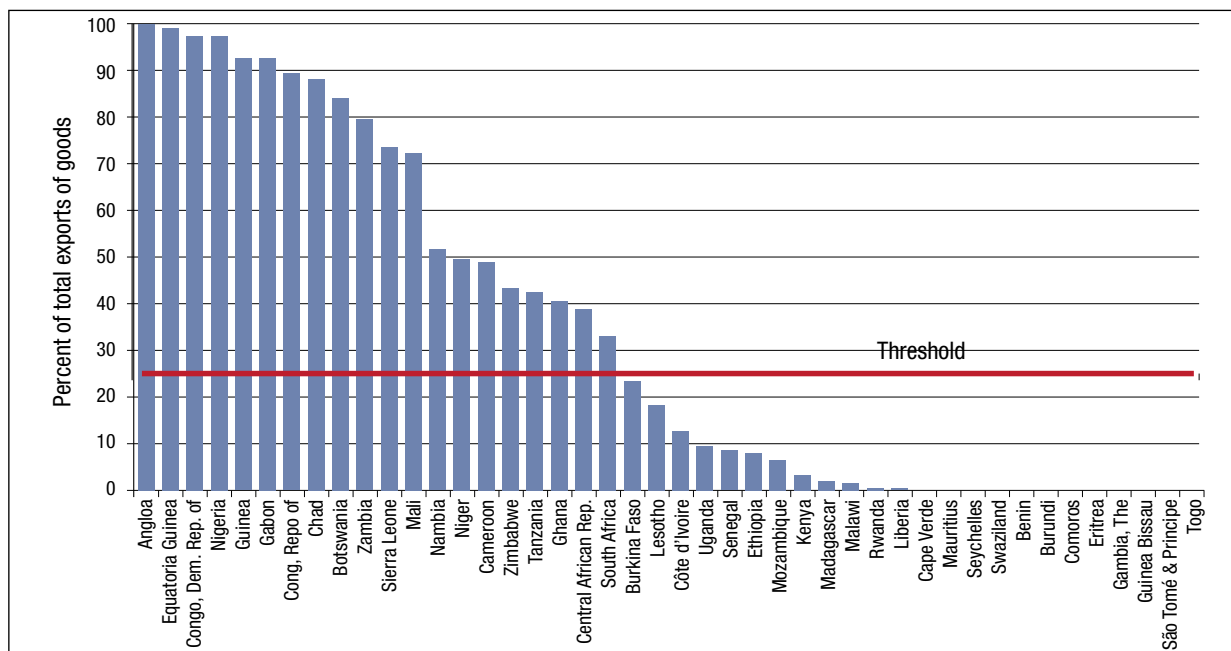
The contribution of manufacturing—mostly dominated by small and informal firms—to output is negligible and the services sector includes a large share of informal activities in urban areas. Industrialization in Africa is now lower than in the

TABLE 1. TYPOLOGY OF GROWTH PROCESSES

Typology of growth processes/ outcomes	Structural transformation, industrialization		
	slow	rapid	
Investment in fundamentals (human capital, institution)	slow	(1) No growth	(2) episodic growth
	rapid	(3) slow growth	(4) rapid, sustained growth

Source: Rodrik (2014).

FIGURE 6. SUB-SAHARAN AFRICA: NATURAL RESOURCE EXPORTS (AS A PERCENT OF TOTAL EXPORTS OF GOODS)



Source: Thomas and Treviño (2013) and IMF.

1970s. Manufacturing industries' share of employment is now below 8 percent and their share in GDP has fallen to 10 percent from about 15 percent in 1975.¹¹ Africa's slow pace of industrialization means that African economies are not likely to replicate the convergence dynamics of Asian countries and European industrializers. The problem, as noted by Rodrik (2014), is that African labor is migrating from agriculture and rural areas, but instead of moving to formal manufacturing industries, it is being absorbed largely into the services sector, which is not particularly productive and dominated by informal activities.

African agriculture is its least productive sector and has the lowest income and consumption levels. McMillan and Harttgen (2014) estimate that the share of the labor force engaged in agriculture fell by about 10 percent during 2000-2010 while services and manufacturing employment grew by 8 and 2 percent, respectively. So although there is a consensus that structural change is happening in Africa as the agriculture sector is shrinking and the manufacturing sector is barely growing, there

is no conclusive message about the activities that are expanding.

Which activities are expanding to absorb the labor force moving out of agriculture? MacMillan (2014) cautions that "without knowing more about these activities, it is difficult to make predictions about the sustainability of Africa's recent growth." Rodrik (2014) is quite skeptical about African service productivity and cautions that in spite of the enthusiasm for the productivity-enhancing benefits of mobile telephony and mobile banking, services have not traditionally acted as an escalator sector like manufacturing. He stresses that services tend to require relatively high skills compared to manufacturing and have "typically required steady and broad-based accumulation of capabilities in human capital, institutions, and governance."

Current policy advice on how to achieve a structural transformation of African economies that would lead to convergence tends to focus, as in Rodrik (2014), on the need to generate growth by reviving manufacturing and putting industrialization back

on track; generating agriculture-led growth based on diversification into non-traditional agricultural products; generating rapid growth in productivity services; and leveraging growth based on natural resources.

Similarly, ACET (2014) advocates economic transformation or “growth with DEPTH” which involves the diversification of production and exports; export competitiveness; productivity increases; technological advances; and human well-being—by expanding formal employment and raising incomes. ACET (2014) identifies four pathways to transformation reminiscent of Rodrik (2014): (i) labor-intensive manufacturing; (ii) agro-processing; (iii) oil, gas, and minerals as part of a portfolio of assets; and (iv) tourism.

The rebasing of some African economies such as Kenya and Nigeria (and previously Ghana) also gives a sense of the ongoing structural transformation in the continent. The rebasing of Nigeria’s economy (changing the base year from 1990 to 2013) elevated the country to the world’s 26th largest economy from 33rd and to the number one spot in Africa above South Africa as the new statistics better incorporate the informal sector and include new industries. In particular, the contribution of the services sector increased to 52 percent of GDP from 29 percent prior to rebasing and that of the telecommunications sector rose tenfold to about 9 percent from 0.9 percent. In contrast, value added by the agricultural sector fell to 22 percent from 35 percent. Interestingly, Nigerian manufacturing now contributes about 7 percent of GDP rather than 2 percent previously. Oil and gas value added fell to about 14 percent from 32 percent.

Well-designed policies in agriculture merit more attention given their potential to enhance growth and create jobs. First, high-value crops increase productivity in rural areas (a good example is horticulture production in Kenya). Second, linkages between agriculture and manufacturing can develop when agricultural products are transformed and even exported. Third, increased productivity of staple food crops can lower food prices and real

wages, thereby making the manufacturing sector more competitive. Solutions will need to be tailored and, at the same time, involve many dimensions. As noted by McArthur (2014), employment challenges can be broken down into typologies by predominately rural, predominately urban, and mixed between rural and urban economies. As a result, highly tailored approaches to job creation based on economy type should be the focus of African policymakers trying to improve the employment situation for young people.

So in conclusion, something is happening in Africa’s economies but economists are not sure what exactly. They know that Africa’s growth model is different from earlier models used in Asia or Europe but they do not know enough about the drivers of the continent’s growth. It is therefore crucial to investigate further the ongoing structural transformation of the continent so as to guide policy in the best possible direction, especially as the continent is going through rapid demographic changes.

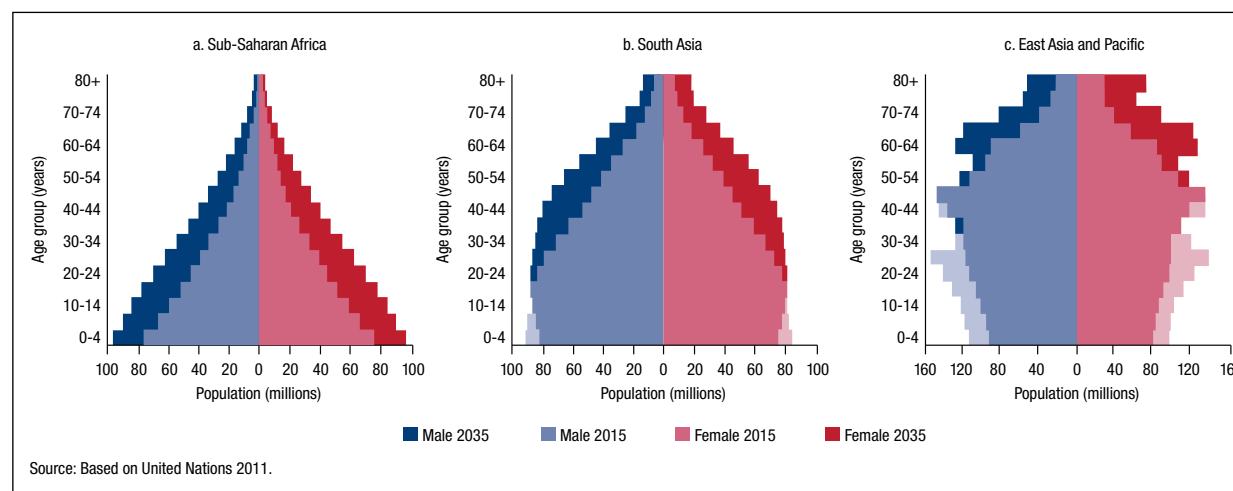
Relative Demographic Advantage

As mentioned above a relative demographic advantage is a potential driver of convergence for emerging markets and developing countries. It is, however, not clear that this is the case for Africa as the recent episode of growth was not accompanied with significant job creation.

Africa’s population is without a doubt growing. The World Bank notes that half of Africa’s population is under 25 years of age. Each year between 2015 and 2035, there will be 500,000 more 15-year-olds than the year before. In contrast, the population structures in other regions are or soon will be aging. The challenge for Africa will be to transform this youth bulge into an opportunity or risk potential unrest, as exhibited during the Arab Spring. So far, sub-Saharan African countries have not been doing a good job of capitalizing on their young, dynamic populations, and time is running out fast.

Even the narrative around a middle class rising in Africa should not divert policymakers’ attention

FIGURE 7. THE STRUCTURE OF SUB-SAHARAN AFRICA'S POPULATION IS DIFFERENT THAN THAT IN OTHER REGIONS



Source: World Bank.

from the urgency of transforming the region’s economy to provide sustainable and inclusive growth. Indeed, a rising middle class creates an “expectation revolution” that has to be managed. As noted by Derviş (2014), in Chile, Brazil and Turkey last year, the young and parts of the aspiring new middle classes were in the streets demanding respect, greater equality, less corruption and a greater say in their own lives.

Income Inequality

Data limitations make it difficult to assess the extent of income inequality in African countries. The quality of national accounts and poverty data (e.g. surveys on daily consumption; measuring yields of crops) can be challenging and has led to calls for a data revolution by the High Level Panel of Eminent Persons on the Post-2015 Development Agenda. Technological advances such as the use of mobile and geospatial technologies appear promising if they are accompanied by improved national statistical development strategies.

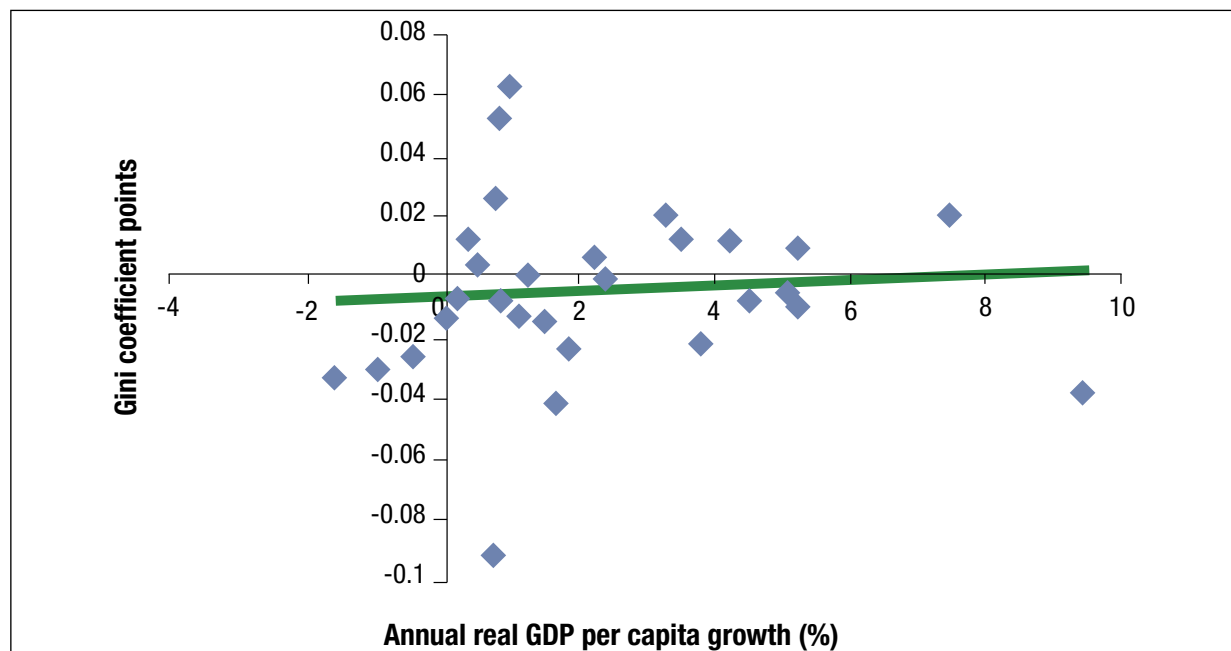
Interestingly, economists seem to know more about Africa’s extreme poverty than the rest of the income distribution. Twenty years of falling per capita income growth in the 1980s and 1990s combined with very weak initial conditions have made it

difficult for Africa to reduce extreme poverty relative to the rest of the world. For instance, Chandy et al. (2013) show that in spite of Africa’s relative success in reducing extreme poverty, the continent will account for a significantly higher share of global poverty because it is growing “too slow” and/or starting “from too far behind.” The authors stress that in 1990, 56 percent of Africans lived on under \$1.25 a day, accounting for 15 percent of those in poverty worldwide. Over the subsequent 20 years, the region’s poverty rate dropped to 48 percent. However, given the superior pace of poverty reduction elsewhere and Africa’s faster population growth, Africa’s share of global poverty doubled. A continuation of these trends would lead to Africa’s poverty rate falling further to 24 percent by 2030, representing 300 million people. But Africa’s share of global poverty would balloon to 82 percent.

What about the rest of the distribution? With the data caveats in mind, estimates show a small but positive association in sub-Saharan Africa between less inequality—measured by the Gini coefficients—and growth between 2000 to 2010.

At the outset it should be noted that there are different ways to define “middle class” in Africa. For certain economists (Kharas, 2010), the middle class is defined as the number of households with

FIGURE 8. INCOME INEQUALITY AND GROWTH IN AFRICA (2000-2010)



Source: Gini numbers from PovalNet. Annual growth rate of Gini coefficient for countries with end point in the 2000's decade. GDP per capita from WDI.

average daily income per capita between \$10 and \$100 in terms of purchasing power. According to this definition, middle class Africans represent 32 million people (2 percent of the world's middle class population) with a total overall consumption of \$256 billion. This population growth is expected to exceed 107 million people with a total consumption of \$827 billion by 2030. On the other hand, according to the African Development Bank, a daily consumption per person between \$2 and \$20 is enough income to be considered as middle class.¹² That equates to 350 million people (or 34 percent of the African population) in this category as of 2010 up from 126 million (or 27 percent of the African population) in 1980. For other analysts, a range of \$15 to \$20 would be a better criterion due to the fact that an income amount of \$2 is far too close to the defined poverty line.

What is certain is that the growth of the African middle class could be the highest in the world. The World Bank estimates that the strong economic growth of African countries (of more than 5 percent per year) is driven by the consumption of household goods. We can therefore expect future

investments targeting the mobile phone market as well as electronic products and banking services.

Conclusions

Over the past 10 years, sub-Saharan Africa's GDP grew at about 5 percent per year, and at this rate, it can double its size before 2030. Over the same period, the world economy grew by 3.2 percent per year. The impressive growth rate of sub-Saharan African countries since the early 1990s has led to an unprecedented optimism about the continent's economic prospects, illustrated by the numerous media stories about "Africa Rising." However, a contemporary look at the continent's growth performance leads to the conclusion that Africa is at a historical crossroads, which could lead to convergence with emerging markets, and ultimately with advanced economies.

For Africa to converge, policymakers need to quickly address three key issues. There should be a sense of urgency as Africa has a young population and the fight against extreme poverty is not yet over. First, they need to continue strengthening growth

fundamentals and pay particular attention to resource management. Better economic and political governance will lay the foundations for growth and help the continent manage shocks. Second, achieving a successful economic transformation will help capitalize on improved growth fundamentals and achieve high and sustained per capita growth rates. However, for such a process to yield lasting benefits, it is crucial to better understand the ongoing structural changes taking place in Africa. This is an important task for economists studying Africa and, in addition to achieving a “data revolution,” both meta-analysis and case study methods can be useful complements to the current body of research on the continent. Finally, policies should aim to take full advantage of the increased cyclical interdependence with China and other emerging markets and developing countries. Globalization for Africa increasingly means rising trade and investment with these countries, and understanding the nature and evolution of their linkages with both Africa and with advanced economies will be essential to benefit from upswings and manage downswings.

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Endnotes

1. Amadou Sy, Africa Growth Initiative, The Brookings Institution. I thank Karim Foda for excellent research assistance.
2. See Derviş and Kharas, 2014, TT20 introduction.
3. Rodrik (2014)
4. Derviş (2012)
5. UNCTAD (2014)
6. ACET (2014)
7. Rodrik (2014)
8. See for instance, Rodrik (2014), McMillan and Harttgen (2014), ACET (2014), UNECA (2014)
9. IEA (2014)
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11. Selected 11 countries, Rodrik (2014)
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Economic Growth in Asia: Performance and Prospects

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Asia deserves a special place in any narrative of global development for several reasons. It accounts for more than half of the global population; it once enjoyed a dominant position in the global economy until it was eroded by the industrial revolution in the West 250 years ago; it is the only region where some countries have, in modern times, made the transition from pre-industrial to mature industrialized economies, beginning with Japan and followed by Korea, Taiwan, Hong Kong and Singapore; and finally, it is where a wide range of emerging markets and developing economies (EMDEs) have been experiencing accelerated growth, with good prospects for the process to continue over the next two decades.

This paper focuses on the performance and future potential of Asian EMDEs, defined as in the IMF's World Economic Outlook (WEO) database.¹ The group is very diverse, including many small countries, but the aggregate performance of the group is obviously dominated by China, India, and the "ASEAN 5" which together account for 95 percent

of the GDP. The paper presents a brief summary of past trends and explores prospects for the future. It also comments on the domestic challenges these countries face in realizing their full potential and the implications of their growth prospects for global governance.

Past Trends

Table 1 shows the evolution of shares in global GDP (measured in PPP terms) of major country groupings between 1980 and 2013, with projections up to 2019 based on the IMF WEO forecast. It is clear that the EMDEs as a group grew faster than industrialized countries, increasing their share in global GDP from 30 percent in 1990 to 50.4 percent in 2013. The IMF projects this to increase further to 54.6 percent in 2019.

This is a major structural change in the global economy and is widely recognized as such. However, what is less recognized is the extent to which this is largely an Asian EMDEs story. The share of

TABLE 1. PERCENTAGE SHARES IN WORLD GDP (PPP)

	1980	1990	2000	2013	2019
Advanced Economies	69	69.3	63.0	49.6	45.5
EMDEs	31.0	30.7	37.0	50.4	54.5
Asian EMDEs	7.5	10.8	14.5	25.9	30.5
of which:					
China	2.2	3.8	7.0	15.4	15.3
Others	5.3	7.0	7.5	10.5	15.2
Latin America	11.4	9.5	8.8	8.6	8.4
Middle East and NA	5.4	4.9	4.9	5.0	5.2
Sub-Saharan Africa	2.7	2.4	2.0	2.6	2.9

world GDP originating in the EMDEs is estimated to increase by 23.8 percentage points between 1990 and 2019. As much as 19.7 percentage points, or 83 percent, is due to the Asian EMDEs. China, which has grown at 10 percent per year for three decades, is obviously the star performer in this transformation, accounting for half the increase in the EMDEs total share. However, as Table 1 clearly shows, the share of other Asian EMDEs has also increased significantly.

In contrast, the share of Latin American and Caribbean EMDEs has fallen steadily during this period, reflecting the fact that this region experienced lower growth than the world average. It grew faster than the industrialized countries but more slowly than other EMDEs. Sub-Saharan Africa experienced a decline in share up to 2000, with a reversal thereafter, but even so its share in 2013 was slightly lower than in 1980. The faster growth of African GDP in recent years is a welcome development but considering the high rate of population growth of the region, it cannot be said to signal a strong process of convergence in terms of per capita GDP.

These changes in GDP shares are mirrored by changes in the structure of trade, especially after 1990. As shown in Table 2, the share of all developing countries in world exports declined marginally from 31.7 percent in 1980 to 30 percent in 1990, but then increased to 45 percent in 2012. A similar

pattern is evident in import shares. The increases in trade shares of developing countries are less marked than in the case of GDP because of the use of purchasing power in measuring GDP, whereas trade flows are measured using market exchange rates.

As in the case of GDP, Asian developing countries contributed disproportionately to the structural change. Of the increase in share of trade achieved by developing countries between 1990 and 2012, Asian developing countries accounted for 88 percent in the case of exports and 87 percent in the case of imports. Once again, China played a lead role but, as shown in Table 2, Asian developing countries excluding China were impressively dynamic, much more so than developing countries in Latin America.

Future Prospects

It is tempting to speculate on what the global economy would look like if the trends observed thus far were to continue over the next decade or two. Such long-term forecasts have well-known limitations but, as Daron Acemoglu (2012) has put it, "...prediction about the future is often a vehicle for clarifying the challenges ahead and because it partly extrapolates from experience it also gives us an opportunity to take stock of the trends that have shaped our age." It is in this spirit that we present a

TABLE 2. CHANGING STRUCTURE OF WORLD TRADE: PERCENTAGE SHARES

	EXPORTS			IMPORTS		
	1980	1990	2012	1980	1990	2012
Developed Countries	66.2	72.5	50.8	72.2	74.0	55.1
Transition Economies	4.2	3.4	4.6	4.0	3.9	3.4
Developing Countries	29.7	24.1	44.6	23.8	22.1	41.4
of which:						
(i) Asia	18.2	16.9	35.0	13.1	15.9	31.9
(ii) Latin America.	5.4	4.2	6.1	5.9	3.5	6.1
(iii) China	0.9	1.8	11.1	1.0	1.5	9.8
(iv) Developing Asia without China	17.3	14.9	23.9	12.1	14.5	22.1

Source: UNCTAD handbook of Trade Statistics.

forecast up to 2030, using the IMF WEO forecast up to 2019, and making further projections for the period 2020 to 2030 by modifying past trends in light of likely developments.

The modifications to past trends that are built into our forecast for the period 2020 to 2030 (see Table 3) are summarized below.

- (i) For advanced economies the IMF has projected growth of 2.3 percent per year for the period 2014 to 2019, which is much faster than the average of 0.7 percent achieved in 2008 to 2013. This optimism is perhaps justified as a phase of recovery from the prolonged low growth after the crisis. However, these economies face a number of structural constraints which are likely to keep growth low. These include the aging of their populations, the much higher expected costs of social security with not enough evidence of a willingness to face this problem, unresolved policy stresses in the eurozone arising from the adoption of a common currency without a common fiscal policy, and some slowing down in productivity growth. Keeping these factors in mind, we have projected growth in industrialized countries at 1.7 percent per year in the period 2020 to 2030. The U.S., of course, is likely to grow significantly faster, with the eurozone and Japan growing more slowly.
- (ii) The IMF projects Asian EMDEs to grow at 6.6 percent per year in the period 2014 to 2019. This is significantly lower than the growth experienced by this group in earlier periods. As shown in Table 3, Asian EMDEs grew at 7.4 percent in the 1990s, 8.5 percent in the period 2000 to 2007 and 7.6 percent in the period 2008 to 2013. Some moderation in growth rates of Asian EMDEs from the earlier high growth rates recorded by this group seem justifiable in view of the fact that China will slow down from the very high growth rates it was able to achieve earlier partly because China is entering a phase of declining labor force and partly also because the earlier export-based growth strategy implemented is no longer feasible. The IMF projects that China will grow at 6.9 percent in the period 2014 to 2019. We project a further slowing down to an average growth rate of around 6 percent in the period 2020 to 2030. However, China's slowdown is expected to be offset by faster growth in other Asian EMDEs.
- (iii) The IMF projects India to grow at an average rate of 6.4 percent in the period 2014 to 2019, reversing the slowdown experienced in recent years. We project an acceleration to 7 percent in the period 2020 to 2030. This may seem optimistic, but it must be kept in mind that India grew at an average rate of about 8 percent for several years up to 2010, after which growth dipped sharply. While the global slowdown explains part of the dip in India's growth after 2011, most of it was due to a number of domestic constraints which can be overcome through corrective policies. It may be noted that the projection of 7 percent growth is actually lower than current official targets.
- (iv) We project the group of other EMDEs (in Latin America, the Middle East and North Africa, sub-Saharan Africa and Europe) to grow at 4 percent per year over the period 2020 to 2030. This is significantly higher than their estimated recent performance (see Table 3) though lower than in the pre-crisis boom period. The critical assumption underlying our optimism is that these countries have built up institutional capacity for growth and this would help improve growth even if the traditional engine of the industrialized countries slows down.
- (v) The IMF projects all EMDEs to grow at 5.3 percent per year in the period 2014 to 2019. Our assumptions about Asian EMDEs and other EMDEs summarized above yield a growth rate of about 5.5 percent for all

TABLE 3. GROWTH RATE PROJECTIONS FOR DIFFERENT REGIONS

	Average Annual Growth of GDP For Different Periods				
	1990 to 1999	2000 to 2007	2008 to 2013	2014 to 2019	2020 to 2030
World	3.1	4.2	2.9	3.9	4.0
Advanced Economies	2.8	2.6	0.7	2.3	1.7
All EMDEs	3.7	6.6	5.4	5.3	5.5
Asian EMDEs	7.4	8.5	7.6	6.6	6.6
Other EMDEs	1.7	5.1	2.8	3.7	4.0

Note: Growth rates for the first four rows and the first four columns are from the IMF WEO database. The growth rates in the last column are author's projections. Growth rates for other EMDEs in the fifth row have been calculated as the implicit residual growth rate for this category given the growth rates for all EMDEs and for Asian EMDEs as reported in WEO, using the shares of Asian and other EMDEs in each year as the basis for deriving the residual.

EMDEs in the period 2020 to 2030. This is significantly lower than the growth achieved by this group in the pre-crisis period and a little lower than the growth rate achieved over the longer period 2000 to 2013 but is broadly in line with the assumption that a slowdown in China will be offset by an acceleration elsewhere.

It must be emphasized that the growth projections listed above are not derived from a quantitative model of the global economy and its constituent parts. They are at best a set of quantitative projections going 10 years beyond the IMF's WEO projections. However, they do allow us to examine what the world might be like if these projections, or something like them, are realized. In the rest of this section, we present the main conclusions that can be drawn from Table 3.

Perhaps the most robust conclusion is that the share of advanced economies in global GDP, which has been falling since 1990, will fall further from just under 50 percent in 2013 to 35 percent in 2030, and the share of EMDEs will probably rise to about 65 percent. This follows from the simple fact that EMDEs are likely to grow much faster than industrialized countries because of (a) the large "catching up" possibilities which exist and (b) the improved ability of the EMDEs to exploit this capability whereas the advanced economies are likely to slow down for the reasons discussed above. This is not very different from conclusions reached

by others engaging in long term forecasting based on past performance e.g. OECD (2012) and ADB (2011). Pritchett and Summers (2014) have raised the interesting issue that the principle of reversion to the mean provides a firmer basis for projection, which of course implies that countries that have done well in the past are much more likely to slow down. We reject this approach because it does not allow for structural changes underway which can lead to the differential performances over an extended period.

Since the Asian EMDEs are projected to grow faster than any other group, their share in global GDP is likely to rise to around 40 percent by 2030. With this development the share of Asia, including the industrialized Asian countries Japan, Korea, Taiwan, Singapore, Australia and New Zealand, will have expanded impressively from around 18 percent in 1990 to an estimated 43 percent in 2030.² This certainly vindicates the view that the 21st century will be Asia's century. However, this Asian resurgence also involves a substantial shift in the distribution of Asian GDP and trade towards the Asian EMDEs. Japan has experienced slow growth for two decades and its share has been falling steadily and will continue to do so. The other industrialized countries of the region—Korea, Australia, New Zealand, Singapore and Taiwan—are expected to have a higher growth rate than Japan, but they are all expected to grow more slowly than the Asian EMDEs. The share of Asian EMDEs in Asia's GDP is therefore set to increase substantially

from about 75 percent in 2013 to an estimated 88 percent of Asian GDP by 2030.

Our projections for different groups of countries add up to produce a global GDP growth of about 4 percent per year in the period 2020 to 2030. This is a little higher than the IMF forecast of 3.9 percent for 2014 to 2019, but it is not unreasonable if one allows for the impact of improved performance in the EMDEs. Given their increasing share in global GDP a modest improvement in EMDE performance could offset slower growth in the advanced economies. It is relevant to ask whether there are aggregate supply constraints that might force the world economy to slow down. Availability of energy is clearly one potential problem, and although falling energy prices from July to October 2014 make this look less of a problem than it did only a few months ago, there is no justification for complacency over a longer period. However, it can be argued that technological change related to the exploitation of renewable energy along with advances in energy efficiency could help overcome this constraint. We return to this issue later in the paper.

A key assumption underlying our projections in Table 3 is that the Asian EMDEs will continue to grow faster than other EMDEs despite the fact that China is expected to slow down. The past performance of this group certainly justifies this assumption, but while past performance is relevant, a credible case for continued faster growth has to be based on some structural strengths in these economies that distinguish them from others in terms of growth potential. The most important structural strength of Asian EMDEs is their

demonstrated ability to sustain much higher rates of investment than the other regions (see Table 4). High rates of investment produce a faster growth of capital stock, which leads to higher growth. This is the unconventional investment—growth linkage. Equally important is the impact on growth of total factor productivity because new technology is typically embedded in new machinery, and the rate of induction of new machinery is a function of the rate of investment. Moreover, general productivity growth is also often dependent on improved infrastructure, which also typically requires large investments.³

Underlying the high rates of investment in Asian EMDEs is another structural factor, namely the high rates of domestic savings. Table 4 shows that while savings rates have been rising in all regions, they have been consistently higher for Asian EMDEs and this differential is projected to continue. The IMF projects a savings rate of 43.1 percent for Asian EMDEs in 2019, but only 19 percent for the other two regions respectively. Low rates of savings would not matter from the growth perspective if it were possible to achieve high rates of investment despite lower savings by attracting large net foreign inflows. However, there are limits to the extent to which investment rates can be raised much above domestic savings rates for an extended period of time and experience suggests that excessive reliance on foreign inflows can generate vulnerability in the face of volatility. What this means is that a sustainable high investment strategy requires high rates of domestic savings and the Asian EMDEs have a big advantage in this respect.

TABLE 4. INVESTMENT AND SAVINGS RATES IN EMDES BY REGIONS (PERCENT OF GDP)

	1980		1990		2000		2013		2019	
	INV	SAV	INV	SAV	INV	SAV	INV	SAV	INV	SAV
All EMDEs	26.0	25.4	25.7	23.0	23.7	25.2	32.2	32.9	33.1	33.2
Asian EMDEs	28.8	24.8	32.7	30.0	29.6	31.5	42.7	43.8	41.6	43.1
Lat. America & Caribbean	24.3	21.6	18.2	18.8	21.1	18.5	21.3	18.5	21.9	19.1
Middle East and N. Africa	26.3	36.2	26.4	22.0	20.3	30.8	25.4	35.7	27.3	30.3
Sub-Saharan Africa	21.0	18.4	16.1	15.9	17.2	17.9	23.0	19.5	22.6	19.0

Asian EMDEs also benefit from several other structural features favoring growth. The major countries have (a) a dynamic private sector, with a growing capability to build global linkages, (b) a relatively young and in many countries still growing labor force which is increasingly becoming better skilled, and (c) a relatively well-functioning and well-regulated financial sector, dominated by banks but with growing capital markets in many countries, and an expanding role for other financial intermediaries. The state of infrastructure in many of these countries remains deficient but this is an area which is at the top of the policy agenda in most countries. Most of these countries have directed large investments toward modernizing their energy and transport-related infrastructure. Telecommunications and IT infrastructure have expanded impressively. Internet connectivity has lagged behind, but is now set to expand in most countries.

Since many of these favorable features also exist in other EMDEs, especially in Latin America, it is relevant to ask why they have not helped to push growth to higher levels. A plausible explanation is that the positive impact of these factors is enhanced in an environment where investment rates are high. It has become conventional in policy analysis to emphasize the role of economic reforms in increasing total factor productivity growth (TFPG), and therefore growth, and this relationship is indeed important. However, the potential gain from reforms is much greater in an environment where investment is also high. While reforms can themselves often stimulate investment, the relationship is not as automatic as is sometimes presented.

Policies to Realize Growth Potential

The projections summarized above provide grounds for optimism, but rapid growth in Asian EMDEs should not be taken as a preordained outcome. They only highlight the potential and there are many examples of countries having grown rapidly for a while and then hitting a new constraint. This is sometimes called the Middle Income trap but what it really means is that to sustain high

growth countries have to be constantly vigilant about creating a policy environment that would enable their growth potential to be realized.

The most obvious of these is the maintenance of macroeconomic stability as a precondition for strong growth. It is actually relevant for all countries and therefore for the Asian EMDEs also. In practice this translates into (a) keeping fiscal deficits under reasonable control to avoid crowding out in the short run and the build up of an excessive burden of government debt in the longer term, (b) ensuring that inflation rates remain moderate, which is a critical requirement for high rates of savings and effective intermediation of savings through the financial system, (c) ensuring that the current account deficit is contained at levels consistent with stable long-term external capital flows, (d) and ensuring that the financial system is well regulated and supervised, minimizing risks of systemic instability. Fortunately, Asian EMDEs have shown high sensitivity to these issues, especially in the aftermath of the Asian crisis, when financial stability and financial sector reform was given much prominence. There is good reason to believe that macro policy will remain broadly supportive in most important countries in the region.

Open trade regimes are also regarded as a critical requirement for achieving rapid growth in today's interconnected world and here too, Asian EMDEs have a good record. Of the major economies, India was traditionally more closed than others, but Indian policies have also changed and India is aggressively pursuing a "Look East Policy" which is reflected in several partnership agreements which incorporate a phased process of tariff reduction leading to free trade for most products over the next few years. Agreements have been signed with Japan, Korea and the ASEAN and also with South Asian countries. Negotiations are underway with the EU. Both the prospective scale of trade flows in Asia and the trends towards greater regional integration can be expected to stimulate growth.

An area where Asian EMDEs have not emerged especially successful so far is financial integration.

Asian EMDEs have not progressed in financial integration as much as they have in trade integration and this is an area where calibrated moves to develop an Asian market could yield significant efficiency gains. Since Asian EMDEs are characterized by high savings rates, it can be argued that the development of an Asian financial market could contribute to economic efficiency. Asian governments, corporate borrowers, pension funds and other long term investors could all benefit from a more active Asian capital market, which would also impart greater liquidity to Asian paper

Energy policy is another area which will pose a major challenge. Asian EMDEs are net energy importers and if growth takes place as projected, their energy demands will also grow. If domestic production of energy cannot increase sufficiently rapidly, import dependence will increase, putting a strain on the balance of payments and raising issues of energy security. Asian EMDEs have to respond by (a) reducing energy demand through massive efforts to increase energy efficiency (b) expanding domestic energy production to reduce excessive import dependence and (c) over the longer term shifting away from fossil fuels and towards greener energy sources. This calls for action across several fronts.

Increasing energy efficiency requires policies which, at the micro level, encourage households and firms to adopt energy efficient technologies combined with action at the “system level” which enables a shift in freight traffic away from roads to railways, shifting from private urban transport to public transport, adopting urban land use planning which minimizes the need to travel long distances and introducing building codes that will reduce the energy required to heat and cool buildings. Increased domestic production of green energy also calls for action at several levels. The cost of solar energy, and to a lesser extent also wind energy, is falling and this will help make these sources more competitive over time. However, increased reliance on these energy sources on any substantial scale presents the problem of dealing with the variability in supply. This calls for supplementary

investment in back-up generation capacity based on gas, introduction of smart grid features to help manage variability in supply, using advanced battery technology for storage of electricity and the like. All these involve costs and the extent to which renewable power becomes genuinely competitive on a full accounting basis will depend on how quickly the costs of all these components (and not just solar generation) can be passed on through higher energy prices.

Much of what needs to be done to reduce energy intensity lies in the realm of regulation and public action, such as setting energy efficiency standards, modifying building codes to encourage energy efficient buildings, and reorganizing the transport system to provide viable energy-saving alternatives. Achieving coordinated action in these areas, at a scale that can make a difference, poses many challenges if only because some of these areas are in the domain of the national government while others are in the domain of states or provinces, or even particular municipalities. Regulatory and public action needs to be supported by rational energy pricing which also poses a major challenge. In many countries the prices of oil, gas, coal and electricity are set below economic cost with the result that they provide insufficient incentive to consumers to adopt energy efficient options and also provide insufficient incentive to invest.

Ideally, prices of fossil fuels should not only cover their full economic cost, but also bear an implicit carbon tax to reflect the “unpriced burden” they impose on society in terms of carbon emissions. The surplus generated from this additional charge could be used to subsidize renewable energy and invest in system infrastructure to save energy.⁴ The adjustments needed to achieve this theoretical ideal are difficult to make in one “big bang” effort, but they can be phased in over a period of time and suitable provisions could be made to protect the poorest sections of the population. None of this is politically easy, but it is necessary and navigating these difficult waters will be a major test for political leadership in the Asian EMDEs.

The management of scarce water resources is another major challenge facing Asian EMDEs. Many Asian countries are now entering a period when it will not be easy to meet the demand for water generated by a growing population and a rapidly rising GDP. The problem is likely to be aggravated if climate change leads to greater variability in rainfall and more frequent occurrence of extreme events.

Meeting the water requirements of urban and industrial users could lead to serious conflict with rural areas unless agricultural practices change to reduce water intensity. In India, for example, about 80 percent of the fresh water available is used in agriculture. Fortunately, the intensity of water use can be cut in half for many crops just by using existing technology, but it is difficult to encourage farmers to shift to water-saving technology if water for agriculture continues to be underpriced. Part of the problem in India is that the legal framework of water rights is not well suited to deal with an era of water scarcity. There are no well-defined principles for settling disputes between different states on sharing the water of interstate rivers. At the micro level, a farmer has the right to pump out any amount of ground water from a well located on his own land. This has led to excessive extraction, well beyond the rate of recharge in many areas, lowering the water table and damaging the aquifer, leading to increasingly poor water quality. It also causes shallow wells, typically used by poorer members of the community, to dry up. The problem is compounded by the fact that in some parts of the country the electricity supplied to farmers to run their pumps is either free, or massively underpriced.

Cities also need to rethink their policy on water use. Too many cities in Asia allow untreated effluent and sewage to flow back into fresh water sources, polluting them for downstream users. A fundamental principle that must be politically enforced is that urban and industrial users extracting fresh water from rivers, lakes, or ground water sources, must ensure that the water returned to natural water bodies after use is treated to bring it to an

acceptable level. The real cost of water made available to cities and industrial users must therefore include not only the full cost of extracting and delivering the water, but also the cost of treating the return flow. These costs must be borne by the user. Large industrial users can be forced to bear the cost of treatment themselves. For cities, it calls for a major rationalization of water charges. There are legitimate distributional concerns about raising water charges for the poorer sections of the population, but these concerns can be met by having a structure which charges a low rate for use corresponding to the minimum needs of a household, with the loss on this account being compensated by a higher price for others. In practice, the situation in many countries is that water use charges do not cover even the full cost of extraction and delivery, with no accounting whatsoever for the cost of treatment before return.

Rapid growth of the type projected can only be sustained if the labor force has the skill level needed to achieve the levels of productivity which underlie an acceleration in growth. This problem is now clearly recognized in almost all Asian EMDEs and they are all committed to universal secondary education with an expansion in higher education. However, while access to school education has been made near universal, the challenge of improving the quality of education remains. There is also a need to give special emphasis to skill development to ensure that the supply of skilled labor matches the emerging demands in the labor market. Opinions vary on how this is best achieved, and individual countries will of course experiment, but there is general agreement that much greater involvement by employers is necessary in designing courses.

Finally, all Asian EMDEs will face major challenges in managing the pressures of urbanization as the level of urbanization increases. This is especially so in the large and heavily populated economies that will have to deal with a growing number of megalopolises. Development of efficient and livable cities is a prerequisite for rapid growth since economies of agglomeration are important drivers of the

growth process. Globalization and the increased presence of multinational investors will place additional demands for developing well-serviced and functionally efficient cities. While there are some exceptional successes, the overall situation regarding the management of urbanization in Asian EMDEs remains seriously deficient with large parts of the population living in slums with inadequate access to basic facilities such as clean drinking water and sanitation. In many countries this will require a degree of devolution and political empowerment much greater than exists at present.

The list of policy challenges enumerated above is not comprehensive. Individual countries will have numerous sector-specific challenges that need to be met. However, the policy challenges set out above are of broader relevance and call for concerted effort out of the ordinary. While there are bound to be slippages on some fronts, it is necessary to achieve a critical degree of momentum in each of these areas to create an environment supportive of rapid growth.

Implications for Global Governance

The prospect of the share of Asian EMDEs in global GDP reaching 40 percent in 2030 raises the issue of the representation of these countries in institutions of global governance. Asian EMDEs are well-represented in institutions such as the G-20, which includes China, India and Indonesia. However, the G-20 is a consultative grouping. The representation of Asian EMDEs in international financial institutions such as the IMF, the World Bank and even the Asian Development Bank is not at all consistent with the share of global GDP they are projected to achieve. The need to increase the shareholding of international financial institutions in favor of developing countries to reflect changing economic power has been on the agenda for some time. It will gain prominence in the next decade especially with regard to the representation of Asian EMDEs as the larger countries in this group—China, India and Indonesia—increase in relative economic size.

Recent experience with such efforts is not encouraging. A relatively modest restructuring in IMF quota shares was agreed in 2010 at the time of the last IMF quota review that would have increased the share of developing countries and other under-represented countries by a few percentage points and reduced the number of European seats on the board by two. The G-20 at the summit level endorsed this initiative and set a deadline for implementation by December 2012. However, it has not been possible to do so because the U.S. administration has not been able to get congressional approval to ratify the increase. Without U.S. ratification it is not possible to reach the 85 percent majority needed to implement the proposal.

The failure to ratify the quota increase means the IMF doesn't have quota-based resources to provide a credible safety net to deal with a major international crisis involving many countries. Such a crisis cannot be ruled out given the potential volatility of capital flows and the inadequacy of the IMF to deal with such a situation damages its credibility as the international lender of last resort. The IMF has recognized the limitations placed upon it by emphasizing the need for building broader safety nets than the IMF can provide and in this context has emphasized the importance of building larger foreign exchange reserves and entering into regional reserve-pooling arrangements such as the Chiang Mai initiative. However, pushing developing countries to build larger reserves, which is contractionary from the point of view of global demand, is hardly the right approach at a time when the global economy suffers from demand deficiency. In effect, a political unwillingness to take modest steps towards reform has produced a situation where the effectiveness of an important international institution is jeopardized.

A similar situation confronts the World Bank. There is universal agreement that expanded investment in infrastructure in emerging and developing economies is not only necessary for the emerging markets to create supply-side conditions favoring higher growth, but would also strengthen the much-needed aggregate demand in the global

economy. However, the bank is simply not in a position to respond with significant financial support for such investment. The net lending of the World Bank is down to a little over \$10 billion per year, which is much smaller than the absorptive capacity of the emerging markets. There is a view that there is enough private capital in the world to fund infrastructure projects in developing countries provided these projects are well-conceived and supported by a sound policy environment, and it is these deficiencies rather than a lack of financing that holds up investment in infrastructure. However, this ignores the fact that the ability to expand multilateral lending, possibly in support of public private partnerships in infrastructure, would lead to reduced risk perception on the part of financiers and would also help to create the policy environment needed. A larger role for Asian EMDEs in the World Bank would help push the institution to be more responsive on this issue.

Similar problems affect the Asian Development Bank (ADB) where 27 industrialized country members (including European Union members and the United States) have 67 percent of the voting share. This was broadly consistent with their share in global GDP in 1980 but if their share declines to 35 percent by 2030 as projected earlier in this paper, it is reasonable to ask why there should not be a commensurate change in voting power with a much greater role for the Asian EMDEs. The point is especially relevant for the ADB since Asia has a high rate of savings and a restructured ADB would effectively be relying on the Asian and Middle Eastern savings pool to mobilize resources. The ADB could take the lead in the restructuring of international financial institutions if Japan were willing to take the initiative.

Restructuring existing institutions is always difficult since incumbents are understandably unwilling to allow their dominant position to be eroded. However, inflexibility in responding to changed circumstances only leads to the institutions themselves becoming irrelevant or being bypassed by new institutions. The decision by the BRICS group to establish a new multilateral development bank,

and the decision of the Chinese government to establish a new bank for infrastructure, with the participation of many emerging market countries exemplify this phenomenon. Since the major shareholders were not willing to expand the World Bank's capital and scale of multilateral lending, the BRICS countries resorted to the only alternative available that was to set up a new institution. It is possible to argue that if these countries had the option to contribute their capital subscriptions to an expansion of the capital of the World Bank, with an associated change in voting structure to reflect their contributions, they may well have opted for this alternative rather than setting up an entirely new institution.

To summarize, the prospects for Asian EMDEs are very positive, provided appropriate policy actions are taken to support the high growth of which these countries are capable. Given the record of steady improvement in policies in most Asian EMDEs, it is reasonable to expect that the policy actions needed to achieve this result will be implemented on a reasonable scale. This means Asia's role in the global economy is set to increase substantially, and within Asia the weight of what are today called EMDEs will increase. Accommodating this structural change in the formal institutions of global governance will require the advanced economies of today to make sufficient room for the new actors. While this is not disputed, it is not at all clear that there is a political will to do what is necessary. However, failure to act will only erode the credibility of established international institutions and lead to them being replaced by new institutions. A proliferation of institutions is not at all optimal. What would be best is if existing and established institutions are restructured to reflect changing realities. Unfortunately, there is not enough evidence of the political will that is necessary to achieve this result.

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Endnotes

1. The IMF definition excludes a number of emerging market countries of the Middle East that are geographically a part of the Asian continent but are grouped under Middle East and North Africa. Unfortunately Pakistan and Afghanistan, both unambiguously South Asian countries, are also in that group and not included as Asian EMDEs. Data used in this paper are from the

IMFs WEO Database (2014).

2. This is broadly consistent with the estimates of ADB (2011) which projects the share of Asia in global GDP to be 50 percent by 2050. The slowing down in the rate of increase in Asia's GDP will slow down after 2030 as the scope for convergence is progressively exhausted.
3. It may be thought that the high rates of investment for all Asian EMDEs in Table 4 is bloated by the very high investment rates in China, but even if China is excluded, other Asian EMDEs such as India, or the ASEAN 5, have much higher rates than those prevailing in other regions.
4. Logically, such otherwise optimal outcomes are unlikely to be realized by countries acting on their own simply because the benefits of emissions avoided accrue to all countries, whereas the cost is borne by the country imposing the additional tax. It is only as part of a global compact in which all countries act together that we can expect sufficient action and that too depends on a global agreement on burden sharing. The lack of progress in the UNFCCC negotiations on the issue of burden sharing illustrates the practical difficulties that arise.

Latin America's Decade of Development-less Growth¹

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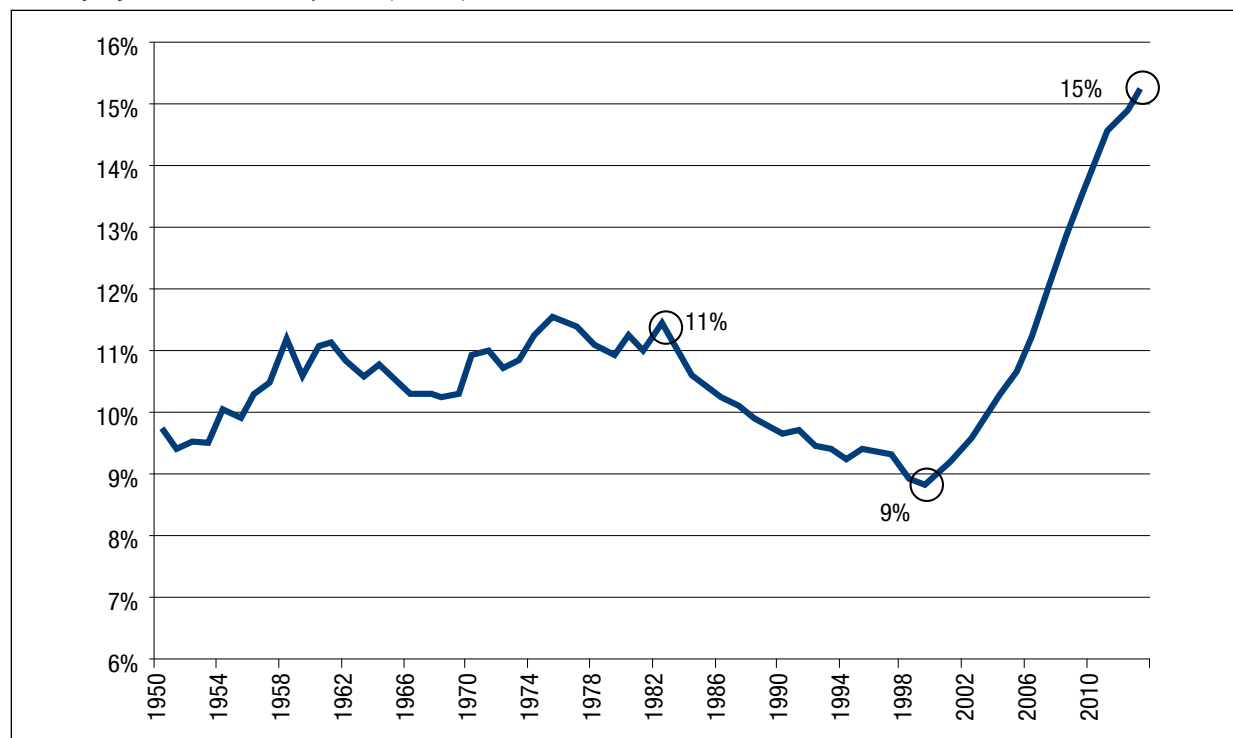
A figure speaks a thousand words. And looking at Figure 1, which shows the population-weighted average income per capita in emerging economies relative to the U.S., there could be no doubt in anybody's mind that since the late 1990s something rather extraordinary happened—a new phenomenon with no antecedents in the post-WWII period—that propelled emerging economies into an exponential process of convergence.^{2,3}

This takeoff took relative income in emerging economies to levels, albeit still low relative to the U.S., twice those of the late 1990s and the highest

since the 1950s. If such a breathtaking path of convergence were to continue, it would mean that the relative income of the typical emerging economy citizen would converge to that of the typical U.S. citizen in three generations.⁴

Needless to say, this extraordinary phenomenon had enormous consequences for the welfare of millions of citizens in emerging economies. It lifted more than 500 million people out from poverty and extreme poverty, and gave rise to the so-called emerging middle classes that increased at a rate of 150 million per year.⁵

FIGURE 1. CONVERGENCE IN EMERGING ECONOMIES 1950-2013
(Emerging markets PPP-adjusted per capita real GDP relative to the U.S.)



Note: Emerging markets refers to the population-weighted average of a subset of emergin market economies as defined by the IMF's World Economic Outlook. This set of countries comprises more than 80 percent of the GDP of all emergin market economies. Source: The Conference Board Total Economy Database.TM

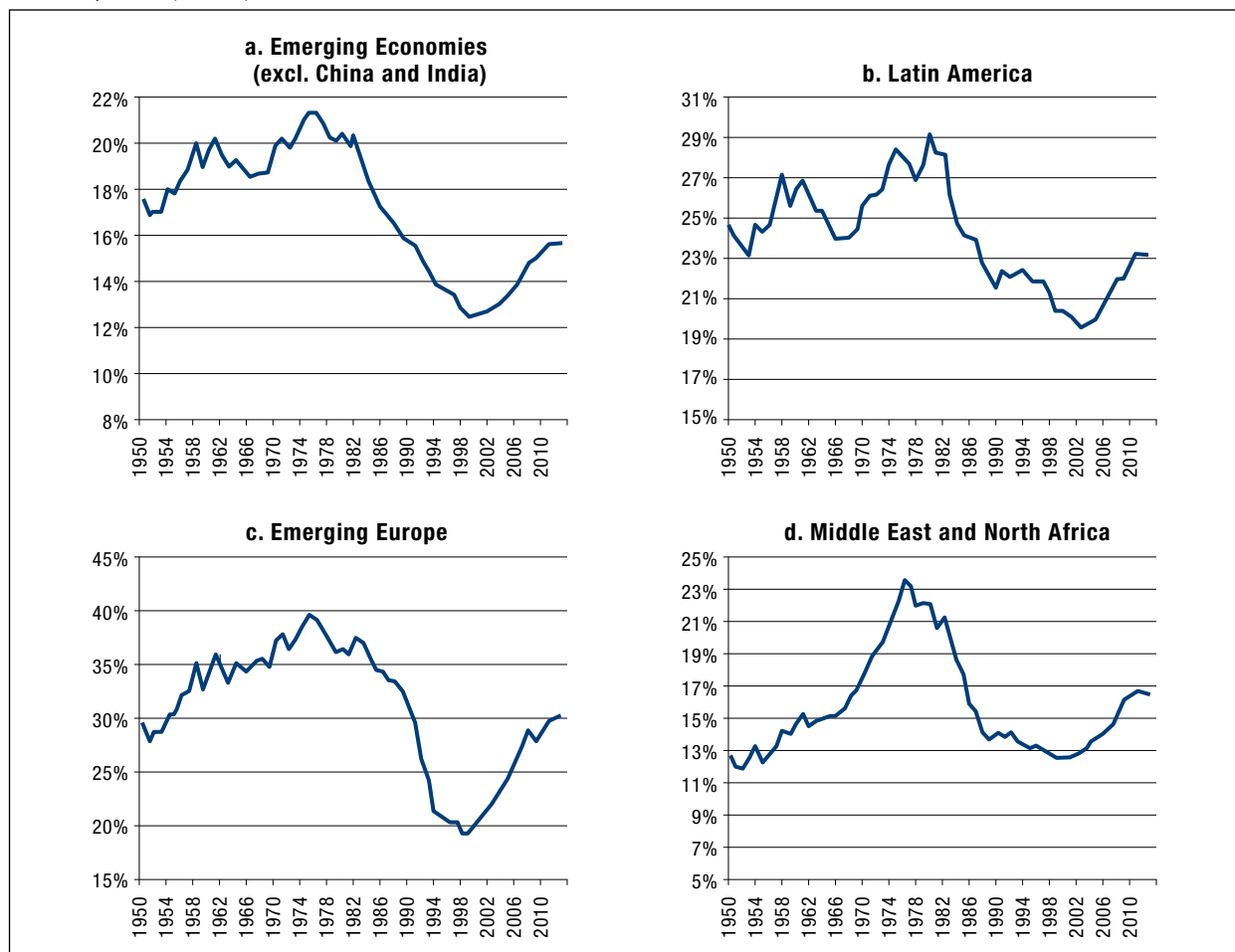
It seems that something rather extraordinary happened in emerging economies. Or did it? Let's look again. When China and India are removed from the emerging markets sample, Figure 1 becomes Figure 2a. In Figure 2a, one can still discern a period of convergence starting in the late 1990s. But convergence was not nearly as strong—relative income is still far below its previous heights—and it occurred after a period of divergence that started in the mid-1970s after the first oil shock, in the early 1980s with the debt crisis, and in the late 1980s with post-Berlin Wall meltdown in Eastern European economies.

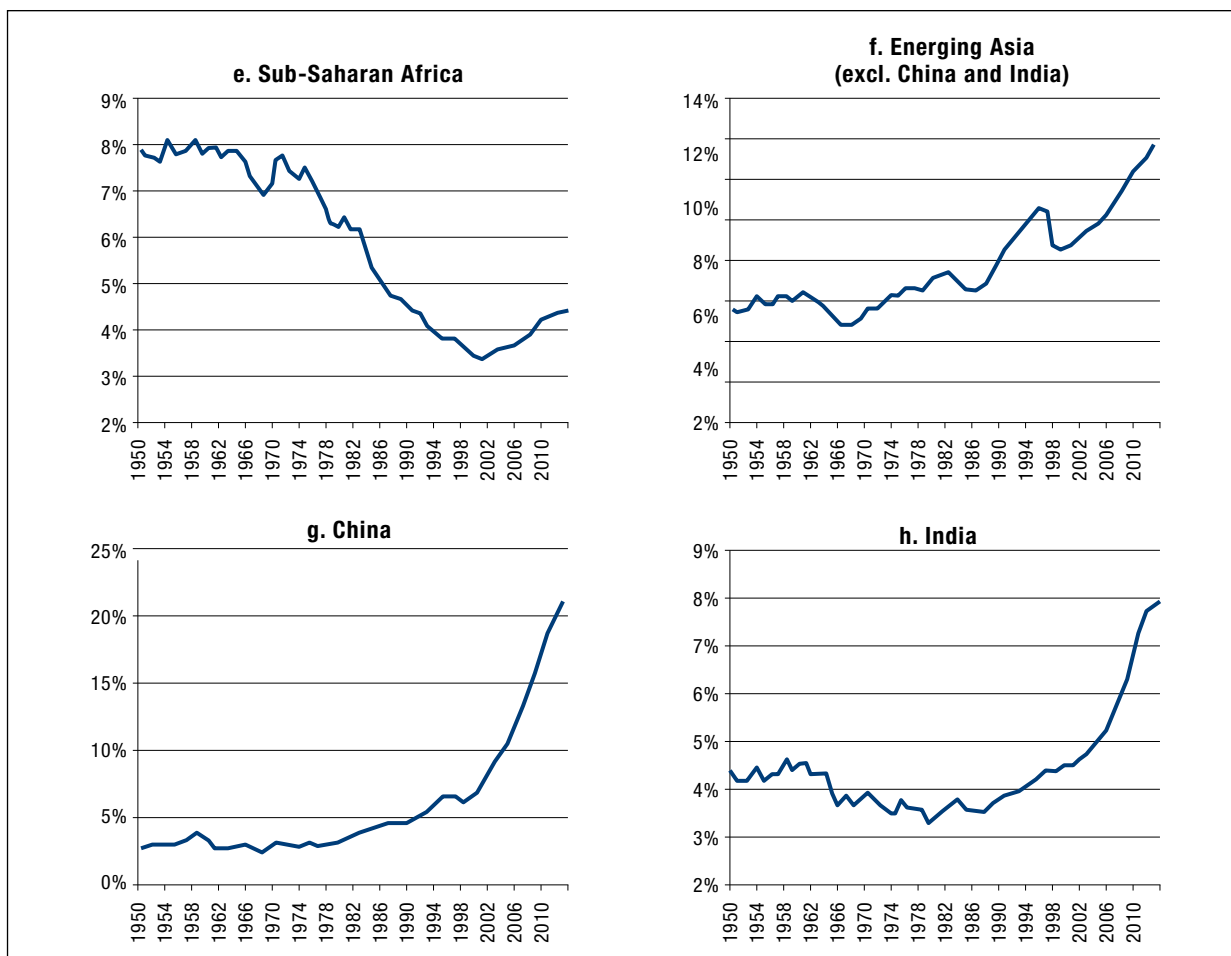
This pattern in population-weighted relative income is actually characteristic of every emerging region with the exception of emerging Asia (see Figure 2 panels b-f). Latin America, emerging Europe,

Middle East and North Africa, and sub-Saharan Africa all display a similar pattern to Figure 2a.⁶ Only Asia differs markedly from this pattern. On the one hand, China and India have seen exponential convergence since the late 1990s (see Figure 2 panels g-h), while the rest of emerging Asia has experienced a sustained but much slower convergence since the mid-1960s (see Figure 2, panel f).

This extraordinary phenomenon of exponential convergence is more a story about China and, to a lesser extent, India. Since China and India represent 37 percent of the world population and 43 percent of the population in emerging economies, needless to say this is an event of immense proportions. If it were to continue, the consequences for humanity would be huge. But be that as it may, it does not tell the whole story of emerging economies as a group.

FIGURE 2. CONVERGENCE PER EMERGING REGION 1950-2013
(PPP-adjusted per capita real GDP relative to the U.S.)





Note: Regional aggregates are defined as in the IMF's World Economic Outlook but only including major economies in each region that represent a minimum of 80 percent of regional GDP. Regions are calculated as population-weighted averages. Countries included in Latin America, Emerging Europe, Emerging Asia (excluding China and India), Middle East and North Africa and sub-Saharan Africa, represent 91, 88, 84, 81 and 81 percent of the corresponding region's GDP, respectively. Source: The Conference Board Total Economy Database.TM

More specifically, it does not tell the story of Latin America.

From the Latin American perspective, the relevant question we need to ask is whether the recent bout of convergence that started in 2004, after a quarter of a century of relative income decline, is a break with the past or just a short-lived phenomenon. To address this question, we will first explore the arithmetic of convergence, i.e., whether mechanical projections are consistent with the convergence hypothesis. We will then explore the economics of convergence, i.e., whether Latin America's income convergence was associated with a comparable convergence in growth determinants. Finally, we offer some concluding thoughts.

The Arithmetic of Convergence

Let us begin by defining precisely what we mean by convergence. To that end, we need to establish a departure and arrival point. For the purposes of this essay, convergence is defined as a process whereby a country's income per capita starts at or below one third of U.S. income per capita at any point in time since 1950, and rises to or above two-thirds of U.S. income per capita.⁷

According to this definition, since 1950 growth-convergence-development miracles represent only 3 percent of emerging countries as currently classified by the IMF's World Economic Outlook. Only five countries managed to achieve

this: Japan, South Korea, Taiwan, Hong Kong and Singapore. They started the convergence process at levels between 10 and 29 percent of U.S. income per capita (Korea and Hong Kong, respectively) and took them between 16 and 44 years to converge (Singapore and South Korea, respectively). Income per capita growth rates ranged from a minimum of 6.1 percent per year to a maximum 8.5 percent per year (Hong Kong and Japan, respectively) during the convergence period (see Table 1).

In other words, convergence towards income per capita levels of rich countries is an extremely rare event. In fact, even if we only consider the sample of 24 countries that had any chance of converging in the 1950-2013 period—the updated sample of success stories of sustained high growth defined by the Commission on Growth and Development chaired by Nobel Prize winner Michael Spence—only 21 percent made it to the finish line.⁸

What about Latin America? If we consider the consensus forecast growth rates for the period 2014-2018 for the seven major countries in the region, henceforth LAC-7, the population-weighted per capita expected growth rate is 1.9 percent per year, similar to that of the U.S., indicating that the process of convergence that the region experienced in the previous decade is expected to stall.⁹ Based on these projections, not a single Latin American

country would converge to two-thirds of U.S. income per capita in two generations.¹⁰

Put differently, the region should grow at an average rate of 4.5 percent per year to converge to two-thirds of U.S. income in 40 years, the number of years it took Korea to converge to high income country levels. To put the odds into context, in the 63 years since 1950, per capita GDP in LAC-7 grew at a rate of 4.5 percent only 8 percent of the time. In other words, the arithmetic does not seem to be on the side of the region.

The Economics of Convergence

What about the economics? To answer this question we must analyze whether Latin America's process of income convergence in the last decade was also associated with a similar convergence in the key drivers of growth.¹¹ If income convergence towards income levels of advanced economies, as defined by the IMF's World Economic Outlook, was not accompanied by a comparable process of convergence in the drivers of growth, it is difficult to see how the process of convergence in income will be sustainable, and was thus more likely triggered by other, more temporary factors. For example, it has been extensively argued that an extremely favorable external environment—with high commodity prices that LAC-7 both produces

TABLE 1. GROWTH MIRACLES AND CONVERGENCE

	Beginning of Convergence Year	End of Convergence Year	Years of Convergence	Relative Income at Beginning of Convergence Year	Relative Income in 2013	Per Capita GDP Growth During Convergence
Hong Kong	1967	1987	20	29%	93%	6.1%
Japan	1950	1970	20	21%	72%	8.5%
Singapore	1965	1981	16	25%	116%	8.1%
South Korea	1966	2010	44	10%	64%	6.3%
Taiwan	1967	2006	39	14%	76%	6.1%

Note: Convergence is defined as a process whereby a country's income per capita starts at or below one third of U.S. income per capita and rises to or above two-thirds of U.S. income per capita. Income per capita is measured as PPP-adjusted per capita real GDP.

Source: Own calculations based on The Conference Board Total Economy Database.TM

and exports, abundant international liquidity and low costs of capital and financial resources—gave growth in the region an unusual boost in the last decade.¹²

To analyze this issue further, we consider a subset of the most widely used growth determinants in cross-country regressions popularized by Barro (1991) that have been shown to have a positive and significant impact on growth: trade integration, physical and technological infrastructure, human capital, innovation, and the quality of public services.^{13,14}

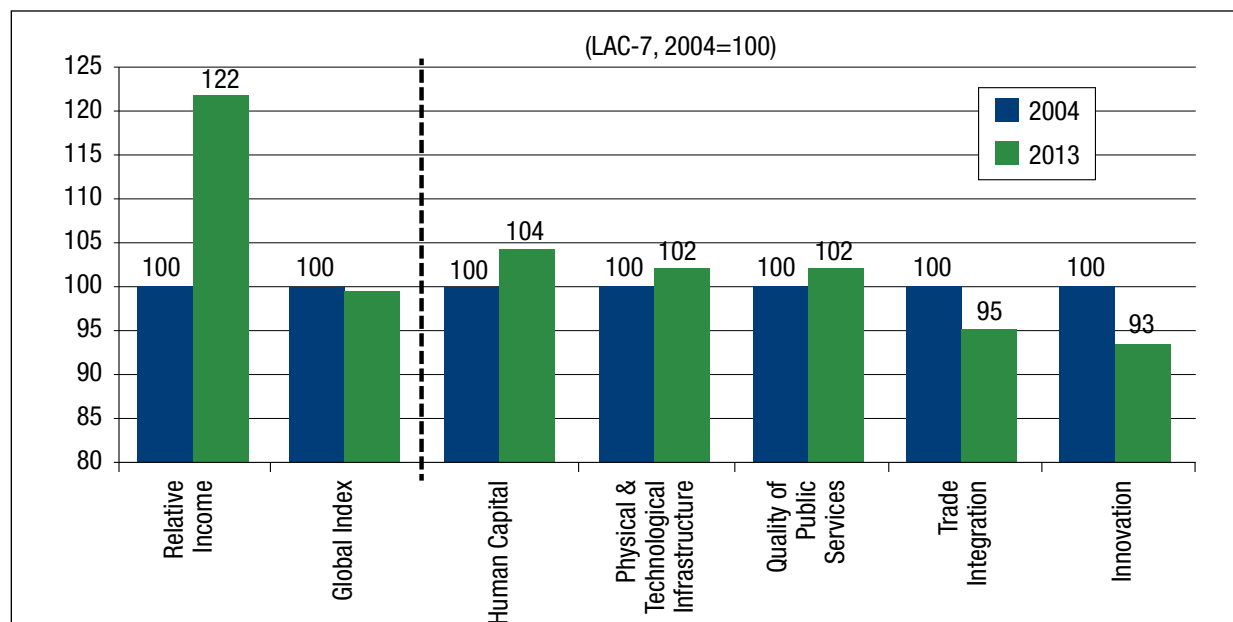
Figure 3 illustrates the results. In contrast to relative income, during the last decade LAC-7 countries failed to converge towards advanced country levels in every growth driver. The overall index of growth drivers—the simple average of the five sub-indexes—remained unchanged in the last decade relative to the equivalent index for advanced economies. By and large the latter holds true for every LAC-7 country. It is worth noting, however, that Colombia experienced the largest improvement in growth drivers relative to advanced

economies, and was the only country that actually improved in every single growth driver in the last decade. Although Chile’s improvement in growth drivers relative to advanced economies was much slower than in Colombia, it is the country in the region where the *level* of growth drivers is closer to those of advanced economies.

This lack of convergence in the key drivers of growth contrasts markedly with what happened in the small group of countries that did converge to advanced country income levels. Figure 4 illustrates the case of Korea. Every key driver of growth—trade integration, human capital, and physical and technological infrastructure—were converging to advanced country levels hand-in-hand with income convergence.¹⁵

Moreover, just as the drivers of growth failed to converge in Latin America in the last decade, nor was income convergence accompanied by any comparable convergence in key indicators of development, such as equality of opportunity by income level and gender, the quality of the environment and personal security (see Figure 5).¹⁶

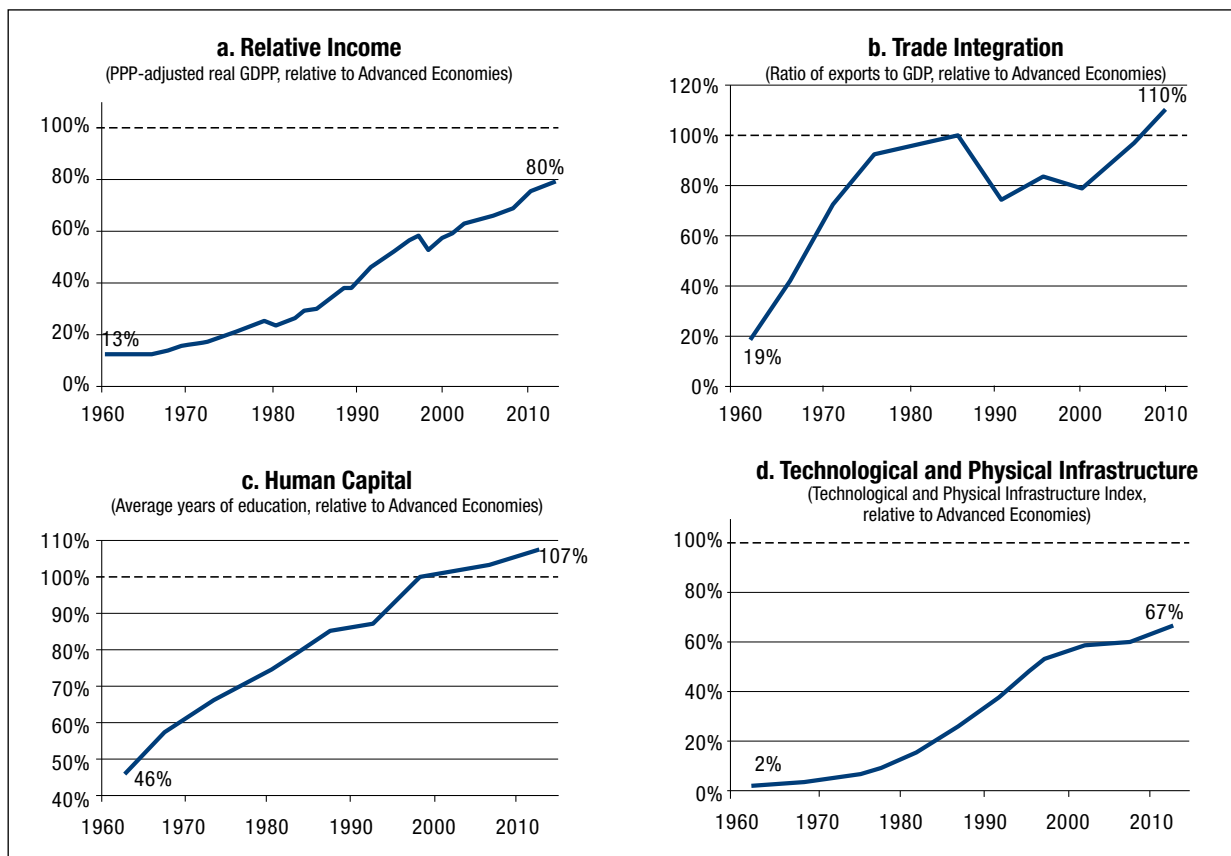
FIGURE 3. CONVERGENCE OF INCOME AND GROWTH DRIVERS IN LATIN AMERICA 1950-2013



Note: LAC-7 is the simple average of Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela, which account for 93 percent of Latin America’s GDP. For details on the calculation of the indexes see Appendix.

Source: The Conference Board Total Economy Database™, World Economic Forum, Barro-Lee Dataset, The World Bank Development Indicators, NetIndex | Speedtest, OECD-WTO and World Intellectual Property Organization.

FIGURE 4. THE KOREAN MIRACLE



Advanced Economies refers to Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Netherlands, New Zealand, Norway, Sweden, Switzerland, United Kingdom and United States. The Technological and Physical Infrastructure Index includes road density and number of telephone lines and mobile phones per 1,000 workers. Source: IMF World Economic Outlook, World Bank, The World Bank Development Indicators, Barro-Lee Dataset and Calderón and Servén (2004) dataset.

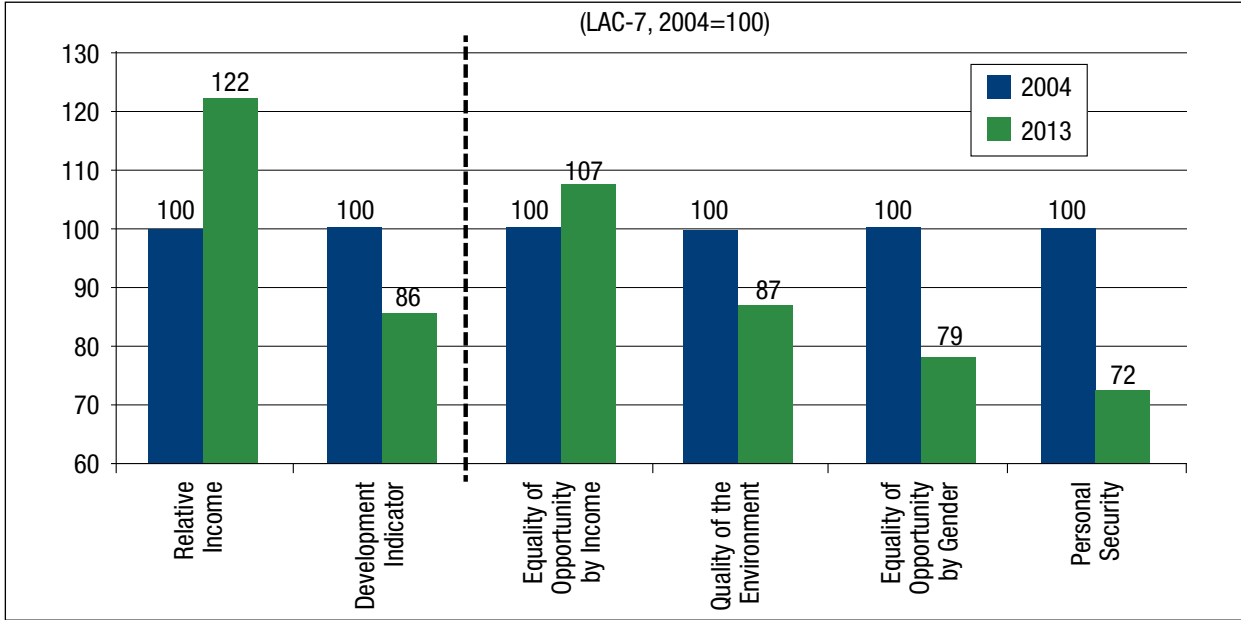
Looking Ahead

Latin America had a decade of uninterrupted high growth rates—with the sole exception of 2009 in the aftermath of the Lehman crisis—that put an end to a quarter of a century of relative decline in income per capita levels vis-à-vis advanced economies. However, high growth and income convergence were largely the result of an unusually favorable external environment, rather than the result of convergence to advanced country levels in the key drivers of growth. Moreover, income convergence was not associated either with a comparable convergence in key indicators of development. Fundamentally, the last was a decade of “development-less growth” in Latin America.

With the extremely favorable external conditions already behind us—China’s growth rates are expected to cool-off significantly, commodity prices will likely soften and world interest rates look set to edge up—the region is expected to grow at mediocre rates of around 2 percent in per capita terms for the foreseeable future. With this level of growth, the dream of convergence and development is unlikely to be realized any time soon.

To avoid such a fate the region must make a renewed effort to deepen integration into the world economy, into global supply chains, and within the region itself; to improve human capital, the rate of innovation and the quality of public services; to upgrade physical and technological infrastructure; and to reduce social exclusion, inequality,

FIGURE 5. CONVERGENCE OF INCOME AND DEVELOPMENT INDICATORS



Note: LAC-7 is the simple average of Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela, which account for 93 percent of Latin America's GDP. For details on the calculation of the indexes see Appendix.
 Source: The Conference Board Total Economy Database™, World Economic Forum, Barro-Lee Dataset, The World Bank Development Indicators, NetIndex | Speedtest, OECD-WTO and World Intellectual Property Organization.

personal insecurity and the pollution of our cities. All of these improvements will be needed to revitalize growth—through domestic rather than external tailwinds—and to put the region on a path of convergence and development.

Although the challenges ahead appear to be huge, there is plenty of room for optimism. First, Latin America has built a sound platform to launch a process of development. Democracy has by-and-large consolidated across the region and an entire generation has now grown up to see elections as the only legitimate way to select national leaders.¹⁷ In terms of democratic development, Latin America ranks first among emerging regions. Moreover, it is for the most part a relatively stable region with no armed conflicts and few insurgency movements threatening the authority of the state.

Second, a sizeable group of major countries in Latin America have by now built a long track record of sound macroeconomic performance.¹⁸ An entire generation has now grown up with low and relatively stable inflation and reasonably healthy

public finances. Moreover, regulation and supervision of the banking system has improved significantly in recent years.

Third, the region could be just steps away from major economic integration. Most Latin American countries in the Pacific Coast have bilateral free trade agreements (FTAs) with their North American neighbors (11 countries with the U.S. and seven countries with Canada). Were these countries to harmonize current bilateral trade agreements among themselves—in the way Pacific Alliance members have been doing—a huge economic space would be born: a Trans-American Partnership that would comprise 620 million consumers, and have a combined GDP of more than \$22 trillion (larger than the EU's, and more than double that of China). Were such a partnership on the Pacific side of the Americas to gain traction, it could eventually be extended to Atlantic partners, in particular Brazil and other of Mercosur countries. The spirit of the 1994 Summit of the Americas, where U.S. President Bill Clinton and his Latin American counterparts set out a grand vision for

the hemisphere by launching the Free Trade Area of the Americas, could then be rekindled.

Latin America's development path will be more akin to that of Spain and Portugal than to the Asian miracles. In Spain and Portugal democratization came first, economic integration (with the European Union) second, and development last. Chile, the only Latin American country on its way to the third stage, is a vibrant example on how the region can accomplish exactly that.

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Endnotes

1. This report was written with the invaluable collaboration of the team of CERES research associates—Santiago García da Rosa, Rafael Guntin and Rafael Xavier—and research assistants—Federico Ganz and Mercedes Cejas. I would also like to thank very specially my colleague at Brookings, Guillermo Vuletin, for a thorough review of the first version of this essay and for suggesting the term "development-less growth". Julia Ruiz, research assistant at Brookings, also provided valuable comments.
2. We consider a subset of emerging market economies defined by the IMF's World Economic Outlook for which complete data are available. This set of countries comprises more than 80 percent of the GDP of all emerging market economies. Relative income is measured by PPP-adjusted per capita real GDP from The Conference Board. Our results would remain unchanged if PPP-adjusted per capita GDP from the Penn World Tables or per capita GDP in real U.S. dollars from the World Bank are used. Population-weighted averages measure the convergence of the income of the average citizen of emerging economies relative to the income of the average citizen in the U.S.
3. The phenomenon depicted in Figure 1 is the other side of the coin of the takeoff in population-weighted average real GDP growth rate which increases dramatically relative to the U.S. and to advanced economies.
4. Considering advanced economies—as defined by the IMF's World Economic Outlook— instead of the U.S., yields similar results.
5. Poverty is measured as the share of persons living below US\$1.25 at Purchasing Power Parity (PPP), see Ravallion, Chen and Sangraula (2009). The middle class is measured as the number of persons that have a level of consumption between US\$10 and US\$100 per person per day as defined in Kharas and Gertz (2010) and Dervis and Kharas (2014) in this volume.
6. Regional aggregates are defined as in the IMF's World Economic Outlook but only including major economies in each region that represent a minimum of 80 percent of regional GDP. Countries included in Latin America,

emerging Europe, emerging Asia (excluding China and India), Middle East and North Africa and sub-Saharan Africa, represent 91, 88, 84, 81 and 81 percent of the corresponding region's GDP, respectively.

7. One third and two thirds of U.S. income per capita represent the mean minus one standard deviation and the mean plus one standard deviation, respectively, of the distribution of income per capita of all countries in our sample relative to that of the U.S. in 2013. The World Bank in its income classifications uses a different and much less stringent definition of high income countries. The World Bank's threshold to define a high income country is \$12,745 per capita gross national income which represents 24 percent of U.S. per capita gross national income.
8. See Commission on Growth and Development (2008). Success stories of sustained high growth are defined as those countries that had an average growth rate per year of at least 7 percent for 25 consecutive years since 1950. The countries that meet the Commission's criterion through 2013 are Belize, Bhutan, Botswana, Brazil, Cambodia, China, Equatorial Guinea, Hong Kong, India, Indonesia, Japan, Malaysia, Maldives, Malta, Morocco, Mozambique, Oman, Singapore, South Korea, Sudan, Taiwan, Thailand, Uganda and Vietnam.
9. LAC-7 refers to the seven largest Latin American countries namely, Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela, which together account for 93 percent of the region's GDP
10. The closest would be Chile converging in 55 years. Considering advanced economies—as defined by the IMF's World Economic Outlook—instead of the U.S., yields similar results.
11. Throughout this section we use a simple average of LAC-7 economies since we are interested in analyzing the convergence of the average country. Using population-weighted averages yields similar results.
12. See Talvi (2014) for a recent analysis on the role of external factors as the key drivers of LAC-7 growth performance.
13. For a complete survey on cross-country growth regressions see Durlauf and Quah (1999) and Durlauf, Johnson and Temple (2005).
14. See Appendix for the definition of the variables used as drivers of growth.
15. Due to lack of time series data, we only show a subset of growth drivers for Korea. Korea's convergence started in 1970 and reached two thirds of U.S. income per capita levels in 2010.
16. See Appendix for the definition of the variables used as development indicators.
17. See The Economist (2014) and Talvi and Trinkunas (2013).
18. For a recent analysis see Talvi (2014).

Appendix. Growth Drivers and Development Indicators

This appendix presents the definitions and data sources of the growth drivers and development indicators presented in the text. Growth drivers are measured by 5 indicators: trade integration, human capital, innovation, physical and technological infrastructure, and the quality of public services. Each of these indicators contains one or more variables. Development indicators are measured by 4 indicators: equality of opportunity by income, equality of opportunity by gender, quality of the environment and personal security. Likewise, each development indicator contains one or more variables.

Each growth driver/development indicator is constructed as follows. First, for each variable, LAC-7 relative value with respect to Advanced Economies is calculated as:

$$Y_t^j = \frac{X_t^j LAC}{X_t^j Advanced}$$

where X_t^j is the simple average of variable j for all countries in LAC-7 ($X_t^j LAC$) and Advanced Economies ($X_t^j Advanced$) in the year t .

Then, the simple average of each variable contained in indicator i is calculated in order to construct the indicator:

$$I_t^i = \frac{\sum_{j=1}^n Y_t^{ji}}{n}$$

where I_t^i is indicator i in period t and Y_t^{ji} is the relative value of variable j in indicator i for year t . Each indicator is normalized to 100 in 2004. When data is not available for 2004 the first year available is used. When data is not available for 2013 the latest data available is used.

The overall indicator for growth drivers is given by:

$$I_t = \frac{\sum_{i=1}^m I_t^i}{m}$$

where I_t is the overall index of growth drivers/development indicators at time t .

Data: Definitions and Sources

Growth Driver Indicators

Trade Integration Indicator

Trade Openness: measured as the ratio of total exports of goods and services to GDP. Data source: World Bank World Development Indicators.

Integration to Global Supply Chains: measured as the share of foreign inputs (backward participation) and domestically produced inputs used in third countries' exports (forward participation) in percentage of gross exports. For further details on the indicator's methodology see Koopman et al. (2010). Data is available for years 2005 and 2009. Due to lack of data, LAC-7 includes Argentina, Brazil, Chile and Mexico. Data Source: OECD-WTO.

Human Capital Indicator

Years of Education: measured as the average years of total education for individuals between 20 and 24 years. Data source: Barro-Lee Dataset.

Quality of Education: defined as educational achievement in standardized tests. Data source: Program for International Student Assessment—OECD, World Economic Forum.

Innovation Indicator

Research and Development: defined as company spending on R&D. Data source: World Economic Forum.

Tertiary Education: defined as the population between 25 and 34 years that have completed tertiary education. Source: Barro-Lee Dataset.

Patents: defined as patent applications per million people. Data source: World Intellectual Property Rights.

Royalties: defined as receipts from Royalties and License Fees in current dollars. Due

to lack of data the LAC-7 aggregate excludes Venezuela. Data source: WTO.

Physical and Technological Infrastructure Indicator

Physical and Technological Infrastructure variables: quality of railroads, quality of roads, quality of air transport, quality of ports and quality of electricity supply. Data source: World Economic Forum.

Broadband Speed: average of download and upload speed expressed in kbps. Data source: NetIndex | Speedtest.

Quality of Public Services Indicator

Quality of Public Services variables: Government Effectiveness, Regulatory Quality, and Control of Corruption. Data source: World Bank Worldwide Governance Indicators.

Development Indicators

Equality of Opportunity by Income: measured as the difference between the proportion of insufficient scores in the lowest socioeconomic quintile and the proportion of insufficient scores in the highest socioeconomic quintile in the Program for International Student Assessment (PISA) tests. Data source: PISA-OECD.

Equality of Opportunity by Gender: measured as the Gender Inequality Index. Given that the Index is available since 2010, it was reconstructed for 2004 following the United Nations methodology. Source: United Nations Development Program and World Bank World Development Indicators.

Quality of the Environment Indicator: measured as the annual average concentration (micrograms per cubic meter) of particulate matter with less than ten microns in diameter (PM10) for urban areas. Data source: World Bank World Development Indicators.

Personal Security Indicator: measured as the number of intentional homicides (excluding deaths in armed conflicts) per 100,000 people. Data sources: World Health Organization and United Nations Office on Drugs and Crime.

Growth and Convergence in the Arab Region

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Frustration, and even rage, over poor socio-economic and political conditions had been building up in the Arab World over several decades before the revolutions of 2010-11. By the spring of 2011, Arab youth and the rest of the world were euphoric; the old autocratic and seemingly sclerotic regimes in Egypt, Tunisia and Yemen had fallen, and were hopefully being replaced by more open, democratic and progressive systems. Two monarchies, Jordan and Morocco, were also undergoing gradual democratic transitions, and their kings appeared open to shifting part of their powers to elected parliaments. Everything seemed to be going very well at the time of the G-7 meetings in Deauville, where the world's richest nations promised substantial economic aid to support the political transitions in those five countries.

However, the euphoria was short-lived, and most people today try to avoid using the term “Arab Spring” when talking about the revolutions that led to the overthrow of presidents Ben-Ali, Mubarak and Saleh, and to constitutional reforms in Jordan and Morocco. More than three years after the revolutions, the Arab transition to democracy appears to be sinking in the desert's quicksand. And, the economies of the five so-called Arab Countries in Transition (ACTs) are not doing much better. Demands for more bread and greater social justice are far from being met. The situation beyond the five ACTs is even worse, as weak nation states (e.g., Syria) descend into chaos and civil strife. In hindsight, the euphoria of the spring of 2011 was clearly unjustified.

But does this mean that today's pessimism is justified? Probably not. A successful transition to democracy requires building institutions (free

press, political parties, independent judiciary, and the like) as well as a change in culture (acceptance of the other, respect for diversity, etc.), and that is a long-term process. The experiences of countries like Turkey and Brazil seem to indicate that it is a process that could take decades rather than months or even years. Hence, a more optimistic narrative could stress the fact that in 2010-11 Arabs clearly expressed their yearning for democracy, and that a process of institution building and culture change that will unavoidably lead to more open and democratic societies has already started. Such a narrative would also stress the need for patience and a long-term vision.¹

Democratic transitions are made easier by economic growth and expanding opportunities. With this in mind, I present here an analysis of the growth experience of the ACTs since 1980. I show that those five countries have been growing fast enough to start converging towards OECD income levels, but at an extremely slow pace, especially when compared to emerging economies like India and China. I then try to explain this slow convergence by looking at: (1) the quality of economic institutions; (2) levels of physical investment; (3) investment in people and skills; and (4) the rate of economic transformation toward higher productivity sectors.

Convergence or Divergence?

Are the ACT income levels converging? It depends. If one compares to U.S. income levels, then they have been converging since the late 1990s but at a snail's pace. On the other hand, if one compares to India and especially to China, then it is divergence, big time!

Table 1 shows the ratio of per capita GDP (in PPP dollars) in the ACTs to U.S. per capita GDP, and it also includes three of the BRICS (Brazil, China, and India) for comparison.² The table shows that the 1980s and part of the 1990s was a period of divergence for most countries, including the ACTs.³ The ratio for Brazil fell from 37 percent, in 1980, to 28 percent in 1990 and 24 percent in 2000. India remained stagnant in the 1980s at 5 percent of U.S. GDP. During the same period per capita GDP in Jordan, Morocco and Tunisia fell relative to the U.S., while Egypt's per capita GDP remained more or less unchanged moving from 17 to 18 percent of U.S. levels. China is a clear exception to this trend as the ratio of Chinese to U.S. per capita GDP doubled from 2 to 4 percent in the 1980s and doubled again in the 1990s to 8 percent.

TABLE 1: RATIO OF PER CAPITA GDP TO US PER CAPITA GDP, IN PPP DOLLARS (PERCENT)

	1980	1990	2000	2010	2013
Brazil	37%	28%	24%	28%	28%
China	2%	4%	8%	19%	22%
India	5%	5%	6%	9%	10%
Egypt	17%	18%	18%	22%	21%
Jordan	29%	18%	17%	23%	22%
Morocco	12%	11%	10%	13%	14%
Tunisia	17%	15%	16%	21%	21%
Yemen	N/A	9%	8%	9%	7%

Source: World Economic Outlook and Author's calculations.

The situation began to change in the 1990s and especially the 2000s as most emerging and developing economies, including the ACTs, started converging towards OECD income levels. Egypt's and Jordan's GDP per capita, which were 18 percent of U.S. GDP in 1990 rose to 22 and 23 percent, respectively. During the same period Morocco moved from 11 percent to 13 percent of U.S. GDP and Tunisia moved from 15 to 21 percent. However, those rates of convergence are very slow. At those rates Jordan would catch up with the U.S. somewhere around 2060, Tunisia would catch up around 2070, Morocco around 2080, and Egypt

around 2090. Yemen shows virtually no convergence. Moreover, political upheaval after 2010 has led to a slowdown in the ACTs, implying slower convergence, and even an outright return to divergence in Egypt, Jordan and Yemen.

Emerging economies, especially India and China, have been growing at much faster rates, and therefore converging much faster to OECD levels. This also means that the ACTs are rapidly losing ground compared with those economies. Table 2 presents the evolution of the ratio of ACT GDP per capita in PPP terms to that of India. In 1980 Jordan's GDP per capita was 647 percent that of India and Tunisia's was 374 percent; by 2013 those ratios had fallen to 214 percent and 202 percent, respectively. At this rate India's per capita GDP will surpass that of nearly all ACTs before the end of the century. The comparison with China (Table 3) is even more dramatic. In 1980 Egypt's GDP per capita was more than seven times that of China, whereas now it is 10 percent lower in PPP terms. Today, Yemen's GDP per capita is about one-third that of China. It is hard to believe that in 1990 Yemen had a GDP per capita that was more than double that of China.

TABLE 2: RATIO OF PER CAPITA GDP TO INDIA'S PER CAPITA GDP IN PPP (PERCENT)

	1980	1990	2000	2010	2013
Egypt	374%	350%	308%	228%	199%
Jordan	647%	362%	289%	238%	214%
Morocco	271%	228%	171%	139%	135%
Tunisia	374%	297%	288%	226%	202%
Yemen	N/A	179%	147%	93%	70%

Source: World Economic Outlook and Author's calculations.

TABLE 3: RATIO OF PER CAPITA GDP TO CHINA'S PER CAPITA GDP IN PPP (PERCENT)

	1980	1990	2000	2010	2013
Egypt	707%	441%	225%	116%	92%
Jordan	1223%	455%	212%	121%	98%
Morocco	513%	287%	126%	71%	62%
Tunisia	706%	374%	211%	115%	93%
Yemen	N/A	225%	108%	47%	32%

Source: World Economic Outlook and Author's calculations.

Why did the revolts occur in 2010 even though ACT economies were growing and converging (although slowly) to OECD levels? There are two possible explanations. The first explanation is that the Arab revolutions of 2010-11 may have been about political rights and not about economics. According to most opinion polls, a huge majority of Arabs (between 70 and 90 percent depending on the poll and the country) believe that democracy is the best form of government. Hence, it may be that as their economic situation improved, Arabs (especially youth) started demanding more civil and political rights and they revolted to obtain them. The second explanation is based on the argument that economic growth in the Arab world has not been sufficiently inclusive. The middle class, and particularly educated youth, have benefitted very little from growth. They watched politically connected businessmen make huge fortunes through government-provided privileges,⁴ while they remained unemployed or working for low wages in the informal sector. Moreover, the global food crisis of 2007-8 led to a huge increase in food prices and a big decline in welfare. According to PEW Research Center data, the proportion of Egyptians satisfied with the country's economic situation fell from 53 percent in 2007 to 20 percent in 2010 (right before the revolution) while the proportion of satisfied Jordanians fell from 44 to 30 percent during the same period. Thus, according to this view, growing inequality and increasing economic pressures on the middle class were the main causes of the revolutions.

The rates of convergence and the calculations of catch-up time presented in this section are very sensitive to the assumed GDP growth rates. The analysis presented here implies that if the ACTs continue growing at the same rates as the average for the period 1990-2010, while emerging economies like Brazil and China and OECD countries like the U.S. also continue growing as they have been over the last two decades, then the ACTs will lag behind the rest of the world for a very long time. But those growth rates are not cast in stone. ACTs can start growing faster by increasing their investments in efficient economic institutions as

well as physical and human capital, and by accelerating the transformation of their economies in favor of higher productivity activities.⁵

Economic Institutions

Acemoglu and Robinson (2012) argue that the main (or even only) explanation for different economic outcomes among countries is different institutions. Inclusive institutions lead to the creation of inclusive markets that support growth and equality of opportunity. On the other hand, extractive institutions stifle entrepreneurship and creativity, and thus lead to low growth and high inequality. In their discussion of Egypt, the authors state that "Egypt is poor precisely because it has been ruled by a narrow elite that has organized society for their own benefit at the expense of the vast mass of the people. Political power has been narrowly concentrated, and was used to create great wealth for those who possess it."

This conclusion is supported by the analysis in a recent World Bank report that used data on "politically connected" firms in Mubarak's Egypt and Ben Ali's Tunisia.⁶ It argues that privileges arising from closed deals between business and politics favor a few connected firms, but prevent the emergence of job-creating competition. Industrial policies were tailor-made to support certain firms. They limited market entry and distorted competition. According to the report, this explains why within-sector productivity growth in Arab countries lags behind the rest of the developing world. The report concludes that the region's relatively slow growth is due, at least in part, to the links between politics and business, and the ensuing distortive policies.

Table 4 shows the percentile rank of the ACTs in 2010⁷ on the six dimensions of governance that are measured by the Worldwide Governance Indicators project. The two dimensions where all five countries fall in the bottom half of the countries covered by this project are: voice and accountability, and political stability. Of course, Yemen appears to be an outlier, scoring very low on all indicators, and Egypt scores generally lower than Jordan, Mo-

TABLE 4: GOVERNANCE SCORES FOR 2010 (PERCENTILE RANK)

	Voice & Accountability	Political Stability	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption
Egypt	13.7	19.3	43.1	46.9	51.2	34.3
Jordan	27.5	34.4	59.3	57.4	61.1	60.9
Morocco	28.9	33.0	50.7	51.2	50.2	53.3
Tunisia	10.0	44.3	63.2	53.1	59.7	54.8
Yemen	10.9	1.9	14.3	30.1	13.3	10.0

Source: Worldwide Governance Indicators.

rocco and Tunisia, particularly on regulatory quality and control of corruption.

The work of Acemoglu and Robinson and of the World Bank,⁸ as well as the data of the Worldwide Governance Indicators, appear to provide a prima facie case for the ACTs to focus on building inclusive economic institutions that provide greater voice for citizens. This could include building an institutional framework for dialogue and citizen participation in economic planning and policy-making, as suggested by Handoussa (2010) and Sakamoto (2013). It could also include reviewing the legal framework governing civil society organizations to make it more supportive of their operations, as suggested by Kharas and Abdou (2012).

Physical Capital

In addition to institutions, economic growth usually requires the accumulation of physical capital, whether as infrastructure or as new buildings, factories, machinery and equipment. Table 5 shows the evolution of the ratio of investment to GDP in the ACTs and three comparator countries. Two points are worth noting. First, ACT investment rates are comparable to those of Brazil but much lower than those of India, which invests about a third of GDP, and especially China, which invests nearly half of GDP. Second, on average, ACT investment rates seem to be stagnating or declining (with the notable exception of Morocco) while investment rates in China and India (but not Brazil) have been increasing.

TABLE 5: GROSS FIXED CAPITAL FORMATION (PERCENT OF GDP)

	1980	1990	2000	2010	2013
Brazil	23.00	20.00	18.00	20.00	18.00
China	35.00	36.00	35.00	48.00	49.00
India	18.00	25.00	24.00	37.00	30.00
Egypt	28.00	29.00	20.00	19.00	14.00
Jordan	37.00	31.00	22.00	24.00	28.00
Morocco	24.00	25.00	26.00	35.00	
Tunisia	29.00	27.00	26.00	24.00	
Yemen		12.00	19.00		

Source: World Development Indicators.

In order to catch up with the emerging economies, the ACTs will probably need to raise their investment rates. This would require an increase in both public and private investment. Government budgets are severely constrained in the ACTs. In 2013 the budget deficits in Egypt and in Jordan were about 14 percent of GDP. It was 8 percent of GDP in Yemen and 6 percent of GDP in both Morocco and Tunisia.⁹ Hence, increases in public investment could not be achieved through increases in expenditure levels; it could only come from expenditure reallocation. Price subsidies, especially for energy products, are an important expenditure item in most countries, reaching as much as 7 percent of GDP in Egypt, for example. Nearly all ACTs are gradually eliminating those subsidies, which should create more fiscal space for much needed investment expenditures.

Public investment that improves the quality of infrastructure would encourage greater private sector

investment, through a “crowding-in effect.” But the ACTs also need to improve the business climate and encourage the development of competitive private activities. This is where institutional reforms could have a direct impact on investment. Experience in some ACTs indicates that simply reforming the rules on the books may not have an impact, because the reforms may be poorly implemented or not implemented at all.¹⁰ It is important that the institutions responsible for implementing the regulatory framework affecting the private sector be reformed to become more inclusive (so that the private sector has a say on how regulations are implemented) and accountable (so that the institution is judged on its results and the quality of service it provides).

Investing in People

Economic growth and development is ultimately about people. People drive the growth process and they benefit from its results. Hence education and the accumulation of human capital are central to economic growth. Arabs generally seem to value education and their governments have invested heavily in the sector with good quantitative results. Today there are 3.1 million less children out of school in the Arab world than in 2002, and more children are finishing primary school than ever before.

The problem seems not to be the quantity of education but rather its quality. International test scores show that too many Arab children are in school, but fail to acquire basic skills. At the primary level, 91 percent of Yemeni students, 74 percent of Moroccan students and 65 percent of Tunisian students fail basic numeracy tests. At the lower secondary level, 64 percent of Moroccan students and 39 percent of Tunisian students fail basic numeracy tests.¹¹

The contents and quality of the curricula are also problematic. Arab education systems rely too heavily on rote learning and do not teach children “21st century skills” like critical thinking, innovation, problem-solving and teamwork. Many Arab

students end up with a diploma but without the skills required by a modern labor market, which may help explain the chronically high level of youth unemployment in the region.

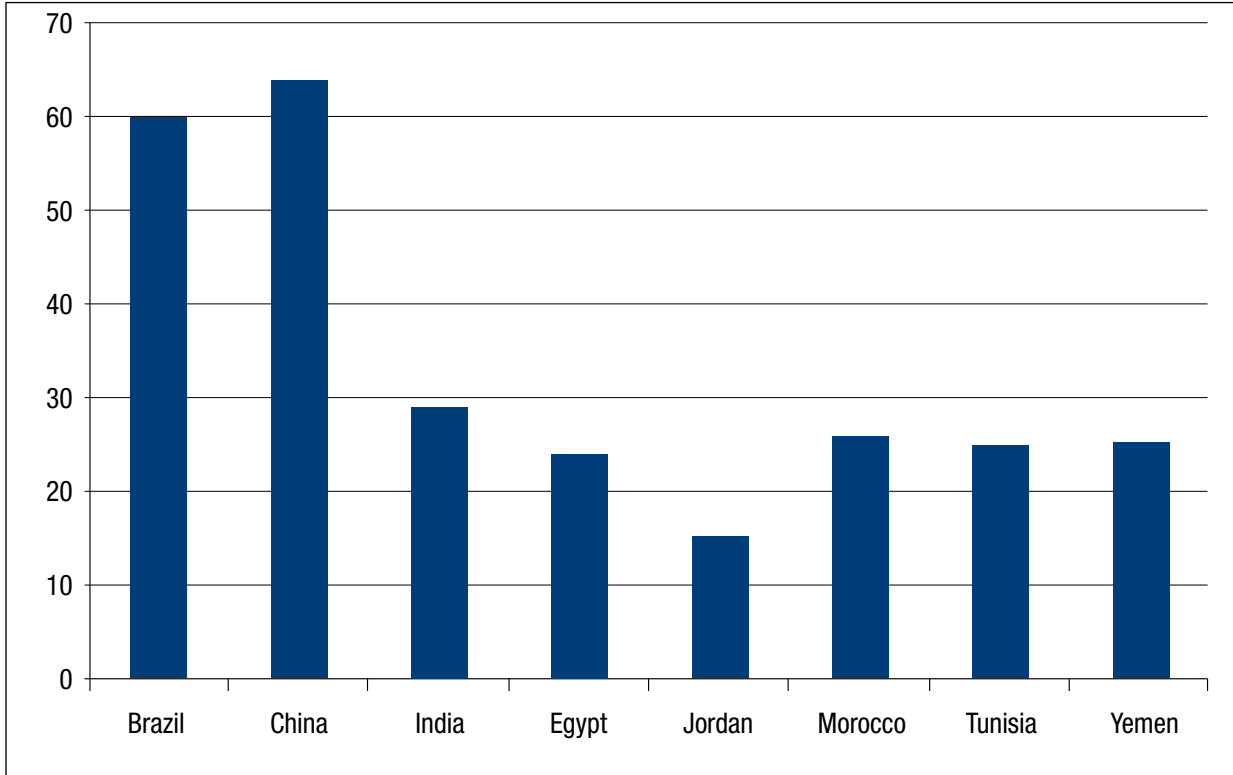
Gender-based discrimination is a very serious problem in the Arab world. Gender differences in education are minor, and even in some ACTs (e.g., Tunisia) more young women complete university education than young men. However, most Arab women seem to stay at home after completing their education. Figure 1 shows that female labor force participation rates in the ACTs range from 15 percent in Jordan to 26 percent in Morocco. This should be compared to 64 percent in China and 60 percent in Brazil. Even India, where there is traditionally a low female participation rate of around 29 percent, does better than any Arab country. Arab female labor force participation rates are the lowest in the world. This is obviously a social as well as a human rights issue. But it is also an economic issue. Arab countries are expending scarce resources educating women, it is therefore important that those women actually work and contribute to their countries’ economic and social development.

It seems clear that in order to achieve rapid growth and convergence the ACTs need to resolve the problems with their education systems and deal with gender biases in the labor market. Education reform to improve the quality of curricula and of teachers is probably necessary, as are labor market reforms that encourage the hiring of women and make the workplace more female friendly. Governments cannot resolve those problems on their own. They need the active support and participation of the private sector as well as worker, teacher and student associations.

Economic Transformation

Rodrik (2013) argues that labor productivity in the formal manufacturing sector in emerging and developing economies converges to that of advanced economies, regardless of levels of education and institutional development. This means that the

FIGURE 1: FEMALE LABOR FORCE PARTICIPATION RATES IN 2012 (PERCENT)



Source: World Development Indicators.

convergence process can be accelerated by a shift of resources from low productivity and low growth sectors into manufacturing. The analysis in World Bank (2014) shows that labor productivity in formal manufacturing in MENA countries is converging to that of advanced countries at the same rate as that of other developing nations.

However, this convergence of the formal manufacturing sector did not lead to overall convergence of the economy because of the sector's very small and declining share of the region's labor force. The proportion of overall labor engaged in formal manufacturing is only 7 percent in Egypt and Jordan and 5 percent in Morocco. Moreover, this share has been declining since the mid-1990s.

This situation seems to call for the adoption of the type of heterodox policies advocated by Rodrik (2013). That is, ACTs may consider direct government interventions to provide special incentives

for the private sector to invest in formal manufacturing, and for existing formal manufacturers to expand their operations.

Looking at the five ACTs, I argue that faster growth and more rapid convergence to the OECD and the emerging economies can be achieved through more investment in inclusive institutions, as well as in physical and human capital. The process could be further accelerated through specific interventions that encourage shifting resources towards higher productivity formal manufacturing.

It sometimes feels like the rest of the world (including South Asia and sub-Saharan Africa) is rushing toward a brave new era of economic abundance, technological innovation, political freedom and cultural diversity, while the Arab world remains stuck somewhere in the mid-20th century. In this short note I have tried to make the point that this does not need to be the case.

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Endnotes

1. Amin et al. (2012) for a more detailed presentation of this argument.
2. The analysis was also done using per capita GDP in nominal terms and GNI in nominal as well as in PPP terms. The conclusions do not change.
3. For more see Pritchett (1997)
4. World Bank (2014) for evidence on the privileges accorded to politically-connected firms.
5. Rodrick (2013) for a more detailed discussion of the determinants of economic growth.
6. World Bank (2014)
7. I selected 2010 to get a picture of the situation before the revolutions.
8. In addition to World Bank (2014) which focused on the issue of privileges, World Bank (2003) carries out an analysis of governance in MENA and concludes on the need for enhancing inclusiveness and accountability.
9. Fiscal data is from IMF (2014).
10. For an example from Egypt see Ghanem (2013).
11. The data and arguments in this section are from Steer, Ghanem and Jalbout (2014). Also note that international test scores are not available for Egypt and Jordan.

A Case of “Reverse Convergence”

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Argentina’s growth performance in the last century represents one of the largest mysteries within the world economy as it has moved from being a prosperous, developed country at the beginning of the 20th century to joining the group of emerging countries 100 years later. Perhaps it is a unique example of reverse convergence.

Argentina’s big success story took place between the 1880s and the 1920s. When the country was integrated into the world economy, it was one of the major suppliers of food and raw materials to the world. It was also a magnet for foreign direct investment and for poor workers who were leaving Europe and searching for opportunities in the new world. Those were the golden years.

The Great Depression of the 1930s marked a turning point. The drop in commodity prices, the trade barriers that developed countries imposed on Argentina’s exports, and the sudden stop of capital flows from the large financial centers to countries like Argentina created the conditions of a change in the development paradigm.

The new world economic order at that time was characterized by more protectionism in Europe and the U.S., and the policy response in Argentina was a shift towards industrialization and import substitution. The new policy approach created tensions between the traditional export sectors (mainly the agricultural/beef sectors) that were efficient and for many years continued to be the main suppliers of foreign exchange, and the infant industrial sector that needed the foreign exchange to import intermediate and capital goods.

The second change in the economic paradigm was a relaxation of fiscal and monetary discipline, a trend that became more pronounced since the mid-forties during the Peronist administration. This was the beginning of the era of inflation, and of the so called “stop and go” macroeconomic cycles in which there was typically an expansionary phase stimulated by fiscal and monetary policies that always ended in a balance of payments crisis due to the lack of reserves and an overvalued exchange rate.

These cycles became more intense over the years. They reached a new dimension as of the mid-1970s when inflation reached three digits and the nature of the macroeconomic problems moved from business cycles linked to the international reserves to macro-financial crises. Devaluations in these crises typically had perverse effects on the soundness of the banking system and led to debt restructurings or outright defaults.

In fact, since the mid-1970s Argentina suffered a large crisis approximately every seven years,¹ including two macro-financial crises in which there were widespread bank failures and sovereign debt defaults and another, in 1989, in which the country suffered traumatic hyperinflation. These were disruptive episodes in which there were sharp redistributions of income and wealth. Between 1975 and 1991, GDP per capita dropped 22 percent, representing the worst period in Argentina’s economic performance.

This hyperinflation marked a new turning point as it triggered a new change in economic policies and put the economy back on a growth path. Between 1992 and 2013, the economy grew at an average

rate of around 4 percent, faster than that of most Latin American countries. It is true that there was a deep crisis in 2001, and since then there has been some shifting of policies and a rebound of inflation. In addition, there are some concerns about the near-term outlook as the country is once again in default, with large fiscal deficits and facing balance of payments problems. Nevertheless, when one looks at the post-hyperinflation period as a whole, there seems to be evidence and hope that Argentina could well be on a new secular growth cycle that is now on a pause due to macroeconomic problems.

The Argentine long-term cycle, which was characterized by high growth until the Great Depression, relative stagnation till the late 1980s and a rebirth of growth in the last two decades, raises important lessons, but also a number of questions about the prospects for growth.

The first lesson is that Argentina grew faster in periods in which it was more open and more integrated within the world economy and when it followed an export oriented growth strategy as opposed to those in which it adopted import substitutions.

A second lesson is that the abuse of stimulus policies, namely fiscal deficits primarily financed by printing money in an environment of a fixed exchange rate, started a new era characterized by high inflation and business cycles that were closely tied to the abundance or scarcity of reserves. In a typical stop and go cycle there was an expansion driven by macroeconomic policies that led to higher imports and inflation. As a result, the currency strengthened and eventually became grossly overvalued, and when reserves reached a lower bound, the government was forced to adjust through devaluation and contractionary macroeconomic policies. This “stop and go” period introduced significant volatility with regards to economic activity and, on the whole, reduced the trend rate of growth.

A third lesson is that exchange rate policy matters, and that most crises occurred following a period in which the currency became overvalued. When,

in the end, the government was forced to devalue, it was recessionary because it affected domestic income. This also happened, more recently—especially since the late 1970s—because it had a negative balance sheet effect that affected the ability of the government and of banks to service foreign currency debt, which generated a link between devaluations and financial crises.

A fourth lesson is that the largest macro-financial crises that were very disruptive for growth (i.e., 1982, 1989 and 2001) shared three key elements: a grossly overvalued currency, large budget deficits, problems with debt sustainability (especially in the aftermath of a devaluation) and major vulnerabilities in the banking system. Typically, the crises were deepened by deterioration in the external environment.

In spite of this history of high volatility and of the fact that Argentina is once again in a recession that in many ways resembles the early stages of prior crises (including an overvalued currency, a new default on part of the debt, and scarcity of international reserves), one could argue that this time could be different.

There are at least three reasons that raise hope about Argentina’s next cycle. First, although Argentina is in default, this time is clearly related to legal and perhaps political issues as opposed to the actual ability to pay. Most investors believe that the default could be cured either when the new government takes over at the end of 2015 or, alternatively, earlier by the current administration. Once this happens, Argentina’s country risk should drop drastically and open the way for large capital inflows that should help to rebuild international reserves and reignite growth. The second reason is that Argentina has a sound banking system that this time is not a source of vulnerability, as it remains solvent, liquid, profitable, and with a very small amount of foreign currency liabilities. Finally, the key macroeconomic imbalances (the fiscal deficit and the overvaluation of the currency) have increased but have not yet reached unmanageable levels as in previous crises.

While solving the macroeconomic imbalances will be a large part of the story, if the country wants to take full advantage of the growth opportunities, it will also need to address sector policies. During the Kirchner years there was a shift toward more interventionist policies such as new trade restrictions that favor import substitution, directed credit lines at subsidized interest rates, numerous controls to access foreign exchange and an almost freeze on utilities rates, that brought to a halt investment in energy generation, transmission, and distribution. The country needs large investments in infrastructure and in many sectors including mining, oil and gas, and agriculture, among others. Argentina has one of the largest world reserves of non-conventional gas which is just waiting for exploration but requires large investment.”

From a political economy viewpoint, there seems to be more consensus regarding the necessary changes to exchange rate and debt management policies than there is regarding sector policies. Opinion polls indicate that a large percentage of Argentines still favor a strong state and government intervention. However, if the new administration does not address head on the incentives to invest in infrastructure and in key sectors, the macroeconomic improvements will provide short-term relief but will not foster long-term growth.

Argentina has an opportunity to restore growth at relatively high levels and get back on a convergence path. Even with some deterioration in the external environment, the country has good potential to grow. The big question is whether the next government will be willing and able to grab the opportunity that will have to attract investment and external financing, to develop the great prospects the country has in shale gas, mining and agribusiness or if it will once again get trapped in domestic politics.

Endnotes

1. The main crises occurred in 1975, 1982, 1995 and 2001.

Australia, Emerging Asia and Global Cooperation

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The emerging market economies have been powering global growth over the past quarter century, accounting for almost two-thirds of global growth as their share in world output collectively has overtaken that of North America and now Europe. On conservative emerging economy and bullish industrial country growth scenarios, Asian emerging economies are likely to account for a larger share of world output in purchasing power parity terms than all the G-7 economies combined in less than a decade.¹ Emerging economies—at least the ones in which most of the world's poor live—are catching up with the industrial world, big time.

Australia in Asia

Among all the OECD economies there is none that benefits more from emerging economy success—the primary locus of which continues to be in Asia—than Australia. Australia is the most Asia-oriented OECD economy in the world and there are few others, including other Asian economies outside the OECD, which out-rank it. Asia accounts for close to three-quarters of Australia's external markets, a larger share than that of Japan or Korea. Asia's continued growth through the global financial crisis, together with some deft domestic macroeconomic policy footwork, assisted Australia in maintaining its more than 23-year record of strong, uninterrupted growth.

Australia's external economic circumstance is the product of three main forces: the scale of Asia's growth; its relative proximity to these Asian centers of growth; and the deep complementarity of its resource endowment with that of its Asian resource-consuming partners.² For much of the commodity boom of the early 21st century, driven

by the demand for raw materials associated with China's rapid heavy industrialization, the iron ore exporting state of Western Australia grew as fast, in some years faster, than the economy of China itself—in excess of 10 percent in real terms a year.

Now the party's over, and iron ore prices have fallen by upwards of 50 percent, the exchange rate has gradually retreated from a brief period of parity with the U.S. dollar, resource export volumes are up sharply and Australia's share in Chinese markets continues to expand, at the same time as Asia becomes Australia's outlet for more competitive services, agricultural and manufacturing exports. The debate about how everything has changed intensifies but nothing has changed in Australia's Asian external orientation; nor will it.³ China is Australia's largest trading partner. It is too for 50 other countries around the world, with Australia's share among the largest. Australia has been the largest, and is still the second-largest, ultimate destination for Chinese direct investment abroad. China is also the largest source of overseas students (almost as many study in Australia as study in the United States) and a leading source of migration.

Together with India, Indonesia, Korea, Japan and ASEAN (by invitation), Australia and its Asian partners have a lot at stake in the G-20 process. Now that the immediate threat of the global financial crisis has receded, Asia's ambitions in the global community remain centered on economic and social transformation through sustainable development. This is an overriding social objective among the emerging economies of Asia and their closely interdependent neighbors. Being at the top table of global governance—participation in the G-20 process—is of importance first because it

provides a forum for bringing to bear the instruments of international cooperation in trying to secure that objective.

Put simply, for these economies, the primary aim is to achieve their full economic and social potential for growth. The potential trajectory for growth is defined by where these countries start, what resources, capacities and technologies they are able to mobilize for growth domestically and through international exchange and knowledge of the experience of other countries in achieving economic and social transformation before them. A twin aim is to realize growth potential in a way that does not threaten economic stability of the international system—the preoccupations of crisis management in the early years of the G-20 summit. A corollary aim is to be accorded an appropriate role in shaping the institutions, rules and norms necessary to securing their accommodation and participation in an international system that is supportive of these aims.

On both fronts, the G-20 has a big and ongoing task and Asian G-20 members have a central role and interest.

Growth Potential

The good news is that, overall, the economies of Asia are a bull element in global recovery and long term development. The advanced countries, although less so now the U.S., remain a drag on the world economy, and there is no sign that Europe is likely to emerge from stagnation any time soon. Some argue that the European economies (and perhaps Japan) are doomed, through demographic and technological circumstance, to a long period of very low rates of growth, that their potential rate of growth is likely not much above their actual growth in recent times.

With the growth rates of emerging economies (not all of them, but overall) four to five times as high as those in Europe, they contribute the largest share to global growth. Even with convergence between the emerging economies in which most of the world's

poor live and those economies that are home to the rich, there is the question of whether their current growth rates are near their potential rates of growth.

While China's growth rate may be close to its potential rate of growth, the structure of its growth is not sustainable and, for most of the developing world, including India, actual growth is way below potential.

Global growth between 2004 and 2007 was running at 5.1 percent, with growth over this period at 2.9 percent in advanced economies and 7.9 percent in emerging markets. This may have been close to or above the trend potential rate of growth. From 2011 to 2014, global growth was 3.4 percent, with growth of 1.6 percent in advanced industrial countries and 5.2 percent in emerging market economies. The IMF now forecasts global growth for 2014 at 3.3 percent, and growth for advanced economies of 1.8 percent and emerging economies of 4.6 percent and these forecasts continue to soften.

It is difficult to accept that rates of growth in advanced or emerging economies are near or nudging potential rates of growth. In Europe there are vast pools of unemployed labor, especially among the young. In emerging economies on the way through lower to higher middle income, and catching up with the industrial frontier, growth rates at 6 to 10 percent are the norm. As China moves to upper middle income, growth potential is easing back from 7 to 8 percent to 6 to 7 percent, and the trajectory is for growth a percentage point or so lower over the coming decade. India and Indonesia in the Asian region, and South Africa and Brazil outside, are languishing below their potential rates of growth.

Is the world condemned to a new normal of stagnation and low rates of economic growth?

Avoiding Stagnation and the Middle-income Trap

Growth potential, it should be noted, is not defined by laws of nature, alone or even largely. Growth

potential is defined significantly by social and economic policy choices and by political will.

From this perspective, there is no inevitability that the advanced economies of Europe, North America and Japan (the old G-7) should be beset by long-term secular stagnation.⁴ There has been no preoccupation with fear of long-term stagnation in Australia, a country favored by its geographic circumstance but also, importantly, by its earlier commitment to macroeconomic discipline and deep financial and structural reform. There are levers of macroeconomic policy that can be activated to lift effective demand; there are structural reforms that can unleash investment and productivity potential. Negative trends in these variables have more to do with policy failure than with chronic propensities to over-save or under-invest. In Europe and Japan achieving growth potential above recent low rates of growth entails hard social and political choices, and the prospect is for a long period of growth stagnation without such choices—in America, though there are similar choices, the constraints on growth potential appear less binding. Will the European or Japanese polities tolerate poor economic and social outcomes in the longer term in favor of easy options? It is possible, though there are signs (in parts of Europe and in Japan) that they will demand more.

In emerging economies, the hard choices are about the round of structural reforms that are needed to navigate the “middle-income trap.”⁵ The middle-income trap is an idea that derives from the experience of a host of emerging economies that looked as if they were on the road to high-income status but did not really make it. Growth rates petered out before they were able to progress from being a middle-income to a high-income country. Industrial “catch-up” might be difficult for many countries, but it is the easy part compared with effecting the transition from a per capita income of, say, \$10,000 (Malaysia’s per capita income in exchange rate converted terms or \$15,000 in purchasing power parity terms) to one over \$60,000 (Australia’s). As economies become wealthier and the technology they need to apply more sophisticated, they lose the

advantages of “starting from behind.” They need to be capable of operating closer to the technological frontier and compete further up the value chain.

Governments in Asia will need to create an environment in which dynamism and investment will flourish, there is improved institutional performance and there is the required investment in human capital and infrastructure. Success or failure will determine whether strong growth in the region will continue over the longer haul.⁶ But unless middle-income Asian countries take the long view and change course, they could fall, like many Latin American countries, into middle-income traps of their own making.

For India and Indonesia too perhaps, both at an earlier stage of development, the choices are more basic. There is still a way to go in lifting the shackles off trade, investment and labor markets to restore the momentum of outward-looking growth ignited by early stage reforms, and releasing the growth potential to absorb their rapidly growing young populations.

Cooperation on Growth

As Derviş and Kharas (Introduction) point out in this volume, in an open global economy, stronger rates of growth in the emerging economies, where returns on investment remain high, are consistent with higher net exports and capital flows from the industrial world to emerging economies on a mutually reinforcing path to higher global growth. Australia will bring its own structural reform program to the table in this income-boosting exercise, including a significant switch to productivity-enhancing infrastructure investment, encouraging greater workforce participation and reducing regulation and the costs of doing business. More expansionary policies and weaker exchange rates in advanced economies are a corollary part of the mix to bring global growth closer to 5 than 3 percent. These positive, mutually reinforcing trends will not be entrenched without international policy collaboration.

For making such collaboration possible, the composition of the G-20 itself is a vast improvement on the G-7.⁷ Inclusion of the Asian and other emerging economies in the G-20 group is a major step forward. They deliver regional, cultural and institutional diversity as well as new economic power to the high table. Agreement may be more difficult, debates more intense, and disagreements out in the open. In global negotiations, though, it is more important to be talking to those with whom reaching some kind of agreement may be difficult rather than just with those among whom there is agreement to begin with. In that context, trying to exclude Russia from the Brisbane summit would have been very costly and unlikely to be possible without breaking the G-20 itself.

The main challenge for the G-20 now is to create sustainable world growth based on real investment that stimulates productivity gains and provides new, long-term jobs in the value-added chains of the products and services of the future across advanced and emerging economies alike. Laying the foundations for sustained global growth through productivity-enhancing reforms within the framework of a global income target is a plausible strategy for achieving this. So too is enabling productive investment in infrastructure.⁸

On the corollary objective of broadening participation in the established institutions of global governance, and ensuring that key global economic institutions are robust and able to withstand unexpected shocks if and when they occur, progress remains disappointing. Leaders need to add value, for example, by asking big questions about whether the global trade regime is headed in the right direction, or how to shape an international investment regime and what they will bring to dealing with climate change. These are vital issues for Australia and its Asian emerging country partners, although they are not prominent in the G-20 agenda.

The scale and structure of the global economy has changed dramatically since the post war institutions were put in place. The nature of international commerce and international capital movements

and the presence of large new players like China, India and Brazil mean that the old rules need upgrading or extending. These are issues on which G-20 leaders and the Australian chair could give more strategic direction going forward from the Brisbane summit over the next three years.

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Demography, Technology, and All Other Things Considered

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The editors of this volume have asked us to take a long view of the world economy—and of a country closer to our minds and, for that matter, our hearts too. In many ways, this is a privilege, at least to those of us that are hammered daily with news and studies of the latest wiggle of the economic cycle. What do we care about the decades to come? Well, we definitely should, at least for the sake of our progeny (and hopefully of our old age). Moreover, within a generation, we will be approaching 2050 and this is not a long time span. In fact, most of us are likely to recall the election of Ronald Reagan, Mrs. Thatcher's backbreaking response to the British economic malaise and the end of Old Labor, Mr. Deng's opening of China, and the onset of the Mexican debt crisis, the first in a series that spanned the next decade and a half. On the technology front, the first PCs are a generation old (including Steve Jobs prescient integration of Xerox PARC's inventions in a single machine). And so is the Supreme Court decision in 1980 that permitted genetically altered life forms to be patented, a ruling contemporaneous with the momentous invention of a Polymerase Chain Reaction technique (PCR), and which allowed for the multiplication of DNA sequences in vitro; transgenic animals were invented just a year later. Both launched the biotechnology revolution.

I recount this timeline to illustrate two points. First, as we look forward, a generation seems to be a very long time. But looking backwards it appears to be quite short. The apparent illusion or asymmetry becomes most relevant for slow-moving phenomena, such as the dynamics of human population growth and many of its far-reaching economic implications. Second, some events—but not many—have consequences deep into the future, such as

China's arrival on the world stage or the turn to market-based incentives as the pillar of economic policymaking following the Reagan-Thatcher accession. While technological forecasting is a tough job, far more difficult is to judge which innovations are truly revolutionary, in the sense that they will bring a radical transformation in our work and lifestyles in the decades to come. I do not doubt that the Internet and hand-held devices will fall in this category. Despite Robert Gordon's protestations,¹ if correctly measured, this cluster of technologies and services will in all probability have far-reaching effects on productivity and the organization of work, the distribution of information, power and income, and society's overall well-being. Further, and this is not of minor consequence, for most of the world's poor, mobiles—increasingly with access to the Internet—are the only multipurpose technology which they can afford, and of which they are increasingly making productive use. As we progress through the 21st century, major consequences should also result from the ability to isolate, identify and recombine genes, thus making the available gene pool a primary resource.

This serves as background to the twin themes at the center of the global debate surrounding the problems of growth and distribution: the arguably dire long-term growth prospects for the more advanced economies, and a structural worsening in the distribution of wealth and income, the latter resulting from Thomas Piketty's central inequality thesis (the tendency for the rate of return on capital to dominate the rate of economic growth).

I would initially like to consider the consequences of observable demographic trends. This is one fundamental phenomenon affecting all major economies

in a number of significant ways. Here we take a “narrow” view, looking at it purely from a long-term growth perspective.

Table 1 presents the average annual growth rates of the working-age population (between 15 and 64 years old) of the world, the more developed and the less developed regions, and a select group of countries. The periods considered were retrospectively the two 30-year intervals from 1950 to 2010, and from 2010 through 2050, initially two 20-year intervals and a last 10-year stretch (to test if the trend was accelerating or otherwise). Here it is worth calling attention to two important regularities: first, the consistently falling rates over time; and second, the fact that this phenomenon is common to all regions.

A relevant corollary follows: Demography will be a drag on growth globally, taking away nearly 1 percent in 2010-30 and another 0.5 percent in 2030-50 on average. For the more developed regions, a significant amount has already been shaved off; and for the rest of the world, the most substantial growth-related losses still lay ahead.

- For the U.S., the greatest demographic friction will be felt in the next couple of decades, with labor contributing just 0.27 percent per year to overall economic growth. If long-term productivity (measured in terms of GDP per working-age population) grows at a rate of 1.7 percent a year, a pace to which many developed countries have converged in recent years, the U.S. economy average annual expansion will oscillate around 2 percent.² Interestingly, the U.S. will show one of the most resilient demographic dynamics among developed economies, in large measure because of significant net immigration flows (the largest globally, followed by Canada and the U.K.), that may continue unabated.
- In Europe, the U.K. has demonstrated similar demographic behavior, driven again by net immigration, though labor growth tailed

off many decades ago. Germany, for its part, will be facing a sharply shrinking labor force that will not be offset by productivity gains any larger than other advanced economies—which does not bode well for its future. It will in fact progressively lose relative economic weight on the continent (together with Italy and Spain, among others).

- In Asia, Japan is the best-known case of an ageing society and adverse demographic trends at least since the 1980s. The long-term stagnation experienced by the country is in no small measure due to the 1.4 percent yearly slowdown in labor force growth between 1950-80 and 1980-2010. The coming years do not bode well either, and it gives additional legitimacy to the claim that reforms—certainly the ones necessary to increase female labor force participation—are essential if the country is to avoid continuous long-term stagnation.
- Russia is also facing a dire demographic future, one akin to Japan’s. Beginning this decade, labor force growth will turn significantly negative, a phenomenon that will deepen in the outer years of the 2030-50 period. The economy is entering a period in which labor will contribute to arrest growth by over 1 percent per year.
- In view of its size and economic importance, China presents the most worrisome picture, with a downward shift of nearly 1.9 percent in the contribution of the labor force to growth since the 1980-2010 period. To what extent the contraction of the labor force will affect China’s economic performance is unclear, and will depend, as in all other cases, on the productivity response of the economy. Yet, China is in the midst of economic reforms reigning in capital augmentation and stimulating consumption and other related expenditures. With the decrease in investment rates, capital-labor ratios might equally come down and adversely affect labor productivity, adding (downward) pressure on economic growth.

- India for its part will also have shaved off 1 percent of its growth rates in the next two decades, compared to its post-1980 record, significantly leveraged by a spate of successful economic reforms. Yet the population drag will be most relevant in the outer years, but to a lesser extent than China, with India in fact still benefitting from a positive rate of expansion in its labor force and one that is far better educated.
- Brazil, the final BRIC, is also being dragged down by its population dynamics. Excess demand for labor in services and low productivity leading to high unit costs, explains *in part* a faltering economic performance and an arrest in potential GDP.

Two additional facts stand out. First, the demographic drag on growth seems quasi universal and quite significant among large developed and emerging economies, with the U.S. being the sole real exception. Second, Japan is not alone in the reversal of demographic “fortune”—the active labor force will be shrinking in a number of other countries in the coming decades, with not only

Russia and Germany (France being the continental exception in Europe), but also China and Brazil, among others, keeping company.

If the demographic considerations above sound over-deterministic, to an extent they are. A number of uncertainties remain beyond the endogenous elements of population dynamics, including immigration and other policies that have a direct effect on the size, age and skill-composition of the working-age population, as well as on the labor market (as in the case of Germany’s Hartz reforms of the early 2000s targeted at increasing labor force participation). Still, a reversal of slow-growth phenomena among advanced economies would depend on the technology leader—the U.S. in the foreseeable future—pushing the productivity frontier out at a faster rate, and the other advanced economies following suit.

How probable is that? Well it depends on the productivity impact of new technologies. However, one need not be a skeptic of technological progress to question the magnitude of the long-term ramifications on labor productivity of the two breakthrough innovation clusters of the 21st century:

TABLE 1: AVERAGE ANNUAL GROWTH RATES OF WORKING AGE POPULATION (15-64) WORLD, DEVELOPED AND DEVELOPING REGIONS, AND SELECTED COUNTRIES - 1950-80, 1980-2010, 2010-2030, 2030-50

Regions and Countries	1950-1980	1980-2010	2010-2030	2030-2050	2040-2050
World	1.81	1.86	0.93	0.49	0.41
More Developed Regions	1.17	0.38	- 0.26	- 0.24	- 0.25
Less Developed Regions	2.16	2.25	1.17	0.60	0.50
U.S.	1.34	1.07	0.27	0.45	0.45
Japan	1.56	0.13	- 0.82	- 1.11	- 1.01
U.K	0.22	0.42	0.13	0.11	0.16
Germany	0.35	0.15	- 0.78	- 0.82	- 0.70
Russia	1.14	0.30	- 0.82	- 0.75	- 1.01
China	1.90	1.80	- 0.06	- 0.75	- 0.70
India	1.95	2.26	1.27	0.44	0.24
Brazil	2.89	2.12	0.68	- 0.24	- 0.48

Source: Own Calculations with data drawn from United Nations Department of Economic and Social Affairs/Population Division, World Population Prospects: The 2012 Revision, Volume I: Comprehensive Tables, New York, 2013.

those built around mobility/Internet and those of the biotech revolution. Even if they have a sizeable impact, it is unlikely that GDP per working-age individuals will advance far beyond today's pace. Gaining 0.2 to 0.3 percent—a considerable jump—would still mean that the U.S. potential GDP would not expand much above 2 percent a year, potentially reaching an annual rate of 2.5 percent in the outer years in the most optimistic technological scenario. This is how things could play out for the U.S., the most dynamic of the developed economies. The others will be converging to a long-term growth rate of just 0.5 to 1.5 percent, as their working-age population continuously shrinks, depending on the extent of an outward shift of the productivity frontier.

Whatever the case may be, the social fabric will be strained in an environment characterized by a fast ageing population and increasing old-age dependency ratios (of those aged above 65 to the cohort aged 15-64), growing demands on public services, higher taxes and lower (public and private) savings rates.³ This will not be helped by a combination of lower growth rates and very likely a higher return on capital, as savings will be drained by pensions and public services, reaffirming Piketty's prediction of a more unequal distribution of wealth and income.

The story for Brazil and other emerging and developing economies will only in part be different, insofar as the demographic dynamics do not fundamentally diverge, with the reduction in the rate of growth of the working age population following a similar step function behavior (when examined by comparing long periods as in Table 1). What is specific to those countries is their distance to the technology frontier, which could still translate into higher than average catch-up growth.⁴

To what extent is this going to be a quasi-exogenous or "unconditional" process, in the sense that the inter-country productivity and income differentials will lead technology and capital to automatically percolate down in search of higher returns or new opportunities (the ultimate reflection of inherited

endowments)? Or, will this flow depend in large measure on the quality of economic policies, in addition to country-specific factors? Undoubtedly there are elements of both, but if by convergence one understands the progressive narrowing of the income per capita gap—and not simply labor productivity levels in manufacturing—most emerging and developing countries will have an uphill battle to narrow the very significant differences in levels of labor productivity.

These differences reflect a broad set of factors. They range from firm-specific characteristics as they relate to workers and management skills and levels of competence, to the intensity of efforts in innovation and product differentiation, to the broader issues related to economy-wide factors. The quality of infrastructure to the overall business environment, including issues related to taxation, regulation and the quality of government are also important factors. In this regard the evidence is overwhelming: Good policies and institutions matter, and they matter most the farthest away a country is from the frontier.

However, they matter not only in the sense that firms in open and supportive environments perform better in domestic and export markets, learning from competitors, suppliers and buyers, and thus profiting from new business methods, practices and technologies. Policies and institutions also influence—and often determine—the cross-sectoral allocation of resources. Erratic macroeconomic management and distortionary microeconomic interventions can bring about long-term adverse effects on productivity by redirecting the flow of resources away, for example, from manufacturing into rent-seeking activities and less productive sectors. In so doing, they artificially accelerate the long-term trend for industry to recede (as did agriculture) and services to gain a higher share of GDP.

This phenomenon of precocious ageing of manufacturing resulting from misguided policies—ranging from an overvaluation of the exchange rate, ad hoc protectionism, discretionary incentives

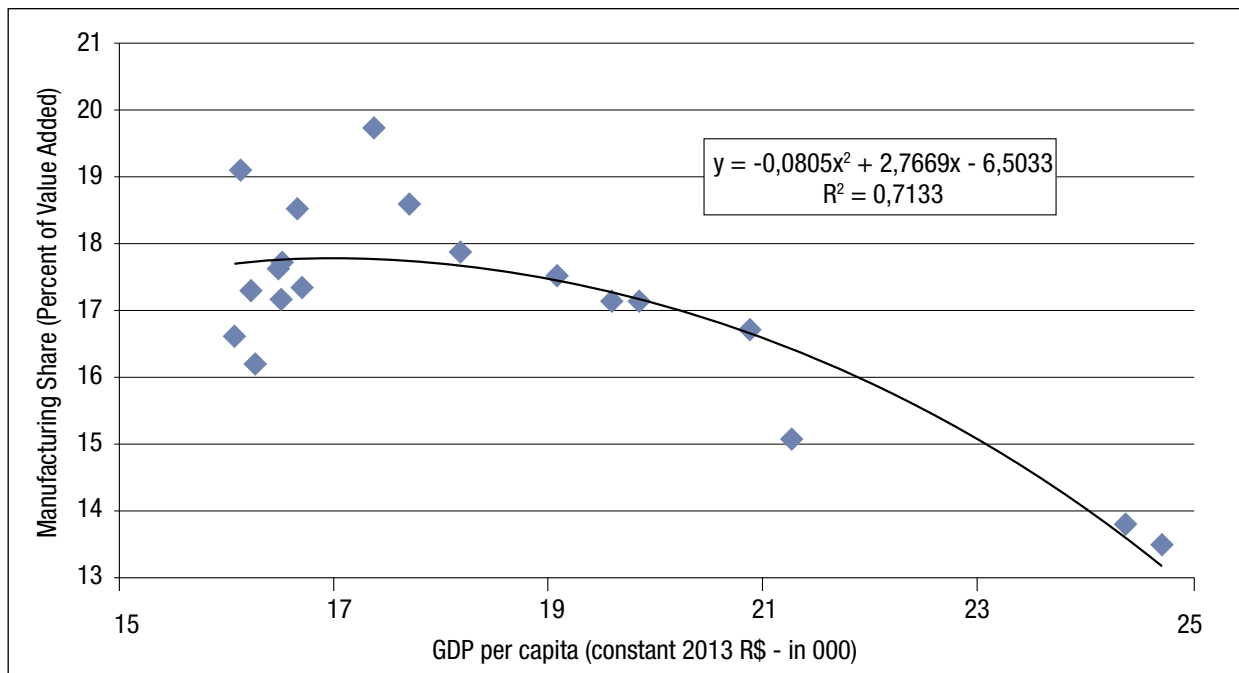
and price controls that ultimately harm sectors with strong comparative advantage—seem to lie behind Brazil’s regression in recent years (Figure 1). To the extent that manufacturing still stands at the center of innovation and productivity gains, the premature loss of substance will no doubt affect the ability of the country to move at sufficient speed towards the technology frontier in the coming years. It is no coincidence that economic growth rates have petered off while manufacturing has ceased to be an engine of growth. It will take major reforms for the country to aim once again to catch up with the technology leader in the coming decades to partly compensate for its demographic dynamics. With total factor productivity expanding at a rate between 0.5 and 1 percent in the bonanza period of the 2000s and possibly turning negative in 2012-14, and the economy facing a more adverse demography already reflected in high unit labor costs, the country is in a low growth trap made worse by a slowdown in its working-age population.

The challenges posed by the two revolutionary clusters of technology organized around major advances in information technology and life sciences, and

the stream of new products and services which will in all likelihood bring implications for the economy and society beyond what we can currently envision, will make the ascent steeper for all followers, including Brazil. What is now required are policies which simultaneously encourage catch-up innovation and their dissemination in the economy. For large middle-income countries manufacturing will remain instrumental in creating, adapting and disseminating innovations for years to come. Yet, manufacturing is being reinvented with advanced services, and protection from the forces of competition and the winds of innovation will not help. To the contrary: In an interconnected world, such policies should facilitate access to people, information, ideas and products. The globe is becoming an enormous “hack space” with firms, organizations and individuals coming to share tools and knowledge. Countries need to adapt and profit from this fact—not fight it.

The story of a long string of policy mistakes hitting previously vibrant and relatively sophisticated manufacturing sectors is hardly exclusive to the Brazilian experience. One should thus be beware that unconditional convergence is not a given

FIGURE 1: BRAZIL - MANUFACTURING INDUSTRY AND GDP PER CAPITA 1995-2013



Source: Own calculations based on IBGE and Ipea data.

anymore in times of demographic headwinds, more intense competition in world markets, and a less accommodating social and political environment in advanced countries. Emerging and developing economies will need to redouble their efforts at reform and openness. Misguided policies, if systematic, will bring about long-term effects that may trap these economies in a low-level equilibrium from which they will need to lift themselves by their bootstraps, with little help from the outside. Developed economies will then have their own problems to deal with. Convergence will become a mirage for years to come.

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2. For a more detailed discussion, see Galo Nuño et al. (2012).
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4. What may also be different is the prediction regarding growing inequality at least over the medium term. In contrast to countries with a social-democratic tradition, some emerging economies such as Brazil had as point of departure already very unequal distribution of income. Thus significant improvements in education, in the context of a tight labor market partly driven by the new demographic dynamics, combined with cash transfers for the poor, could mean not only lower poverty levels but a less unequal income distribution. This is in a nutshell the recent Brazilian experience. Is this benign trend sustainable over the longer term? It is still an open question. China's point of departure, on the other hand, was a great measure of equality borne out of the 1949 Revolution, Deng's reforms were accompanied by a concentration of wealth in the hands of a new class of entrepreneurs and well-connected individuals. The Chinese shift towards growth being driven by domestic consumption and families being protected by a more comprehensive social safety net (combined with an overt fight against corruption) is in fact a massive experiment in the social engineering of arresting inequality. Both the Brazilian and Chinese stories may still show that Piketty's prediction may not be foolproof.

Secular Stagnation is Not Destiny: Faster Growth is Achievable with Better Policy

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Will global growth accelerate as the world economy transitions from recovery to expansion, the transformational potential of new information-based technologies is realized, and a widening spectrum of developing economies join the global trade and financial system? Or are we doomed to secular stagnation, owing to some combination of slower demographic growth, fewer big innovations, a shrinking middle class, and chronic private and public underinvestment?

These are big questions. Although we have learned much about many of the factors influencing global growth and convergence, we don't know much about their relative magnitudes and pacing. Indeed, given the competing factors at play and the historically unpredictable patterns of technological progress and economic convergence, the answers to these questions will likely remain unknowable for some time.

We should not let this paralyze us.

Whether new information technologies have sparked a third industrial revolution or not, there is considerable scope for G-20 countries to grow. The global economy is far from the efficient production or policy frontiers. Better public policies and an improved global financial architecture can unleash significant additional growth.

Many of the policy levers that influence growth are national in scope, and countries can and should take action that is targeted to their particular circumstances. There are, however, some policy levers that are critical to growth that can only be deployed at a global level to be effective. Others have important spillovers to other countries that need

to be taken into account. Here, the G-20 should take the leading role.

We begin by examining what is holding back medium-term growth in Canada, and where domestic policy should be directed to raise potential growth. This is interesting from a global perspective as it illustrates how we can apply *what we do know* about the drivers of growth to an advanced economy. Other countries may see parallels with their situations, or be spurred to action themselves.

We will then turn to areas where the G-20 needs to take a greater leadership role. At its most fundamental level, the best contribution the G-20 could make to boosting global growth would be to re-energize trade and financial integration, while ensuring global financial stability. This has four essential ingredients: trade liberalization, financial reform, exchange rate flexibility, and a framework for international financial linkages and spillovers. These elements are not new, and some progress has been made. But an unwavering focus will be required to spur growth and avoid secular stagnation.

Raising Medium-term Growth in Canada

Thanks in large part to a credible monetary policy regime, the best fiscal situation in the G-7, and a well-regulated and sound financial system, Canada weathered the global financial crisis considerably better than other countries among the G-7. It was the first to fully recover output and the jobs lost in the Great Recession. In addition, Canada has several other key strengths, including a well-educated and increasingly flexible labor force, privileged

global access to capital, and abundant commodities that the world desires. Nevertheless, in the last couple of years, growth has disappointed. Elevated household indebtedness is weighing on consumers, and deteriorating international competitiveness is eroding export growth.

To increase medium-term growth, Canada should focus on two priorities: closing its investment and innovation gaps, and “going global.”¹ We examine each in turn.

1. Invest and innovate. Since 2000, productivity growth in Canada has languished, and Canadian competitiveness has deteriorated. In 2000, Canada ranked 7th in the World Economic Forum’s Global Competitive Index; today it ranks 14th.

While we don’t yet know whether new information technologies have fundamentally changed the growth potential of the world, at a micro firm-level, there are several stylized facts about productivity that have both a sound theoretical basis and considerable empirical support.² In particular, more productive firms tend to:

- invest more in machinery and equipment (M&E), particularly in information and communications technology (ICT);
- employ more workers with higher educational attainment; and
- invest more in research and development (R&D) and innovation.

Canada has some examples of tremendously successful global firms that have invested heavily in new technology, skills and R&D. But on average, Canada has gaps along all three dimensions.

- On average, Canadian firms invest less in M&E and ICT than their U.S. counterparts and as a result, Canadian workers have only about *half* as much M&E and ICT capital stock to work with as their US counterparts.³
- Canada has a well-educated workforce that compares very favourably in OECD rankings

when it comes to primary and post-secondary education, but Canadian firms lag in the employment of PhDs and other post-graduates, especially in the sciences, engineering and business.⁴

- In business sector spending on R&D, Canada ranks a disappointing 22nd among OECD countries, and when it comes to innovation capacity, the World Economic Forum rates us 27th, far behind Switzerland, Germany and the United States.⁵

Public policy has done much to address Canada’s productivity and innovation underperformance, from sound macro and regulatory frameworks for monetary, fiscal and financial sector policies, to low corporate taxes and strong public spending on R&D. What is needed is *more competition* in a number of the protected sectors that underpin Canada’s cost structure, combined with a societal shift towards *greater entrepreneurialism*. Simply put, Canada needs more entrepreneurs. It needs to build entrepreneurialism into its educational system at colleges and universities and provide better training for our scientists who seek to commercialize their ideas. Canadian executives need to have an “innovate-or-perish” mentality, and they need to learn from successful innovation ecosystems.

2. Go global. Canada’s location right next door to the United States—the largest and richest market in the world—has been a tremendous boon to its growth and prosperity. Thirty percent of Canada’s GDP comes from exports, three-quarters of which go to the United States. But in recent years, the U.S. has not been the engine of global growth it once was, and Canada’s exporting firms have suffered.

Part of this is cyclical, and with the U.S. economy now showing sustained momentum, the prospects for Canada’s exports and growth have improved. But the other part is structural. The global financial crisis only accelerated the shift in the centre of economic gravity from the U.S. to rapidly growing emerging market economies (EMEs), particularly

in Asia. In 2000, less than half of global growth came from emerging and developing countries; today, it is nearly three-quarters. Yet only about 10 percent of Canada's exports go directly to fast-growing EMEs, while 85 percent go to slow-growing advanced economies.⁶ Canada needs to strengthen its links with fast-growing economies, and Canadian firms need to invest in developing business in these markets. This is a long game, which will require a more global mindset among Canadian business, a better understanding of local markets outside of North America, and investment in global supply chains.

It will also require a major investment in infrastructure in Canada to build gateways to the Pacific and Atlantic Oceans so that Canadian businesses can get their products to rapidly-growing markets. Nowhere is this need more acute than in the commodity complex. Sustained increases in the demand for energy, food and metals in emerging markets present a tremendous opportunity for Canada—but only if it can get the product to market. Achieving this will entail very large infrastructure investments in rail, pipelines and ports. The enormous scale and longevity of these investments are a hurdle for private investors, and the G-20's focus on financing for long-term growth and infrastructure is very helpful in this regard. However, domestic issues—regulatory uncertainty, aboriginal land claims, and environmental disputes—present even larger hurdles for private investment. Resolving these will require leadership from all levels of government in Canada.

These policy prescriptions are within Canada's reach all by itself and reflect *what we do know* about productivity growth. Acting together, the G-20 could further raise Canada's growth prospects significantly.

What Can the G-20 Do to Raise Medium-term Growth?

To raise global growth, the G-20's essential role is to ensure an open and resilient global trade and

financial system. This requires a concerted focus on four mutually reinforcing ingredients:

- 1) a freer flow of goods, services and capital;
- 2) an efficient and resilient global financial system that is less prone to crisis;
- 3) flexible and market-determined exchange rates to improve the allocation of resources and facilitate adjustment; and
- 4) a more complete understanding and framework for international financial linkages.

We examine each in turn.

Re-energize trade liberalization. Greater trade and financial integration can increase the global GDP level by allowing better diffusion of technology and best practices, increasing competition and productivity, improving the allocation of resources and capital globally, and diversifying risk. Evidence also suggests that freer trade cannot only increase but also accelerate the growth rate of global GDP, by serving as a vehicle for technology diffusion.⁷ These are also the mechanisms by which convergence occurs, allowing the growth benefits to be shared around the world.

In the aftermath of the global financial crisis, global trade collapsed, falling by roughly 15 percent, and is now growing at only one third of its pre-crisis rate.⁸ Weak demand and changing global trade patterns are part of the explanation, but increased protectionism—both explicit and implicit—is also part of the story. The World Trade Organization estimates that trade-restrictive measures put in place since the financial crisis now cover five percent of G-20 imports, with the most recent evidence suggesting that they are now more prevalent than at any time in the last three years. This is holding back global growth and is a major challenge facing the G-20.

While there has been some recent progress on bilateral trade agreements, the multilateral trade agenda needs to be re-energized. In our view, the best outcome would be to complete a meaningful and comprehensive multilateral agreement that

goes beyond the G-20 countries. Unfortunately, the most ambitious initiatives in this arena have been stalled for some time, but multilateral regional initiatives such as the Trans-Pacific Partnership would represent a significant step forward. Coordinated unilateral trade liberalization, whereby every country agrees to reduce tariffs on different things, even if not part of an explicit quid pro quo, could help make progress and achieve positive spillovers. The G-20 should play a greater leadership role in promoting these initiatives and eventually connecting them.

Complete the reform of the global financial system. Trade liberalization goes hand-in-hand with greater financial integration, and the global financial system has been an essential enabler propelling global economic growth. Despite frequent shocks to the system, it facilitated a remarkable post-war expansion of advanced economies and ushered in a new era of rapid economic growth in new integrated emerging market economies. But as the global financial crisis laid bare, it can also be a source of instability, with devastating consequences.

Robust domestic policy frameworks and well-developed domestic financial markets are essential and this requires effective international coordination. The G-20 reform of the global financial system has been its most successful reform undertaking. Thanks to the leadership and coordination efforts of the Financial Stability Board (FSB), much has been done globally to strengthen risk management and supervision, increase capital and liquidity buffers, strengthen financial market infrastructure, align incentives, and improve crisis management.⁹ While completing the reform of the global financial system is now within reach, two areas require a final “push.”

First is shadow banking. As standards have risen in the regulated sector, there is increasing evidence of rapid growth in the shadow-banking sector, particularly in some EMEs. Lack of transparency and standardized protocols have the potential to lead to unforeseen interconnectivity and risks.

Because shadow banking encompasses a wide range of heterogeneous players and activities, and differs across jurisdictions, it is neither desirable nor realistic to have Basel-style standards. Countries must have some discretion on how to implement the principles within their jurisdiction. But if we are to restore trust, these principles need to be sufficiently “crunchy” that we can assess whether FSB members have indeed put in place reforms that fully live up to the spirit and intent of agreed principles.

Getting to “crunchy principles” is proving difficult in some areas. At times, agreements to high-level principles look more like agreements to disagree on crucial details. The G-20 needs to cut through these disagreements and accelerate progress. Peer reviews that shine light on implementation across the G-20 may be helpful in identifying where implementation needs to accelerate and where more crunchy principles are required.

Second is recovery and resolution. Much progress has been made here, but two critical elements remain. First, a comprehensive bail-in regime must be developed that will provide both an efficient and final buffer to protect tax payers, and support continuous operation of the core functions of systemically-important financial institutions at the point of failure. Secondly, this needs to be combined with credible cross-border cooperation agreements between relevant authorities. Without these two elements, we risk a more fragmented, less efficient global financial system that is ultimately less stable.

Increased exchange rate flexibility is also important. More progress towards market-determined, flexible exchange rates is essential to enable the financial system to avoid and absorb shocks. A more efficient mechanism to enable the adjustment of relative prices is a necessary release valve that reduces pressures on the system as a whole and, by providing appropriate price signals, facilitates needed reallocation of resources within and across economies. The lack of flexibility in some parts of the world generates imbalances and increases the burden of adjustment required by others.¹⁰

This is why exchange rate flexibility has been at the center of discussions within the G-20, and progress has been achieved. Global current account imbalances have been significantly reduced, with China's current account surplus declining from a peak of 10.1 percent to 2.3 percent of GDP, and China is now allowing greater, if still limited, exchange rate flexibility.

The G-20 needs to build on this positive momentum if we are to reap the gains of a more open, more integrated global economy. Global imbalances are accumulating at a slower rate globally, but divergence in net foreign positions is still growing. Moreover, depressed global demand played an important role in reducing current account imbalances. As global demand recovers, imbalances can be expected to widen. They are, in fact, already large and growing in some places, such as Germany with a surplus of 7 percent of GDP.

The international monetary system remains overly rigid, particularly as we face the implications of asynchronous recoveries across advanced economies and the prospect of divergent monetary policies. As of 2014, aggregate reserves of G-20 emerging-market economies have reached nearly \$6 trillion, or about 28 percent of their GDP—well beyond any conceivable precautionary motive. Moreover, countries representing roughly 40 percent of the U.S.-dollar trade weight have been thwarting foreign exchange adjustment, either through quasi-fixed exchange rates, with ongoing capital controls or the threat of using them. At \$4 trillion, China's reserves alone have increased by over two-thirds since January 2010. Without further progress, there is a risk of a vicious circle settling in, where insufficient adjustments spill over onto others, leading G-20 members to take more individual actions further preventing necessary adjustment.

Better understanding of international financial linkages is essential. The financial landscape is in constant evolution, and greater financial integration can increase the importance of financial market dynamics that are not yet well understood.

Over the last few years there has been a greater appreciation of the risk-taking channel as a driver of asset prices, such as asset owners crowding into or chasing returns and extrapolative expectations, both of which can be exacerbated by a low interest rate environment.¹¹ These channels have started to be more explicitly acknowledged in domestic policy frameworks and macroprudential policy tools are being developed.¹² But whether this acknowledgment and the tools being developed are efficient remains to be seen. Moreover, with greater global financial integration, these channels become global in nature, and macroeconomic policy setting in one country can have financial stability repercussions in another. Concerns around such “spillovers” have featured prominently in G-20 discussions in recent years.¹³ However, the fact that policymakers are beginning to pay greater attention to the risk-taking channel and its cross-border manifestation is a good thing, and the G-20 needs to make sure that it properly integrates this into macroeconomic frameworks and policy decisions. This is essential to both protecting financial stability and to reducing the temptation to thwart exchange rate adjustment.

Conclusion

At the global level, the persistent headwinds from the global financial crisis are being felt beyond the typical cyclical horizon. A significant global output gap remains, and an immediate objective of G-20 policymakers is to close it. Relevant authorities have already signaled that this will require the injection of further policy stimulus in some countries, while stimulus is withdrawn in others. This policy divergence will induce capital flows and required exchange rate adjustments. The unprecedented nature of the stimulus already in place and the potential magnitude of the adjustments give the G-20 a critical role to play: The effectiveness of these policies will benefit from a common understanding across the G-20 and will need to be properly communicated.

While closing the global output gap will help to raise growth, a sustained increase will require a

considerable push on structural reform. Many of these reforms are best deployed domestically, and here the G-20's role is to support these initiatives by acting as a commitment device supported by a transparent accountability mechanism. There are also important reforms required to build a more open and resilient international trade, financial and monetary system. These are essential to raising medium-term growth, and they can only be pursued jointly by the G-20.

To both support needed domestic reforms and international resolve, the G-20 Finance Ministers and Governors have set an aspirational goal of raising global output by 2 percent over the next five years. This is a big step forward, and represents the first time the G-20 went beyond stating that the “recovery is too weak,” and articulated and communicated what it wants to achieve. On the basis of that objective, measures that will be put forward can now be evaluated and progress can be assessed. This represents a significant strengthening of the G-20 accountability process and provides stronger incentives to deliver.

The stakes are incredibly high. Faster growth is within reach, but it will require countries to take action individually and collectively. Secular stagnation is not destiny, but avoiding it will take determination and resolve.

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9. Carney (2012) and Macklem (2012).
10. Carney (2009) and Bernanke (2011).
11. Rajan (2006), Adrian and Shin (2006), Boivin, Lane and Meh (2010), and Stein (2013).
12. Bank of Canada (2011).
13. In their September 20-21 Communique, Finance Ministers and Central Bank Governors stated: “We are mindful of the potential for a build-up of excessive risk in financial markets, particularly in an environment of low interest rates and low asset price volatility. We will monitor these risks and continue to strengthen macro-economic, structural, and financial policy frameworks, and other complementary measures, as the best response to managing risks, and meet our G-20 exchange rate commitments.”

A New Normal, but with Robust Growth: China's Growth Prospects in the Next 10 Years

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The Chinese Economy is Rebalancing

There are strong signs that the Chinese economy is entering a stage of a “new normal.” Since the global financial crisis hit in 2008, China's growth rates have declined from double-digits to around 7.5 percent per annum. The economy is rebalancing: Export growth has substantially slowed down, from an average of 29 percent per annum between 2001 and 2008 to under 10 percent per annum in recent years. As a result, exports have become less important for the country's growth, to the point that the contribution of net exports has become negligible, if not negative, while the indirect contribution of exports through forward and backward linkages has also shrunk. Consequently, the overall contribution of exports to growth has declined from 3 percentage points to about 1 percentage point. Both employment and output of the manufacturing sector as a share of the national total began to decline in 2013, with manufacturing output was smaller than service output for the first time. In the first half of 2014, services accounted for more than half of the country's growth. It seems that China has passed the turning point of the inverse U curve of manufacturing widely observed for advanced countries in their earlier days (e.g., United States in the late 1950s, Japan in the early 1970s). In accordance, domestic consumption as a share of GDP stabilized in 2008 and finally began to rise in 2013. The size of China's current account surplus has shrunk quickly, accounting for about 2 percent of GDP in recent years.¹

Rebalancing has helped China to improve its income distribution. Growth slowdown is uneven

across the country; it mostly happens in the coastal provinces that produce more than 85 percent of China's exports. Inland provinces have kept relatively high growth rates, creating convergence within the country. As a result, the national Gini coefficient of personal income declined from 0.481 in 2010 to 0.473 in 2013 (see Figure 2).

This transformation has been brought about by three forces. The first is the global adjustment following the 2008 financial crisis. Using other East Asian economies as a reference, China would probably have had to wait until 2015-2018 to pass the peak of the inverse U-curve of the manufacturing sector. The slowdown of world demand has accelerated the adjustment of the Chinese manufacturing sector.

The second is China's demographic transition. This transition is comprised of two parts. One is the change of age structure of the whole population. The country's working-age ratio (i.e., the number of people between 16 and 65 years old divided by the number of people younger than 16 or older than 65) reached its peak of 2.6 in 2010 and has since begun to decline. In fact, the absolute number of working-age population began to decline in 2012. The second transition is the movement of the labor force from the countryside to cities. The rapid economic expansion in the period 2001-2008 brought about 200 million people out of agriculture. Although the countryside still retains 35 percent of China's total labor force, grossly under-matched by agriculture's share of national GDP (barely 10 percent), the rate of migration has slowed substantially. Considering these two transitions, it is understandable why its economy has begun to slow down since 2010.

The third force is the slowdown in investment growth. The Chinese economy relies heavily on investment for growth. To deal with the negative impact of the global financial crisis, China launched a major investment drive in the second half of 2008 and 2009. However, the growth of investment has since slowed. It is noteworthy that infrastructure and housing each account for one third of China's total investment. The slowdown in investment has been largely caused by a slowdown in those two sectors.

Reasonable Growth Rates in the Next Decade

The new normal implies lower growth rates for the Chinese economy. But how low? Some prominent economists in China, such as Cai Fang, believe that China's new normal will entail growth rates in the range of 6 percent to 7 percent or even lower in the next 10 years.² Estimates provided by international organizations arrive at similar numbers.³ This prediction is mostly driven by the negative demographic trend that began in 2010. However, the negative impact of this negative trend may be overestimated.

First, extrapolating China's past growth records to predict its future growth rates is problematic when there exists a reversal of trends in some determining variables, such as the working-age ratio. Because China's growth was so extraordinary before the global financial crisis, the marginal rate of contribution of an increasing working-age ratio could be overestimated in the conventional regression analysis. When this rate is applied to a declining working-age ratio, the negative impact of the ratio is also overestimated.

Second, although the speed of rural-urban migration has declined, there is still labor redundancy in the countryside. Agriculture only accounts for 10 percent of China's GDP, but 35 percent of the country's labor force are still in the countryside.

Third, China will enjoy large educational dividends created by cross-generational substitution in the next 20 years. The rate of return-adjusted educational attainment of the retiring cohort (i.e.,

50-60-year-olds) is only half of that attained by the newly employed (i.e., 20-25-year-olds).⁴ That is, new workers are twice as productive as retiring workers. Educational attainment of the youth is improving steadily. Currently, 27 percent of 18-22-year-olds have a college education; by 2020, that number will reach 40 percent. This swift improvement of human capital among young people has offset part of the net loss of labor.

Fourth, China's retirement ages are very low by any standard. Currently, female workers can retire at the age of 50, and male workers can retire at the age of 55. The labor force participation rate is barely above 60 percent in the whole population. By the age of 52, half of women are not working; by the age of 58, half of men are not working. It is widely accepted in China that the current retirement ages should be raised. Even if the retirement age were to be raised by half a year each year in the next 10 years, the reduction in the working-age population, now standing at 2.5 million a year, would be more than compensated.

Setting aside demographics, other factors remain favorable to China. Investment as a share of GDP is likely to decline, but it will probably take a decade for it to drop below 40 percent, during which time the stock of capital can still maintain a reasonable growth rate. On top of that, China's innovation capacity is being strengthened. In addition to improvements in human capital, China's spending on research and development (R&D) is accelerating. By 2015, R&D spending will reach 2.2 percent of GDP, moving close to the ratios prevailing in advanced economies.

With those considerations in mind, it is a useful exercise to use the international experience to predict China's future growth. Toward that goal, we collected data on 106 countries for the period 1985-2011, mainly from the World Bank Development Index (WDI) dataset, and ran the conventional growth regression on the growth rate of per capita GDP.⁵ As growth determinants, we considered per capita capital stock, the working-age ratio, infant mortality rate, college enrollment rate, and research productivity (defined as papers published per researcher). The first two variables measure

the two most important inputs, capital and labor, and the last three variables control a country's health and human capital as well as research capability. With the regression results, we can calculate China's potential growth rates in the data period. Assuming that the growth determinants other than the working-age ratio grow by their averages in the sample period, and the working-age ratio declines by an accelerated pace of 0.4 percent, 0.5 percent, and 0.6 percent, starting in 2014, and also assuming that the global growth trend keeps its average of the sample period (i.e., 3.8 percent), we then predicted China's potential growth rates for the period 2014-2023. Figure 1 presents the historical and future potential growth rates (converted into GDP growth). As a comparison, the actual GDP growth rates are also presented.

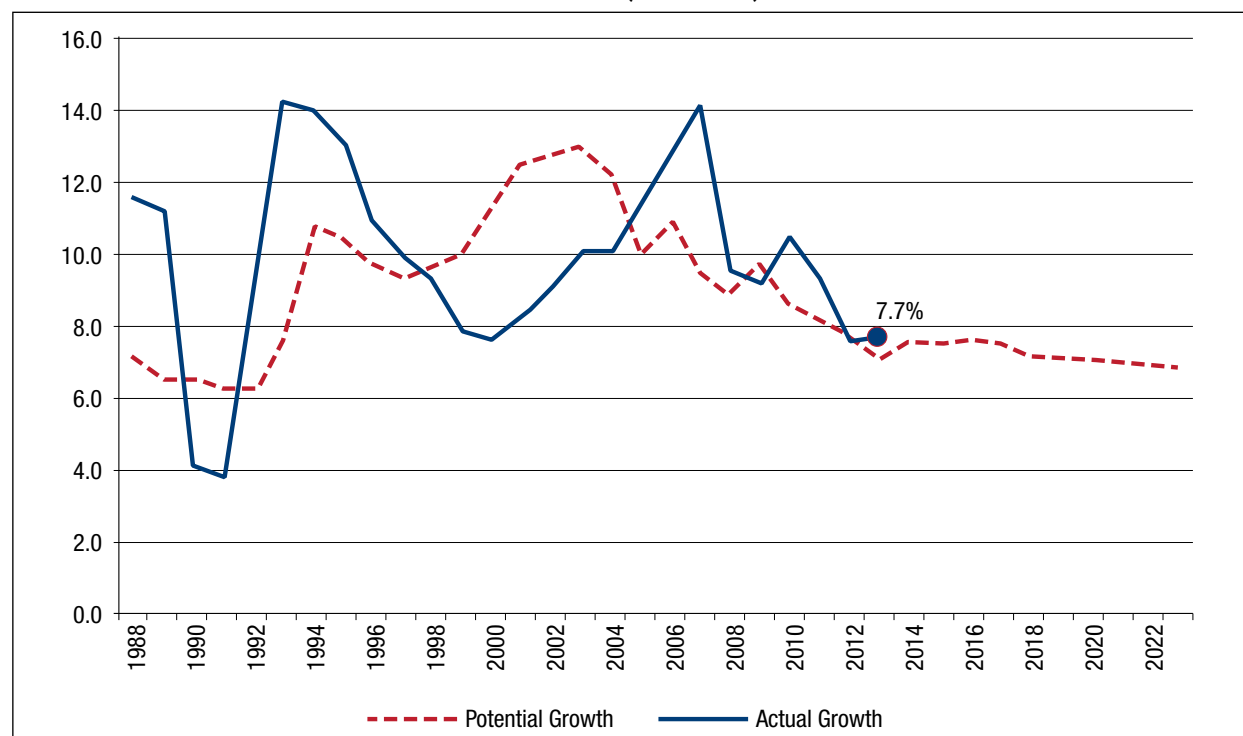
The comparison between the potential rates and the actual rates matches China's business cycles. The Chinese economy outperformed its potential growth rates in two periods, the 1990s before the Asian financial crisis and the years around the global financial crisis. In between, the Chinese economy experienced deflation and its actual growth rates were below its potential growth rates.

China's potential growth rates in the next 10 years are predicted to be in the range of 6.9 to 7.6 percent, with an average of 7.27 percent. This is indeed much lower than the 9.4 percent average in the period 1988-2013. Because the growth determinants other than the working-age ratio are assumed to keep their historical trends, this decline is mainly driven by China's worsening demographics. It is worth mentioning, though, the prediction assumes that China's labor participation rate remains constant. As indicated previously, the unfavorable demographic trend can be neutralized if China gradually raises the retirement age.

A Note on the Piketty Thesis

Based on a large quantity of historical data, Thomas Piketty (2014) proposes that income distribution in a capitalist system will inevitably be worsened because the share of return to capital in national income increases steadily. The key premise is that the rate of return to capital—the interest rate—is higher than the growth rate of national income. Piketty believes that this premise holds in

FIGURE 1. CHINA'S POTENTIAL GROWTH RATES (PERCENT)



Source: Author's own calculations.

slow-growing countries. However, it also applies to China, a fast-growing country. Although the baseline interest rate is relatively low, often around 6 percent, the interest rates prevailing in the shadow banking sector and informal markets, now growing quickly, is often higher than 10 percent. However, Figure 2 shows that China seems not to have followed Piketty's thesis; instead, the Kuznets Curve seems to have prevailed in recent years. The official data may report lower Gini coefficients because the National Bureau of Statistics (NBS) household surveys are likely to miss the very poor and the very rich, but the declining trend since 2010 is confirmed by other independent surveys. For example, data from the China Family Panel Studies (CFPS), a national representative longitudinal survey carried out by Peking University every other year since 2010, show that the income Gini coefficient declined from 0.52 in 2010 to 0.50 in 2012.

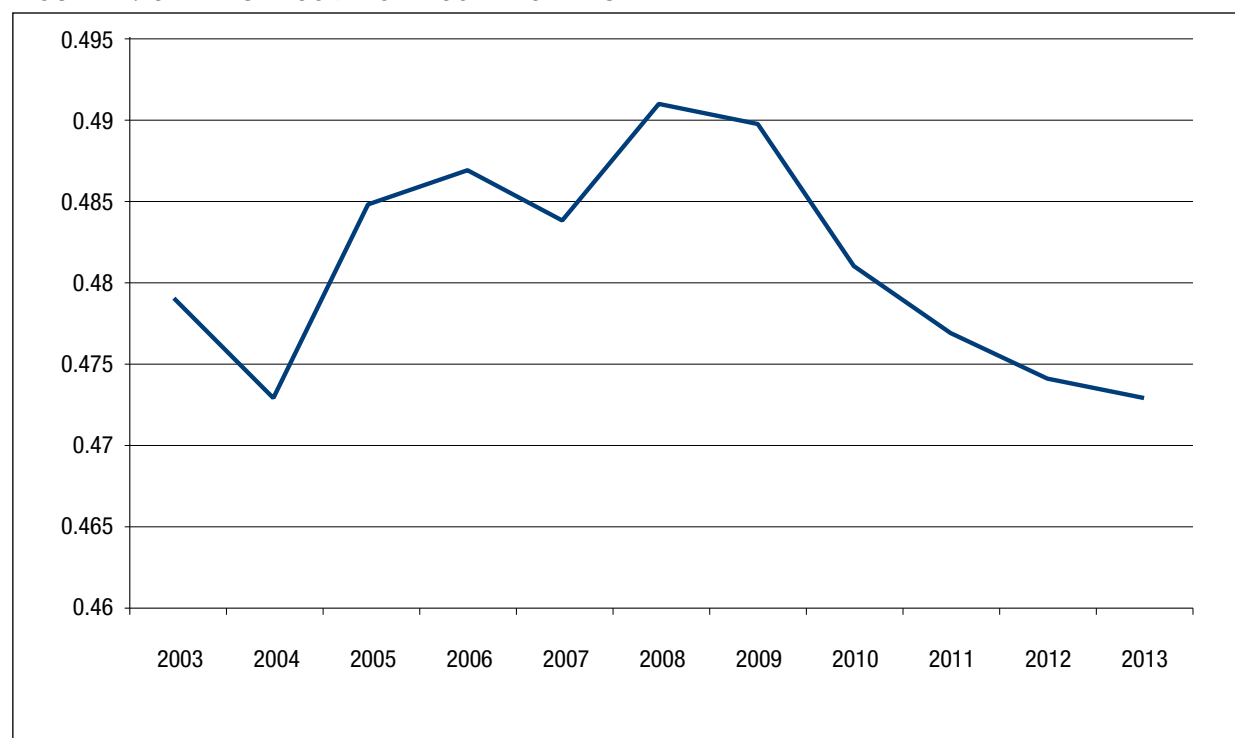
The decline in inequality has happened not just at the aggregate level; the share of the very rich has also declined. According to the CFPS data, the share of income of the top 10 percent declined

from 38.2 percent in 2010 to 35.3 percent in 2012, and the share of the top 1 percent declined from 10.9 percent to 9.5 percent in the same period.

China's income distribution continued to worsen throughout the reform period following 1978. It is probably not incidental that this trend began to be reversed in 2008. The slowdown of the world economy hit China's coastal provinces more than its inland provinces. In addition, wage growth in the coastal provinces forces many companies to move inland. As a result, a strong trend of convergence has happened among Chinese provinces and cost-adjusted wages are converging across the country. Labor share in the national income declined steadily beginning in the mid-1990s and hitting a low of 40 percent in 2008. However, it has since begun to rise, climbing above 45 percent in the last two years. There is no doubt that wage growth has contributed to this reversal. However, the effect of structural change cannot be underestimated either.

In developing countries, manufacturing is typically the most capital-intensive sector and thus its

FIGURE 2. CHINA'S INCOME GINI COEFFICIENTS



Source: National Bureau of Statistics, January 20, 2014, at www.stat.gov.cn.

labor share is the lowest among the major sectors. As a result, the labor share in the whole economy declines when a country's manufacturing sector expands. This is what happened in China before 2008. The global financial crisis accelerated China's structural change. The manufacturing sector reached its peak, and its share has begun to decline. This trend will likely be sustained if the world economy does not experience a boom similar to the one that occurred in the pre-crisis period. The Chinese economy will move toward a more service-based economy, and the labor share in national income will continue to rise.

The advanced economies may be a different story, though. The economic structure is quite stable in most of them. The dominance of the financial sector and the hollowing-out of industry are likely to be the main culprit in worsening income distribution. However, this does not mean that structural change is impossible in those economies. With certain supporting government policies, re-industrialization is not impossible.

Global Implications

Can China serve as a reasonable predictor for other developing countries? The answer is uncertain. It all depends on the specific circumstances in each country. The economies that have successfully upgraded their income levels shared strong commonalities: high saving rates, high investment rates, high working-age ratios, healthy populations, manufacturing-dominated exports, long-lasting periods of industrialization and stable political environments. China shares each of these commonalities, but other developing countries do not. Judging by their slow growth in recent years, rapid growth in emerging economies, excluding China, and some developing countries before the financial crisis was likely a consequence of their riding the tide of world growth. The world economy is entering a stage of mutual enhancement, that is, a country's growth depends highly on other countries' growth. This has a lot to do with the fragmentation of production. The production process of a consumer

product is often sliced into dozens of sub-processes that are scattered across many countries. This renders it obsolete to identify where a product is produced. "Made in China" is really made all over the world. One of the consequences is the separation of production and consumption, which is more pronounced in advanced economies that increasingly specialize in producing high value-added intermediate goods. As a result, those economies import large quantities of final products, and thus they become the last resort of consumption. The global financial crisis has substantially weakened the demand from advanced economies so, in turn, the growth of the rest of the world has slowed. The impact of a weakened U.S. economy is particularly detrimental. Since 2008, the U.S. economy has on average grown 1.6 percent less than in the period 2001-2007 (from an average of 2.5 percent to an average of 0.9 percent). Cross-country CGE (computational General Equilibrium) models show that this has caused an average drop of 0.32 percentage points for the annual growth in other major economies.⁶ If the U.S. economy can reach the goal set in 2014 by G-20 finance ministers of an additional 2 percentage points of growth in the next five years, other major economies will benefit by 0.4 percentage points.

Robust growth in China can compensate for some of the losses left by advanced economies if these economies can only achieve mediocre growth in the future. China's share of world nominal GDP is already 12 percent. It will probably increase to 20 percent by 2023. Being the world's factory, China creates demand for surrounding Asian economies and other resource-exporting economies that export either intermediate goods or resources to the country. However, China's contribution will be modest in the near future. Cross-country CGE models show that China's current growth spillover to the rest of the world is barely above one tenth of the U.S. level. The world may have to wait until China enjoys much higher per capita income to expect the country to become a major consumer goods importer.

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How Can Europe Avoid Secular Stagnation?¹

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Larry Summers crystallized an important question in a recent speech: Has the world economy entered a period of “secular stagnation”? The slow recovery in the United States since the financial crisis is his starting point and he argues that secular stagnation could also retrospectively explain features of previous decades, such as low inflation. Professor Summers had picked up an old term first coined by Alvin Hanson (1939), in his Presidential Address of the American Economic Association in 1938. Back then, Hanson focussed on the importance of (public) investment expenditure to achieve full employment. His argument was that for such investment to happen, the economy needs new inventions, the discovery of new territory and new resources, and finally, population growth.

Summers’ argument is centered on the fact that inflation rates have been falling for the past two decades and have often been lower than expected. Is a permanent fall in the equilibrium real interest rates needed to achieve full employment? Olivier Blanchard (2013) argued that it is advisable to have higher inflation rates in normal times as this makes it possible to drive down nominal interest rates more substantially so that real interest rates fall even further in crisis times. Krugman (2013) goes one step further, and even argues that the new normal may be a permanent liquidity trap, so it would therefore not be advisable to have low inflation rates in the eurozone² and the inflation rate should be increased.

So how can we summarize the situation today in the eurozone and what policy measures can be envisaged to improve the situation? I would identify three fundamental issues facing the eurozone currently.

The first issue is a lack of aggregate demand and a corresponding fall in inflation rates. The economic recovery in the eurozone has been weak and recent data show that it may slide back into a full recession again. Correspondingly, unemployment remains very high, in particular for the young. In addition, inflation rates have been falling since late 2011, and forward-looking indicators now suggest that inflation expectations have become disanchored from the close-but-below 2 percent goal.

The second important issue is the combination of significant divergences in unit labor cost with the build-up of large levels of debt, in both the private and public sector in the eurozone periphery. The gap in unit labor costs that has opened between Italy and Germany since the beginning of the euro amounts to more than 20 percent, while the gap between France and Germany is similarly around 20 percent. At the same time, debt to GDP ratios have increased prior to the crisis mostly in the private sector while since the beginning of the crisis, high deficits have added to a substantial increase in public debt to GDP ratios, for example by more than 60 percent of GDP in Spain.

The third problem is the remaining uncertainty around the state of the banking system as well as doubts about the profitability of the system. While the European Central Bank’s (ECB) asset quality review (AQR) and stress test should remove uncertainty, the assessment by the IMF is quite clear that more restructuring may be pending.³ Non-performing loans remain high in a number of countries.

It is against these three central issues that any policy response for the eurozone has to be formulated.

Partial proposals aimed at addressing only some of the above problems are unlikely to deliver results that will satisfactorily create stable and robust growth and new employment opportunities. The solution must be found in the current context of a monetary union operating without a fiscal union, and thus there are limits on what monetary policy is allowed to do. Dealing with the problems of the eurozone therefore goes beyond the risk of secular stagnation. In fact, some of the fundamental issues may not be solvable without further steps towards fiscal union.

Three Central Policy Measures to Deal with Stagnation in the Euro Area

First, policies need to be designed to address the demand shortage. U.S.-based Keynesians typically suggest that eurozone periphery countries should increase their deficits in response to the recession. However, this argument fails to acknowledge that debt levels have already increased substantially due to high deficits and that in a monetary union, sub-federal debt is inherently less stable. In fact, the eurozone has already used substantial fiscal resources to lessen the impact of the shock. Unless one is willing to accept the ECB as an unconditional lender of last resort, a policy recommendation to increase periphery deficits could quickly lead to renewed market stress with very harmful consequences for financial stability, which would in turn deteriorate the economic situation substantially. While one can argue that the ECB should automatically act as a lender of last resort to governments and buy governments bonds without conditions even in countries under stress, the legality of this arrangement is heatedly debated. While I would argue that the Outright Monetary Transactions (OMT) program is economically justified and legal, it certainly cannot be misread as an automatic policy to buy debt under all conditions. In fact, only a clear political consensus on the sustainability of debt in the context of a European Stability Mechanism (ESM) program would allow the activation of bond purchases from distressed countries.

Consequently, the best way to increase eurozone demand will be by a combination of more fiscal measures in countries with strong fiscal positions and a build-up of a eurozone fiscal capacity, together with more aggressive monetary policy. Germany in particular could use its fiscal space to increase borrowing to fund public investment as well as reduce taxes on low-income households. A eurozone fiscal capacity could be built up by using existing instruments, such as the European Investment Bank (EIB), much more forcefully, for example by increasing the EIB's leverage. Such European funds could be used to fund European investment projects as well as to support national budgets where public investment has been cut substantially recently. Monetary policy could be more aggressive by buying more bonds issued by the EIB, asset-backed securities, covered bonds as well as corporate bonds.⁴

Second, bold measures are needed to address the substantial unit labor cost divergence and substantial debt overhang. The empirical literature is clear that countries with high unit labor costs will find it difficult to attract new and productive industry, especially if their tax levels are high. The debt overhang in the private sector in some periphery countries is holding back new investments and can lead to a negative feedback-loop between corporate debt and a weak banking system, as has been seen in Japan.⁵ At the same time, it needs to be made clear that unit labor costs require an adjustment in both the deficit and the surplus countries in order to be politically feasible and economically effective. I would therefore advocate for bold structural reforms such as increases in annual working hours and increases in retirement ages to address the unit labor cost problem in the deficit countries. In the surplus countries, reforms that open up professions and lead to the creation of new industries are paramount in order to achieve adjustment. The introduction of minimum wages is a riskier policy measure, but the public sector and its wage-setting can be part of the answer to support rebalancing. To deal with the high private debt levels, restructuring and reorganization in the banking system are important. One should

also consider reviewing insolvency regimes and restructuring frameworks for the corporate and household sector, as has recently been argued by the IMF's legal counsel Sean Hagan.⁶ Policies such as non-recourse loans for mortgages have greatly helped to reduce the debt overhang in the household sector of the U.S.

Third, the remaining banking sector problems need to be addressed. It is obvious that the ECB needs to be ambitious in its stress tests and AQR. The way the exercise has been designed largely prevents the deleveraging pressure to result in a reduction in lending. Rather, the logic of the exercise should lead to deleveraging through strengthening the capital base, and there is some evidence of such an increase having happened in the eurozone banking system. An important question is about the right interplay between monetary policies and the ongoing bank restructuring process. Some of the ECB's recent measures, such as the TLTRO (targeted longer-term refinancing operations) measure may delay some bank restructuring while adding little to ease monetary conditions. It would be useful to reconsider the balance between active management of the balance sheet of the ECB through unconventional measures and the policies directly aimed at supporting liquidity in the banking system.

This overall mix of policies should deliver results in terms of addressing the underlying weaknesses of the eurozone and revitalizing growth. While a lot can be done within the framework of the current institutions, this policy mix also points to the need to upgrade the European policy framework and move towards the creation of a eurozone fiscal capacity.

Some have argued that the eurozone needs a change in its inflation target to overcome the crisis and to be better equipped to deal with secular stagnation. However, I fail to see how an increase in the inflation target can be achieved in normal times without generating significant risks to the economy. One of the important features of the pre-crisis global economy was that inflation rates

were falling despite loose monetary policy and arguably overly optimistic asset markets. In fact, more demand generated by monetary policy prior to the crisis would have led to even more substantial distortions in the asset markets and in the real economy. This could have triggered an even more substantial crisis than the one we are seeing currently. Perhaps more important than this rather theoretical consideration of normal times is an assessment of a potential change in the inflation target within the current situation. A change in the inflation target by the ECB from 2 to 4 percent, for example, would undermine the credibility of the ECB in many respects. On the one hand, it would undermine trust in the institution by all those who have relied on the ECB to keep inflation at close but below 2 percent. On the other hand, even now the ECB's credibility is endangered by the fall of inflation expectations below 2 percent. Market participants fear that the ECB will not be able to push inflation up to the target level with its existing policy instruments. Instead of changing the target, the ECB would therefore be well advised to deliver bolder policies to convince markets that it is serious about achieving its current target.

To summarize, like Hansen, I believe in the importance of the structural factors that actually provide the conditions for new investment opportunities. Fundamentally, we need to know why the equilibrium interest rate has been falling globally and why the global economy has entered "secular stagnation". Is it global demographics? Is it the lack of good investment opportunities? Certainly, these challenges need to be addressed. Also the eurozone needs to see more substantial structural policy actions to increase its long-term growth potential and to tackle the very substantial divergences between the different member states of the eurozone.

But macroeconomic policies will also have to play a larger role. One of the big problems in the eurozone has been the weakness in public investment in the last few years, in contrast to the U.S., where public investment actually increased. More European level investment in European public goods such as new and better energy and digital networks should also

be undertaken. But the EU will also need a boost in domestic investment at the member state level. Monetary policy needs to be bolder and arguably the ECB has the instruments available. Overall, President Draghi's Jackson Hole speech points the way in the right direction.⁷ The euro area needs bolder fiscal and structural policies, and the ECB must also play its part.

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Growth, Convergence and Social Conditions: Where is Europe Headed?

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The critics who announced in 2011 and 2012 the coming disintegration of the eurozone have finally been proven wrong. But the continent is now facing three new and severe, if less acute, challenges.

First, growth: No recovery is on track; deflation is the coming threat; unemployment remains dramatically high, especially for the young; timid policies are progressively reducing growth potential. Is secular stagnation already imposing its mark?

Second, social conditions: The benefits of the single market for decades translated into a shared prosperity; the debt crisis led to the adoption of costly, albeit necessary, reforms that are exacting a high toll on the southern countries and are giving rise to a dual Europe. Can “social Europe” survive?

Third, convergence: The EU integration process has involved a succession of crises and steps forward that have required bold but converging views between the member states, France and Germany in particular; today, this “Franco-German engine” seems to have stalled. Can it be revived?

The eurozone, having successfully emerged from the acute phase of its debt crisis, is again entering uncharted waters. There is no region in the world economy where the three debates about growth, convergence and social conditions are more closely linked. This paper explores this new horizon and finds reason for hope.

Policy and the Eurozone Crisis: It's Politics, Stupid

The management of the eurozone debt crisis can undoubtedly be qualified as chaotic. Mutual

resentment, continuous hesitation and major policy errors have had dramatic consequences on financial markets. But the politics beyond the management of the debt crisis has been frequently misunderstood. The critical question that made a euro breakdown plausible for two exhausting years was as simple as this: *Are the eurozone member countries willing to stick together whatever this implies?*

This was a time when the Commission was weak and the Parliament nonexistent; inter-governmental cooperation was the rule of the game and Germany undoubtedly played the leading role. Two years of political debates between national governments, with decisive participation by the only federal institution, the European Central Bank (ECB), were necessary to offer to the public and to the markets a credible—and positive—answer to this question. The “Four Presidents Report,” launched by the European Council in December 2011 and adopted in June 2012, confirmed the unanimous adherence to monetary union and designed policy changes to make it function properly in the future.¹ ECB President Mario Draghi famously translated the political decision into financially intelligible words: “We will do whatever it takes to preserve the euro and believe me, it will be enough.”

The eurozone having clearly exited the financial danger zone is now moving—to British repulsion—towards ever greater integration (e.g., fiscal union, banking union); the result will not be perfect but it will work. Nevertheless, the costs of this crisis have been huge. In the wake of austerity measures and structural reforms, unemployment has skyrocketed in southern European countries and social conditions have deteriorated. Is Europe politically well-equipped to face these completely different challenges?

The most striking innovation in European politics has been the high-voltage political debate over the choice of the new president of the Commission; rightly so, but for the wrong reasons. The U.K. forcefully opposed the designation of Jean-Claude Juncker for weeks; the British prime minister relied on the traditional bargain of governments choosing the smallest common denominator (Mr. Barroso in the previous case) through a diplomatic process. Unfortunately for David Cameron, this time was different, because the Parliament's powers have been extended to include the right to veto a candidate proposed by the European Council. Even if the decision by the European Council was unanimous, their candidate could not be imposed on a recalcitrant Parliament. Democratically elected by hundreds of millions of voters, the Parliament, the day after the election, proved clearly willing to exercise these new powers: parties of almost all political stripes—the right, the left, the greens, and even the Greek extreme-left (Syriza), proclaimed that they had one and only one candidate, Mr. Juncker who, as *Spitzenkandidat*, led his center-right coalition to victory. Misunderstanding this new political context, David Cameron entered into a rear-guard personal battle against Jean-Claude Juncker that he had no chance of winning. The electoral victory had turned into a democratic victory.

Contrary to the expression immediately coined by *The Economist*, there is nothing in this Parliament that could be called a “Eurosceptic Union.”² To be blunt: “Brussels” may be discredited in Europe, but no more than Washington is in the U.S. electoral progress among Eurosceptic parties is a reality and it would be dangerous to underestimate voter frustrations. But frustrations against what? Against austerity in Greece? Yes. Against perceived excessive immigration in many countries? For sure. Against Hollande and what remains of Sarkozy's UMP party in France? Absolutely. But certainly not against the euro. In fact, adherence to the euro remains extremely strong everywhere: A Pew research survey in spring 2013, confirmed in the elections a year later, showed around two-thirds of voters almost everywhere were willing to keep the

euro (69 percent in Greece, 67 percent in Spain, 66 percent in Germany, 64 percent in France), with only one-third favoring a return to their old national currency.³ Make no mistake about the results: Eurosceptic parties will be vocal expressing frustrations, but they will prove much less influential than the headlines have suggested. It is true that the far-right Front National in France is a shock for the French political establishment, but the victory of the reformist Italian Prime Minister Matteo Renzi is a more positive outcome of that same election. The far-right Danish People's Party topped the polls in Denmark, but in the Netherlands the populist party, estimated to come in first, slid to fourth. All in all, Eurosceptics will have the loudest voice they have ever had within European institutions, but they have demonstrated that they do not have much in common. The reality is that, with their disparate voices, UKIP, the Front National, Syriza and the other Eurosceptic parties will prove much less influential in Brussels than, say, the Tea Party in Washington.

Pro-European parties represent a wide majority and Brussels is more than ever the center of European politics. These parties had strong reasons to agree on the choice of the Commission president, but they are unlikely to go any further towards forming a transnational “grand coalition” (like the German one). This strategy would reinforce the perception of an elite cartel running the EU to the detriment of many Europeans, and that would fit precisely the Eurosceptic narrative of a division between elites and the people. More importantly, pro-European parties must now design policies that will deliver jobs in the foreseeable future. There is no alternative, no way to turn political debates into a battle between pro- and anti-Europe. Politics in Brussels must be based on pragmatic responses to the challenges facing the union and its member states, primarily employment and growth.

Slow growth in recent years is not the start of a secular trend of stagnation; it has very understandable reasons. Investment and growth have been severely hampered by the consequences of the debt crisis in the eurozone. Despite decisive action by

the ECB, expectations everywhere bar Germany have suffered deeply from dramatic uncertainties regarding the future of the euro and the depressing effect of austerity measures. These two obstacles have largely but not fully been removed: There is no more uncertainty about the fact that the European market in five or 10 years will be the continental market companies are struggling for. Issues with economic policies are far more complex. Austerity produced the results that were expected, the lax fiscal policies too many governments had indulged in have been corrected, and structural policies that are a pre-condition of a successful monetary union have been significantly if not completely harmonized. This adjustment was costly but necessary, Germany was right to impose it and the indebted countries were right to adopt them. But more austerity now would mean deflation and depression. This would be a policy error in the same vein as the attempt by Winston Churchill to restore the parity of the pound in the 1920s. It's time to start the policy debate afresh in Europe. The president of the Commission already outlined his proposal for a new strategy, and while Chancellor Merkel expressed reservations, this time it will be different for 2014 brings something new in the play: There is a Parliament where this debate will be democratically and publicly shaped.

Towards a Dual Europe or a New Social Contract?

Despite the lack of common social policies at the European level, the convergence of social conditions between most eurozone countries before the debt crisis was surprisingly strong, but based on weak foundations. First, financing was fragile; many governments had indulged in lax social spending permitted by extremely low interest rates. Second, this easy-going policy translated into significantly diverging trends for major policy parameters. The most evident example is the unjustifiable and unsustainable differences in pensions between countries belonging to the same monetary union. This could not last and the debt crisis was a moment of truth. Reforms were badly needed; and

many reforms have been introduced in southern member states in the last three years. Excesses that made the social protection network unsustainable have essentially been corrected. Pension reforms in particular make the eurozone today much more homogeneous than it was. Differences between social conditions in different countries now mostly reflect differences in the macroeconomic outlook; a return to better converging social conditions relies on a proper solution to the success of a growth strategy. But this alone is not sufficient.

The worldwide financial crisis and its impact on Europe and the eurozone means that, for the first time since the late 1950s, the process of economic and social convergence is being challenged. Some countries, such as Germany and others in northern Europe, managed to weather the storm rather well despite a tough shock in 2009. Following the debt crisis, southern Europe suffered serious losses to GDP, rising unemployment and a surge in poverty that the region had not experienced since World War II. Should these divergences become permanent, they would undermine the political basis of the European project. As the Pew research mentioned earlier illustrates, the European project has been a clear casualty of the crisis. People are disappointed with the functioning and the performance of the EU and support for the European project is now lower in France than in Britain (22 percent versus 26 percent!) and even lower in Italy and Greece (11 percent).⁴ The contrast between the positive perception of the currency and the negative evaluation of the union is not sustainable. Employment and social conditions are at the center of this dichotomy.

For 60 years, social policies have been absent from the European integration project: Different countries have different social preferences that do not mix easily with each other's. This is why most of the social protection network reflects nationally designed policies implemented by national institutions. The recent experience nonetheless demonstrates the need for a stronger European framework. Its goal should be the convergence of results, not the uniformization of policies. Stronger institutions

and procedures have to be built in order to regularly assess national policies as precisely as the fiscal compact does for national budgets. A “social semester” would allow an in depth-examination of past results, future trends and the need for reforms in every country. That would offer guidance about gradual changes to pension rules, health cost control, immigrant assistance and so forth. The European Parliament would work together with national chambers in order to place the indispensable convergence of policies under democratic control. Note that this framework would be applied to countries with different income levels, different age structures, different appetite for equality and so forth: Convergence means that these different situations would be made coherent, not identical. And this would cover, say, 80 percent or so of social expenditures. But “Social Europe” can no longer be contained within national boundaries; there is a need to restore the sense of a community that is bound together by rigorous budgets and well-regulated finance.

Twenty percent or so of social expenditures could thus in the future be designed and implemented as eurozone-wide policies. Financing these expenditures would come from eurozone proper resources that would be decided within the budget procedure. They would be complements, not substitutes, to national policies. A realistic proposal for such a policy, already widely circulated, could be a eurozone-wide unemployment scheme; it makes sense from an economic point of view because exercising at the eurozone level contra-cyclical effects between regions diversely affected by changing conditions on the continent. These new eurozone policies should not duplicate traditional health or old-age policies; rather they should be oriented towards the preparation of a common future. Acting at a eurozone level can increase labor mobility within Europe, encourage innovative activities for all those who have the talent to engage in business or research, stimulate flexibility and adaptation through a vibrant social dialogue within European-wide companies and successfully integrate senior citizens (“the aging society”) as active participants in a vibrant social market economy. If

finally willing to open more creative avenues and prepare the social state of the 21st century, one can think to introduce a version of a generalized minimal; it could start as a circumscribed instrument that could for example be specifically directed towards the young (18-25) that are suffering today from such adverse labor market conditions. After a modest departure, a eurozone-wide minimal income could prove a powerful tool that could after 2025 have developments comparable to what age or health protection, unthinkable one century ago, turned to be: a central piece of the social fabric.

Can Germany and France Make a New Start? Yes They Can

European integration has never been a story of old nations, having spent most of their history fighting each other, suddenly deciding to join together in a “perfect Union.” It has always been a tortuous political process whose most powerful engine has been Franco-German cooperation. France and Germany share major common interests but they are also competitors and frequently differ in terms of economic policy preferences. This is why, for more than 50 years, France and Germany compromising on an issue or making bold proposals to their fellow EU members made so many (unlikely) steps forwards possible. But the gap between the two countries in terms of economic competitiveness has increased during the last decade, and the divergence between the two governments on policy and structural reforms sometimes seems irreconcilable. So how serious is the present Franco-German disparity?

The contrast between France and Germany in the last 15 years is in this respect fascinating. Having flourished while Germany was engulfed in the reunification process, France ignored the opportunities and constraints of globalization. As globalization grew and voters asked for protection the country took an easy path and improved its social system. No government nor statesman rose up to offer a vision of how the country could keep its place in a changing world, to tell the truth to voters

and to make the economic and financial decisions that were more and more clearly required. On the other side of the Rhine, Chancellor Schröder recognized the changing globalized environment and in a couple of years transformed a struggling country into the economic powerhouse that Angela Merkel would subsequently inherit. At the outset, German elites decided to organize the competitive come-back of Germany (“*Model-Deutschland*”). The timing was perfect, exploiting in 2005-2007 the last period of global expansion before the financial crisis. By contrast, French voters and politicians agreed to kick the can down the road as long as possible. When Germany under Schröder decided to quickly restore fiscal discipline (from a 3 percent deficit in 2005 to balance in 2007), France continued on its complacent path so that a difference as high as 4 percent of GDP appeared between the deficits of the two countries in 2007 and 2008; and this difference has remained unchanged. The European Commission repeatedly pressed France to reduce its structural deficit to below 3 percent in 2013; the 2014 ratio will be above 4 percent.

That said, the French president’s commitment to more sound public finance now appears credible, and the need to pursue a fiscal policy that avoids pushing the economy into recession is accepted by financial markets and international financial institutions. The government recognizes competitiveness is an overarching challenge, and the president has progressively imposed on his recalcitrant majority what he himself called a “supply-side policy.” But the situation remains fragile: The resilience of the country to any adverse shock is diminishing, its financial external position remains weak, and government policy relies too heavily on tax increases rather than on spending cuts. Any sort of social upheaval could abruptly derail recovery efforts. The political institutions of the Fifth Republic are resilient; but the two major parties, the

socialists and the center-right UMP, are deeply divided while the extreme right is making progress. Germany thus remains ambivalent: On the one hand, there is a widespread belief that France is habitually tempted towards the wrong side of budget discipline; on the other hand, there is a deep conviction that France cannot be pushed into austerity like Spain or Italy without dramatic consequences for the rest of the eurozone. France is not the “ticking time-bomb” that *The Economist* painted in November 2012,⁵ but the correction of serious French imbalances remains a major hurdle in the Franco-German relationship.

The debt crisis has had two contradictory effects on the Franco-German relationship. For one, the difficulty to design and implement rescue packages and new institutions exemplified significant differences of interests. Germany has good reasons to be cautious as she remembers the French slogan in the 1920s, “Germany will pay.” This is, for example, why Germany has opposed the creation of euro-bonds in the absence of a properly functioning fiscal union. And yet, the crisis made clearer than ever the proximity of the socio-economic model of the two countries, traditionally called “*économie mixte*” and “*Sozial-marktwirtschaft*.” Franco-German differences regarding industrial policy may be real, but are little more than nuances when compared to other forms of capitalism, be it American, British or Chinese. This closeness explains and legitimates the constant willingness in the past to compromise when facing common challenges. Despite traditional divergences regarding monetary policy, the bold decision to create a monetary union was in that sense the pragmatic solution to a simple equation: A truly single market (not a free trade area) requires a single currency. What is required today is that the chancellor and the president demonstrate the capacity to push the work of their predecessors, Chancellor Kohl and President Mitterrand, further.

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Quantitative Easing and Deflation in a Creditor Economy

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The world seems to be divided now between happy debtors and unhappy creditors. During the acute phase of the financial crisis it proved to be dangerous to be a debtor as risk aversion rose suddenly, and many debtors experienced difficulties in servicing their debt or simply rolling it over. During that time Germany appeared to be in a strong position as its economy proved resilient to the financial crisis. However, the world has moved on. Risk aversion has fallen again and the world is awash with liquidity and excess savings desperately looking for some return in an environment characterised by zero interest rates and an absence of inflationary pressures. In particular, the Anglo-Saxon debtor nations such as the U.K. and the U.S., which both have sizeable external deficits, are growing more quickly than creditor countries like Germany or, for that matter, the rest of the euro area in general.

This reversal of fortunes has its economic logic, which is seldom recognized. The basic problem is that the standard guarantee against deflation is ultralow interest rates supported by vast central bank purchases of government bonds. However, this approach might not work or, worse, might even be counterproductive in creditor economies like Germany and other European countries.

At the G-20, as in other international forums, it is now widely felt that the European Central Bank (ECB) should do “something” to prevent the euro area from sliding into outright deflation. This “something” is usually taken to be the massive outright purchase of securities on the open market. The ECB has already announced its intention to buy large, but unspecified, amounts of asset-backed securities, but it is shying away from

large-scale purchases of public debt such as those undertaken by the Federal Reserve or the Bank of England under their quantitative easing (QE) programs.

All these variants of asset purchases (asset-backed securities or public debt) share one aim, namely to lower interest rates in the long term. Short-term interest rates are already close to zero for most assets of low risk (even the governments of Italy and Spain can now refinance their debt at less than 1 percent for maturities up to two years). The only rates that can still go down are thus longer-term interest rates. These rates are already around 1 percent for Germany, but the rates on Spanish and Italian government debt are still around 2.5 percent. For the latter there is thus more room for downward movement. The ECB might thus be able to push long-term interest rates a bit lower.

The question too seldom asked, however, is whether even lower long-term interest rates would solve the euro area’s deflation problem.

Discussion on the need to do something to prevent deflation has so far proceeded along predictable national patterns: Creditors do not object to deflation since it increases the real value of their investment. Deflation is thus not viewed as a problem in economies dominated by creditors and vice versa in debtor countries.

In a closed economy, to every credit there must be a corresponding debt. But this is not the case if one considers individual countries. Some countries have a large foreign debt burden, whereas others find themselves in a large creditor position.

The U.S. and Germany (or Japan) are at opposite extremes of the creditor-debtor spectrum. The U.S. has run current account deficits for over 30 years and has enjoyed the “exorbitant privilege” of being able to pay for its external deficits by issuing debt denominated in its own currency. Foreigners hold about \$7 trillion worth of U.S. bonds (mostly Treasury paper). A reduction of the yield by 1 percentage point yields a net gain of about 0.5 percent of GDP and the investment income balance of the U.S. has indeed improved since the start of QE by about 0.7 percent of GDP, although its net foreign investment position has continued to deteriorate. For the U.S., lower interest rates thus represent a considerable income gain.

This implies that a reduction in U.S. interest rates will benefit the country as whole, relative to the creditor countries, like Japan or Germany, because both of these countries have run large external surpluses for a long time and have thus accumulated large external assets, mostly in fixed income. Creditor countries like Japan and Germany would thus lose out in terms of interest income when the central bank engineers lower (long-term) interest rates. It is thus not too surprising that the investment income balance of Germany has not improved much over the last few years, although its net creditor position has further ballooned as the country continues to run large current account surpluses.

Within the euro area, for which external accounts have until recently been close to balanced, one finds a similar debt/creditor dynamic involving Germany and the Netherlands relative to much of southern Europe. In part, this difference explains the hostile stance on QE in the German financial press¹ and the increasingly desperate calls for more action by the ECB from the over-indebted periphery of the eurozone. But how effective would large-scale quantitative easing be in the euro area? The aim of QE or any form of asset purchases is, as mentioned above, to lower long-term, market interest rates. In financial market terms, the purpose of QE is essentially to flatten the yield curve. This implies that QE can be effective only in economies in which changes in the long-term market

rates (say, 10-year) play an important part in the private sector.

In Europe most corporate sector investment is financed by bank loans, whose maturities are typically not very long term (ordinarily not much more than five years) given that banks themselves have little secure long-term financing. Moreover, given this financing structure of the banks, many long-term bank loans are extended on floating rates. Lower 10-year rates are thus unlikely to have a strong impact on the financing conditions of the corporate sector, and thus little impact on investment in the euro area.

By contrast, in the U.S. a much larger proportion of investment is financed via the issuance of bonds, which can have a longer maturity than bank loans (and which are priced on the basis of the government bond yield curve). This implies that QE could lower the cost of capital for the corporate sector in the U.S.

For households, the main impact of lower interest rates is seen in mortgages. Here again the euro area is quite different from the U.S. and also is experiencing sharp regional differences.

Loans in the southern part of the euro area are mostly on floating rates. This constitutes an advantage right now given that short-term rates are close to zero. But it also implies that QE would not reach southern European households whose mortgages are indexed to the Euribor rate and are already close to zero. This applies in particular to Spain where mortgage debt exploded with the construction boom. In Italy mortgages are less important, but Italian enterprises are highly indebted. But their bank loans are usually short-to-medium-term and are thus also not likely to change much even if the Italian government can refinance its debt at lower rates.

In the U.S., the typical 30-year mortgage is formally at a fixed rate. But in reality a U.S. household always has a prepayment option should interest rates fall. This implies that a fall in 10-year rates can have,

and was widely expected to have, an impact on household spending because lower long-term rates typically lead to waves of mortgage refinancing, leaving households with lower monthly payments and thus higher disposable income. This mechanism does not operate in the euro area because mortgage rates are usually floating in the south and fixed without a pre-payment option in the north.

An indirect effect of QE is usually expected through its impact on asset prices, especially housing. Here again the U.S. example is misleading for Europe. Owner occupancy rates are high in the U.S. and the financial system allows households to extract equity in their homes relatively cheaply, either via second liens or by refinancing the entire mortgage. This is not possible in most of Europe, and especially not in Germany, where loan-to-value limits remain conservative, refinancing is costly and where most banks would frown on second liens based on higher house values for the purpose of financing higher consumption.

Higher equity prices would also do little to stimulate consumption in Germany given that the majority of the shares in publicly traded companies are held by foreigners, while German households own very few shares. By contrast, those U.S. households that do save hold a substantial share of their portfolios in shares.

Differences in the financial structure thus interact and sometimes compound the debtor versus creditor differences across the Atlantic. QE might work in a debtor economy with a flexible financial system, but not in a creditor country with a conservative financial system, as in Germany (and a number of northern European countries have similar structural savings surpluses, as shown in Box 1).

Moreover, the indirect impact of QE on asset prices is bound to increase inequality, and might thus have a negative impact on demand.

Once more, the U.S. experience, where higher house prices stimulate consumption, is misleading. In the U.S. an increase in house prices allows

the owner to take out additional credit in the form of a home equity loan. These loans might be higher risk for the banks when house prices fall, as they did after 2008. But the risk to the consumer is limited since most mortgages are either de jure or de facto “no recourse,” meaning the mortgage holder can walk away from his or her debt in case of payment problems. This encourages higher consumption on the back of higher housing prices.

This is not the case in Europe, especially in Germany, where house prices have been increasing lately. But increasing house prices in Germany risk dampening, rather than fostering consumption demand. Only a little over 40 percent of German households own their place of living. Most households just see rents increasing, which reduces their disposable income and lowers consumption. Moreover, in Germany, the average is misleading: House prices are increasing in the major cities, but falling in the countryside. Home ownership rates are typically higher in rural areas where families build their own homes, but lower in large cities where renting is more prevalent. An increase in house prices thus shifts wealth from the relatively less prosperous (the rural and those renting in general) to those who own the housing stock, who tend to be relatively wealthy. This implies that higher house prices shift wealth and income towards the better off. Since the latter have typically a lower propensity to consume, it follows that the impact of a policy of low interest rates, whether through QE or other means, might not have the desired effect of stimulating consumption.

The same reasoning applies, *mutatis mutandis*, for the impact of QE on other asset prices, such as equity prices. Holdings of equity are typically concentrated even more than income and wealth in general. The recent large increases in stock prices, which are thought to be at least partially a product of QE, thus contribute to the trend increase in inequality that has been documented recently by the French economist Thomas Piketty.

The one channel through which unconventional monetary policy could have a stronger impact in

BOX 1: GERMANY AND THE NORTHERN EUROPEAN EXCESS SAVINGS AREA

An emphasis on Germany seems justified within the context of Europe, although Germany represents less than 30 percent of eurozone GDP. Germany is important, but not dominant in Europe.

In the context of the G-20 the focus on Germany hides the fact that the country represents the tip of a larger northern European iceberg: Excluding English-speaking states, all northern European countries with a Germanic language are running a current account surplus. Indeed, the Netherlands, Switzerland, Sweden, and Norway are all running surpluses that are larger as a proportion of GDP than Germany's.

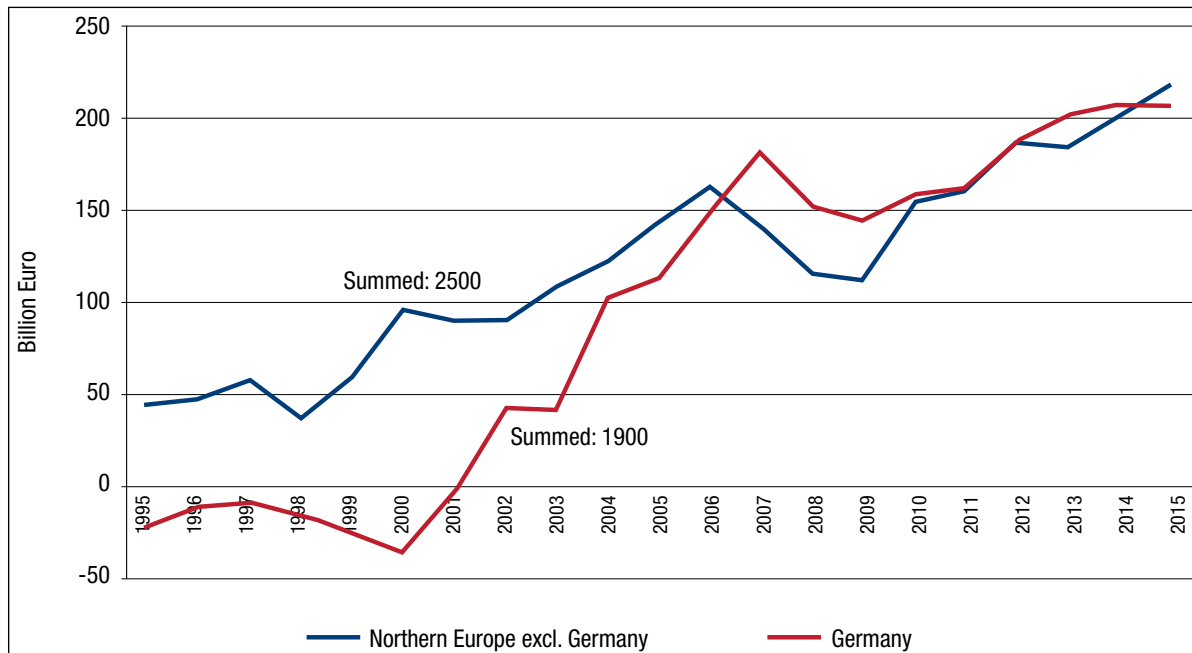
These small countries' combined annual external surplus is more than 200 billion euro (over \$250 billion), slightly more than that of Germany alone (see figure below). Moreover, their surpluses have been more persistent than those of Germany, which 10 years ago had a current account deficit while its linguistic kin were already running surpluses of a similar size to today. Over the last decade, this group of

small countries has recorded a cumulative surplus that is even larger than that of China.

Today, the counterpart to northern European excess saving is 'Anglo-Saxon' dissaving: All English-language countries are running current account deficits (and have been doing so for some time). Taking the United States, the United Kingdom and major Commonwealth countries together, the sum of the Anglophone current account deficits amounts to more than \$600 billion, or roughly 60 percent of the global total of all external deficits, somewhat larger than the combined northern European surpluses of around \$500 billion.

It is not surprising that national policymakers and news media in Anglo-Saxon countries are complaining of the German surplus. But Germany constitutes 'only' half of the problem. If QE does not work in Germany, as argued here, it might not work in the rest of northern Europe either.

EXCESS SAVINGS IN NORTHERN EUROPE



Source: Adapted from <http://www.ceps.eu/book/germany-scapegoat>.

the euro area than in the U.S. is the exchange rate. The share of exports in GDP is almost twice as high in the euro area than in the U.S. However, it is doubtful that QE by the ECB would have a strong impact on the exchange rate, which is driven generally more by short-term rate differentials. Given that short-term rates are already zero throughout most OECD countries, it would appear that there is little the ECB could do to ensure a devaluation of the euro short of outright foreign exchange intervention. Moreover, any implicit exchange rate policy of the ECB could represent a zero-sum game at the global level, resolving some problems in Europe at the expense of the rest of the world, whose recovery might then be weaker.

The key problem of the euro areas is weak domestic demand in Germany (and other northern European surplus countries). This problem might actually be made worse by an attempt to drive down long-term interest rates through QE. A German household trying to increase its retirement income would have to save even more to achieve a certain target if interest rates were to go down. Close to two decades of near-zero interest rates in Japan also did not lead to a reduction in the Japanese savings surplus. Browbeating the ECB into a large-scale QE program might not lead to the desired result.

So what could make northern Europe spend more? It is tempting to conclude that only a strong fiscal

expansion would do the trick given that northern Europe is one of the few regions in the world that still has “fiscal space.” But the past has shown that the northern European surplus does not depend strongly on fiscal policy. Moreover, it is unlikely that this “fiscal space” will be used given that unemployment remains low throughout northern Europe. The governments in the region do not have a domestic incentive to run higher deficits and all of them think that they escaped the crisis only because they had run tight fiscal policy during the boom years. The German surplus had been a feature of the global economy for decades until the mid-1990s. Only the shock of unification led to its disappearance. The German surplus has now returned with a vengeance, and has been doubled by the surpluses of the other countries in the region.

Would stronger northern European demand solve southern Europe’s problems? This seems unlikely given that exports to northern Europe constitute only a small fraction of southern Europe’s GDP. Studies with large models have repeatedly confirmed this conclusion. However, northern European excess savings constitute a serious issue for a global economy still short of demand. This issue should be on the agenda of the G-20, not just Europe’s, but it is unlikely that it will be resolved any time soon.

Secular Stagnation: Can India Buck the Trend?

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Introduction

India's GDP has grown at an average rate of over 6 percent per annum over the last 35 years, which would place it among a small elite group of high-growth countries.² Overall, the global economy had also done relatively well throughout this period up to the North Atlantic Financial Crisis (NAFC) which broke out in 2008. Global trade has also had a golden period of high growth. The most important question for India now is if we can join an even smaller elite by maintaining a sustained high growth path over the next three decades.

Such a question, if posed five years ago, would have elicited a definite “yes”. The situation now is different, but we still answer “yes” albeit with some uncertainty. In the advanced economies, the Great Moderation has given way to the Great Recession and now to the emergence of widespread concern about the initiation of a long period of secular stagnation in the advanced economies in general. What could have earlier been seen as a large cyclical downturn is feared by many as the precursor of a longer period of slow growth in the advanced world that could have repercussions on developing countries as well.

Coming back to India, despite the high growth of the last three decades, the per capita income of India remains low at around \$1500 per capita. Even if per capita income grows at around 7 percent per annum, it will only reach around \$6,000 by around 2035 (2011-12 prices and market exchange rates). Viewed in this context, India simply does not have the option of not aiming for high growth.

This paper provides one scenario that suggests that it is well within the realms of possibility for India

to achieve accelerated sustained growth of 8 percent-plus over the next 15-20 years, even if there is a sustained slowdown in much of the advanced world. But this is predicated on global trade recovering from the Great Recession slowdown, as a consequence of the greater weight of fast-growing emerging markets and developing economies (EMDEs) in the global economy. Mostly, it will take strong policy action by Indian policymakers, in terms of macroeconomic stability, particularly fiscal stabilization, and continuous structural action to stimulate high public and private investment. India has a demonstrated track record in both areas since the early 1980s, so there is some basis for optimism, although the institutional development and reforms now needed to move up the ladder towards upper-middle income status will be of a much higher order than those achieved in the past.

Can High Growth Be Restored in India? A Simulation for 2017-32

We start by analyzing India's recent growth slowdown, before turning to describe simulations for a return to rapid growth in the medium-term.

The Great Slowdown: 2012-14

The growth slowdown during 2012-14 occurred after almost a decade of consistent high growth, including a sharp recovery from the 2008-09 crises. The monetary and fiscal policy response to the NAFC was admirably rapid, but there was overshooting of the stimulus. This caused high but unsustainable growth—averaging around 9 percent—during 2009-11 and sowed the seeds for

inflation and current account pressures. Inflation is still to come down to the desired levels of 4-5 percent, and fiscal correction is a work in progress.³

The delayed and incomplete withdrawal of the fiscal stimulus led to crowding out of the private sector, which has also hampered private corporate investment. Simultaneously, high nominal interest rates in an environment of subdued growth also impacted corporate profitability and investment, which has suffered a notable slowdown. Moreover, the global environment has imparted headwinds: Growth in exports of goods and of services during 2012-14 was almost a third of that during the 2003-07 period. The strong boost to domestic demand during 2009-11 from the domestic stimulus led to widening of the current account deficit (CAD) from 1.3 percent of GDP in 2007-08 to 4.7 percent in 2012-13, clearly above desirable and sustainable levels. Finally, a key feature of the great slowdown is the near collapse of manufacturing growth in 2012-14, which has been near zero during this period—an almost unprecedented event for the Indian economy since independence.

A Simulation for 2017-32

Historically, Indian growth accelerations have been accompanied by higher gross domestic investment rates, largely financed from correspondingly increasing domestic savings.⁴ One scenario for significantly higher savings and investment levels, consistent with a return to 9 percent growth, has been released by the National Transport Development Policy Committee (NTDPC 2014) in its recent India Transport Report: Moving India to 2032. The simulations reported here are essentially taken from this report.⁵

The projections aim to provide a consistent macroeconomic framework for returning Indian annual GDP growth to around 7 percent in the near future and then ascending to 8-9 percent over the period 2017-2032. The objective is to work out the implications for the kind of movements that will be needed in key macroeconomic magnitudes

that would make such growth possible. The results then provide some assessment of the feasibility of achieving such a growth objective. This scenario entails the gross domestic capital formation (GDCF) rate to increase from about 35 percent in 2012-13 to around 39 percent during 2017-22, and further to 43 percent during the five-year period 2027-32. Such a projected increase in investment would appear to be achievable in view of the actual investment level of 38 percent reached in 2007-08. The corresponding rates of domestic savings would be about 36 percent during 2017-22, rising to 41 percent during 2027-32. These projections envisage an increase in all of the three major components of savings—household, private corporate and public savings. While the projections may seem ambitious, they appear to be reasonable and achievable, given that the domestic savings rate had reached almost 37 percent in 2007-08. In this scenario, the absorption of external savings has been kept at around 2.5 percent of GDP throughout the period, which is judged to be consistent with a sustainable CAD.

What do the projections imply for the overall efficiency of the economy? One crude measure of productivity is the incremental capital output ratio (ICOR). Indian ICORs have ranged between 3.5 and 4.5 for much of the past three decades, except for some outlier years. Our projections embedded in the desired growth paths of GDP and GDCF imply an ICOR of about 4.2 over the next couple of decades. We are therefore assuming a relatively high level of efficiency in resource use, but which is consistent with Indian historical achievements and hence in the realm of feasibility.

What would be the nature of sectoral growth transformation that would be consistent with projected GDP growth? A key feature of such a growth path is that, even with relatively optimistic agriculture growth scenarios of around 4 percent per year, overall GDP growth rates in excess of 8 percent are really not possible to achieve without manufacturing growth approaching 10 percent. Whereas such a high rate of manufacturing growth was indeed achieved during 2005-08, India has never exhibited

such a rate over a sustained period of a decade. The revival of competitive Indian manufacturing over a period of a couple of decades is a key element of the scenario.

Financing Growth

Household savings have been the bedrock of domestic savings in India, exhibiting a steady increase over the years. They reached about 21 percent of GDP during 1997-2003 and ascended further to just under 24 percent during 2008-12. We have projected only a slow increase to about 28 percent by 2027-32, concentrated in household financial savings. These need to be restored to the earlier 10 percent level in the near future (from 7 percent at present), and then increase gradually to around 13 percent by 2027-32. This would appear reasonable with increased financial depth in the economy as income increases at the kind of pace projected; increasing shares of savings should go into contractual saving such as insurance, provident and pension funds as urbanization gathers pace and people have to insure themselves for their retirement. Ensuring positive real returns on deposits is necessary to reverse the downward trend in household financial savings, along with a focused thrust on contractual savings schemes. The vast majority of Indian household savers continue to exhibit a marked preference for safe savings avenues such as postal savings and public sector bank deposits.

All of this is predicated on the softening of inflation and inflation expectations in the country over the next couple of years. As persistently high food inflation has been a key driver of headline inflation, monetary policy will have its limitations. Accordingly, supply-side policies aimed at improving productivity and output in agriculture through reorientation of government spending away from current spending (fertilizer, power and irrigation subsidies) towards capital outlays will be extremely helpful. Food-inflation containment will also depend on a more focused rollout of rural infrastructure in terms of both transport and energy, mainly a public sector function.

A distinguishing feature of the golden era of growth (2003-08) was the dramatic doubling of private corporate savings from 3.9 percent of GDP during 1997-2003 to about 7.8 percent during 2008-12, reflecting the buoyant profitability of that period. High corporate investment levels were then enabled by the availability of both ample internal and external resources. The private corporate savings rate has since fallen by more than 2 percentage points. Higher nominal interest rates have adversely impacted corporate profitability and savings. Therefore, success with fiscal consolidation and inflation management, allowing a lowering of nominal interest rates, will have a positive impact on corporate savings and investment. Restoration of private corporate investment to its earlier level of 7.5 percent of GDP should then become possible within the next three to four years. We have then projected them to increase progressively to 9.5 percent by 2027-32.

This brings us to the desired trajectory of public sector savings, which consists of two broad categories: government per se and public sector enterprises. As a consequence of the fiscal stimulus of 2008-09, government savings turned distinctly negative, after having become mildly positive at 0.5 percent of GDP in 2007-08. This broadly corresponds to the revenue deficit of the center and states combined. Interestingly, public enterprises have maintained consistent positive saving rates of around 4 percent of GDP over the past decade and a half. With the envisaged fiscal correction for the next two to three years, government savings could again approach positive levels. Cutting subsidies, especially in energy, would free up around 1.5 percent of GDP. Accordingly, we have projected overall public sector savings to increase from the current level of just over 1 percent of GDP to 3 percent in 2017-22, rising to 3.4 percent by 2027-32. This is a relatively conservative assumption and so it is possible that even greater improvement can take place, particularly if the overall tax/GDP ratio can be improved over the years.

The fiscal stimulus of 2008-09 raised the fiscal deficit of the central government to 6.5 percent of

GDP, almost completely absorbing net household financial saving, effectively crowding out the private corporate sector. Thus, reduction in the overall fiscal deficit and borrowing requirements of the government is a *sine qua non* for the restoration of high sustainable growth. The second issue with respect to fiscal policy is to focus on the revenue side; the gross tax-to-GDP ratio of the central government has recorded a significant fall from its peak of 2007-08 of 12 percent, to 10 percent in 2013-14. Cross-country analysis indicates that the ratio of general government revenues to GDP in India is lower than Asian emerging market economies and, more generally, also lower than that in countries with similar levels of per capita incomes. Increases in the tax-to-GDP ratio can be achieved through greater buoyancy without any increase in tax rates, with a renewed focus on compliance. With the buoyant growth that the Indian economy achieved in the 2000s, and even since the NAFC, there has been a very substantial increase in middle and upper income households who should be taxed more. This is indicated, for example, by the increase in the number of cars sold from 1.5 million in 2007-08 to 2.7 million in 2012-13; and in the relatively booming housing sector.

India will also need to make prudent use of external savings to ensure external sustainability. Except for 2008-09 and 2009-10, which were crisis years for global trade, Indian exports of goods and services, in dollar terms, have been growing at 20-25 percent per year since 2002: Hence their share in GDP almost doubled between 1998-2002 and 2008-12. Accounting for the global trade slowdown and protracted slow growth in the advanced economies, we are projecting a relatively slower pace of growth at 11-12 percent between 2017 and 2032. Even at this pace, exports of goods and services would increase from the current level of about 25 percent of GDP to about 30 percent of GDP in 2017-22 and 38 percent in 2027-32, so this is a relatively ambitious scenario of export growth (the current level of exports of goods and services of China amounts to about 31-32 percent of its GDP). Imports of goods and services are projected to grow correspondingly.

With this scenario, the CAD is expected to be 2.5 percent of GDP, a level which is considered sustainable. Allowing 2 percent of GDP for foreign exchange reserves accumulation consistent with higher import levels so as to provide comfort to external lenders and investors implies that net capital flows will need to be in the region of about 4.5 percent of GDP during 2017-32. From an external sustainability point of view, and given the more volatile nature of debt flows, the projections assume that equity flows will dominate, at 60-65 percent of net capital flows, with debt flows (35-40 percent) being the residual. These proportions are also broadly consistent with the prevailing debt/equity ratios in the Indian corporate sector. The debt service projections in the current account are based on such a composition of capital flows.

Available evidence indicates that rapid financial sector and capital account liberalization often ends up in crisis; financial openness is not a panacea and it could instead be poison. Benefits of financial openness are most likely to be realized when implemented in a phased manner, when external balances and reserve positions are strong, and when complementing a range of domestic policies and reforms to enhance stability and growth.⁶ Thus, sound management of capital flows, particularly that of debt flows, is essential to preserve financial stability. On the positive side, one factor that reduces India's external vulnerability, despite large twin deficits, is the fact that public debt is mostly internally held. It would be prudent to continue with this approach and to keep external confidence in the Indian economy high so that relatively stable external capital flows are forthcoming.

Infrastructure Investment

Achieving a high sustained rate of economic growth requires corresponding investments in infrastructure, including all aspects of transportation. If manufacturing growth is to be ratcheted up to around 10 percent, and if there is to be the kind of trade growth projected, the demands for the provision of power, transportation and logistics will also grow commensurately. The continued

expansion of trade requires corresponding investments in ports, airports, and in all forms of domestic transport linkages.

With this perspective, infrastructure investment will need to pick up significantly in the coming years. NTDPC (2014) projects that overall infrastructure investment will need to increase substantially from around 5.4 percent of GDP in 2011-12 to around 8 percent during the 2020s and beyond—levels consistent with the economic growth and transformation experiences of Southeast and East Asian countries. While an increasing proportion of infrastructure investment could be undertaken by the private sector, the public sector will have to continue to play the predominant role in sectors such as electricity, railways, roads and bridges. The private sector can be the driving force in the “communications” sector, in ports and airports and in commercial vehicles. For the public sector to carry out the enhanced role, fiscal consolidation, as indicated earlier, assumes importance.

A key finding of the NTDPC (2014) is the clear need to substantially raise the share of Indian Railways in total infrastructure investment, from the current level of about 0.4 percent of GDP to 1 percent and above by 2017-22, and continuing at similar levels for at least the next decade and a half. This is essential for improving productivity of manufacturing overall, for linking inland nodes to ports to aid in the sustained growth required in trade, and for a sustainable environment. Total investments in transport (including railways), both public and private, would need to increase by around 1 percent of GDP above current levels.

Manufacturing

Globally, rapid industrialization and manufactured exports have been the most reliable levers for rapid and sustained growth. Virtually all countries that have enjoyed sustained high growth rates for decades have done so on the back of manufacturing, with the growth miracles of Japan, Korea and China being conspicuous illustrations.⁷ Thus, policies that promote manufacturing activity in India

will have a key role, although the cross-country evidence indicates that the structural change in favor of manufacturing has softened in many countries and some countries are exhibiting premature deindustrialization. This makes a sustained revival of manufacturing growth challenging. What is of the utmost importance is acceleration in manufacturing growth to levels approaching double digits and then sustaining it at such levels over the next twenty years and beyond.

With the Indian economy now being essentially open on the current account, future development of Indian manufacturing has to be internationally competitive. Although the Indian factor endowment is abundant in labor, Indian manufacturing has not been generally competitive in labor-using sectors: there needs to be a focused effort at correcting this, much as China and other East Asian countries have done over the past 30-40 years, by tackling legacy issues connected with regulatory impediments that constrain the use of both land and labor in Indian manufacturing. There has been a traditional prejudice against the location of industries in Indian cities, which is where skilled labor is likely to be available. Urban land ceiling regulations and other zoning requirements have limited the availability of urban land for industrial development. Whereas in successful manufacturing-oriented cities it is common to find multistoried structures housing clothing and other light industries, these segments of manufacturing are almost totally absent in Indian cities.

There has been longstanding discussion of labor legislation hindering investment in labor-using industries, along with small scale industry reservations. The latter impediment has now largely been removed, but labor legislation problems remain. The measures needed are well known, but reform has so far not been feasible politically. The way forward has to include quick and practical labor reforms accompanied by programmes such as unemployment insurance.

Persistently high inflation during 2009-13 has added to some exchange rate overvaluation during

this period, and this is clearly visible from CPI-based real effective exchange rate indices. Success with inflation management will provide a conducive environment for stability in the real exchange rate, which will encourage exports, manufacturing activity and corporate health.

It is this combined and focused approach to urban land and labor reforms, along with the maintenance of a competitive real exchange rate that can accelerate manufacturing growth in labor-using industries. In addition, it goes without saying that the efficient provision of power, transport, and logistics is also necessary.

India has also exhibited competitiveness in heavy industries such as steel, aluminum, and automobiles. Such industries are more affected by governance issues related to environmental and other approval processes that have become more cumbersome in recent years, and from inadequate infrastructure. Some of the approval process issues are already being addressed and perhaps need further focus.

Conclusions

India's growth record since independence suggests that it is capable of recording sustained growth over a long period, even if it is punctuated by some periods of lower growth because of business cycles or other reasons. Its institutional system has also demonstrated that significant policy changes are made in response to changing circumstances. Sometimes this is done relatively quickly, whereas at other times there may be significant delays before the needed policy change is done.

Much of the Indian growth record has been possible due to sustained growth in domestic savings and associated investments. The use of external savings has been important, but has been relatively limited as a proportion of total investment. Whenever growth has stalled, it has been associated with stagnation in savings and investment, usually in the presence of a deteriorating fiscal situation and higher inflation.

The immediate priority for returning the country to a sustained higher growth path is to achieve the kind of fiscal quality and low inflation level that was exhibited during 2003-08. Focused attention needs to be given to increasing efficiency and compliance in tax revenue collection so that the Indian overall tax-to-GDP ratio rises to levels consistent with comparable international experience. In contrast, the recent fiscal correction has generally been on reduction in expenditure and particularly capital expenditures. While it is necessary to curb ill-targeted subsidies, it must be understood that the restoration of growth involves increases in public investment.

If such macroeconomic stabilization, in terms of both fiscal deficit and inflation, can indeed be achieved over the next couple of years, the projections presented in this paper suggest that it is within the realms of feasibility that the Indian economy can return to a 8-9 percent growth path for a sustained period. This would then begin to replicate the kind of growth experience exhibited by East and Southeast Asian countries, including China, in the immediate past and Japan in earlier periods. However, we do need to note that the task ahead will be more difficult now in view of the protracted slowdown in global economic growth and in global trade. The silver lining is that the weight of the global economy is shifting to emerging market and developing economies. Thus, even if the North Atlantic economies of North America and Europe do suffer secular stagnation in growth, as some are predicting, it is possible that the impact on global growth and trade may be mitigated by counter balancing growth in EMDEs.

For the Indian growth story to exhibit that kind of dynamism, it is crucial for Indian economic policy to focus on the revival of double-digit manufacturing growth, as first envisaged in the Industrial Policy Reforms of 1991 and beyond. The achievement of such industrial growth needs the maintenance of appropriate interest rates, a realistic and competitive real exchange rate, and removing impediments in labor and land markets. In addition, Indian cities must become more hospitable towards the location of manufacturing activities.

Achieving high growth in India is quite feasible but also depends on a step-up in infrastructure investment in energy and transport, especially freight and passenger railways where the whole system needs reorganization. Given that the elasticity of power demand with respect to GDP is around unity, there will be a need for sustained and continued investment in power generation, transmission and distribution. Associated investment will be required for the timely supply of energy resources such as coal and petroleum in adequate quantity from both domestic production and imports.

With these measures in place, we believe that India can buck the trend towards growth slowdowns that are now appearing in other countries, advanced and developing.

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Endnotes

1. The views expressed in the paper are those of the authors and not necessarily those of the institutions to which they belong.
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Growth, Convergence and Income Distribution: A View from Indonesia

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Global Growth and Convergence

Emerging economies, including China, India, Brazil and Indonesia, have become an important engine of global growth in the post-crisis period. However, high growth in emerging countries often hides deep structural issues that make it unsustainable. Painful structural reforms, politically and economically, that might require economies tolerating a slowdown in growth in the near term, are needed to support high growth in the long term. Such reforms require strong leadership at the highest level. Some economies have already experienced slower growth following the implementation of structural reforms and Indonesia is no different, with real GDP growth moderating from a level of 6.8 percent in the last quarter of 2010 to a projected 5.2 percent in 2014.²

This paper explores Indonesia's specific challenges in maintaining high growth and avoiding the middle-income trap. Indonesia's experiences are not unique, and we will see that many of its structural challenges have been present in other emerging economies like China, India and Brazil, and that there are many lessons to learn from the often painful structural reforms undertaken in these countries.

Neither sustained high growth in emerging countries, nor convergence in income per capita between emerging countries and advanced economies, is automatic. As the cases of China, India and Brazil demonstrate, structural reforms form the basis of sustained long-term growth, albeit often with short-term losses. There are also common structural shifts among emerging countries that will determine the rate of convergence, or

divergence, several of which are listed by Spence (2011). First, large middle-income economies need to develop domestic sources of growth—"we can expect a gradual strengthening of endogenous domestic-growth drivers in emerging economies, anchored by expanding middle class." Second, distribution matters and failure to address rising inequality can hamper sustained growth. Third, as long as advanced economies maintain low interest rates and expansionary monetary policies, all emerging economies will experience volatile capital flows, raising the risk of capital reversal, inflation and asset bubbles. Fourth, the continued presence of a stable and open global economy cannot be taken for granted—"sustained high growth rates in emerging economies [are] closely linked to an open, rules-based and globalized economy. Yet this global construct is coming under pressure—seen as a zero-sum game. Such a world requires better global governance, as well as implementation of overdue institutional reforms that will give emerging economies proper voice and representation in international institution."

Like elsewhere, fundamental domestic structural reform in Indonesia must become a priority before the country can achieve long-term sustainable growth. Such reform is also needed to enable Indonesia to manage its "twin deficits," namely its current account balance and fiscal budget, both currently under pressure and symptoms of structural threats to the country's macroeconomic stability.

Pro-stability Monetary Policy

Since 2009 and the advent of "easy money" in advanced economies, Indonesia's current account and capital and financial account balances have seemed

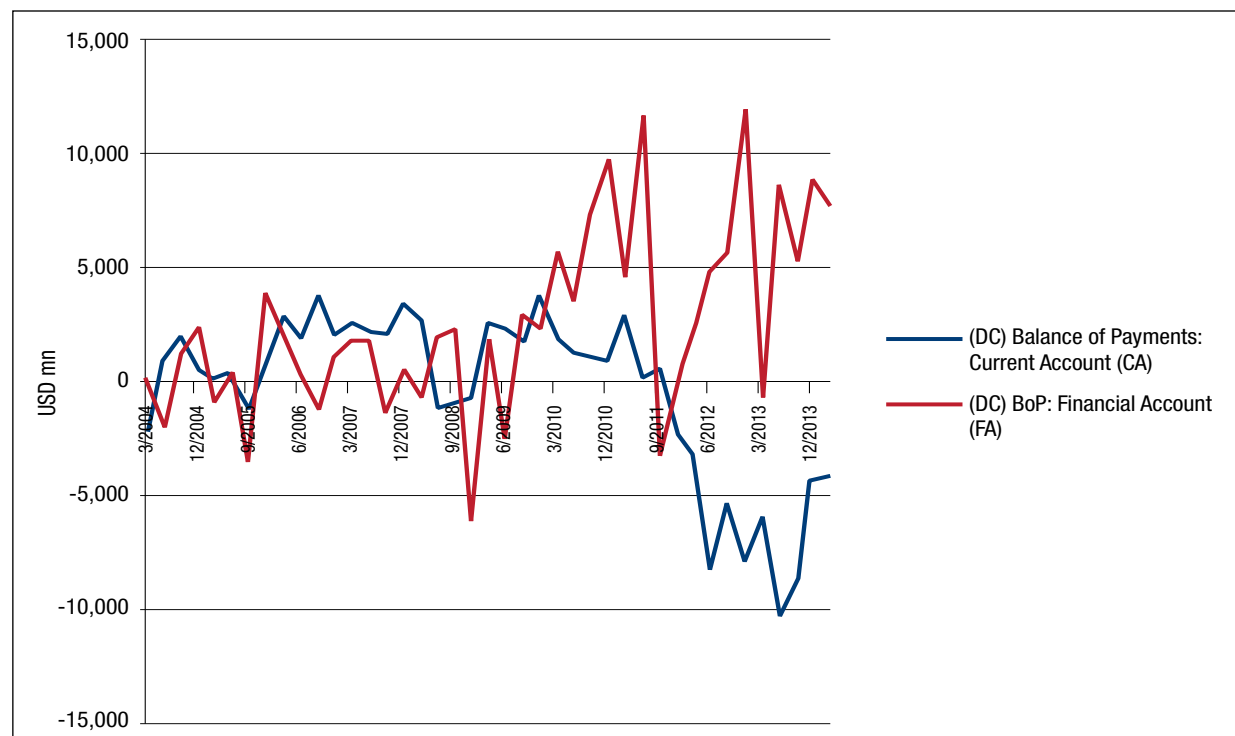
to diverge as the financial account skyrocketed and the current account slumped into deficit (see Figure 1). The surge in the financial account resulted from relatively stable direct investment and strong, albeit more volatile, portfolio investment. By the first quarter of 2014, net portfolio investment was at a decade-high, but it brought with it a concern about financial fragility in the event of the flows reversing once the U.S. increases its interest rate and quantitative easing ends.

The plunge in the current account balance was due to both strong imports and weak exports (see Figure 2). By the second quarter of 2014, the current account deficit to GDP ratio was about 4.3 percent. With a growing consuming class, demand for goods and services is growing but domestic supply growth is not fast enough to respond. The country's heavy reliance on commodity exports meant that, once the commodity boom ended in 2012, exports weakened, and manufacturing and services exports were not able to make up the losses. Another macroeconomic fragility comes from the

fiscal budget. The burden of the fuel subsidy—at about US\$21 billion in 2014 or about 20 percent of the central government's budget—stifles other spending including social assistance and capital expenditure. Meanwhile, fuel subsidies are poorly targeted, with higher-decile households benefiting more. The subsidies are also contributing to the current account deficit through increasing oil and gas imports. By July 2014, the government has revised its 2014 budget, which includes cutting the budget for line ministries by \$3.5 billion (World Bank, IEQ, July 2014). Without fuel subsidy reforms, the fiscal budget deficit could have reached 4.7 percent of GDP in 2014,³ surpassing Indonesia's 3 percent fiscal rule limit, and raising the possibility of the president's impeachment for defying the law.

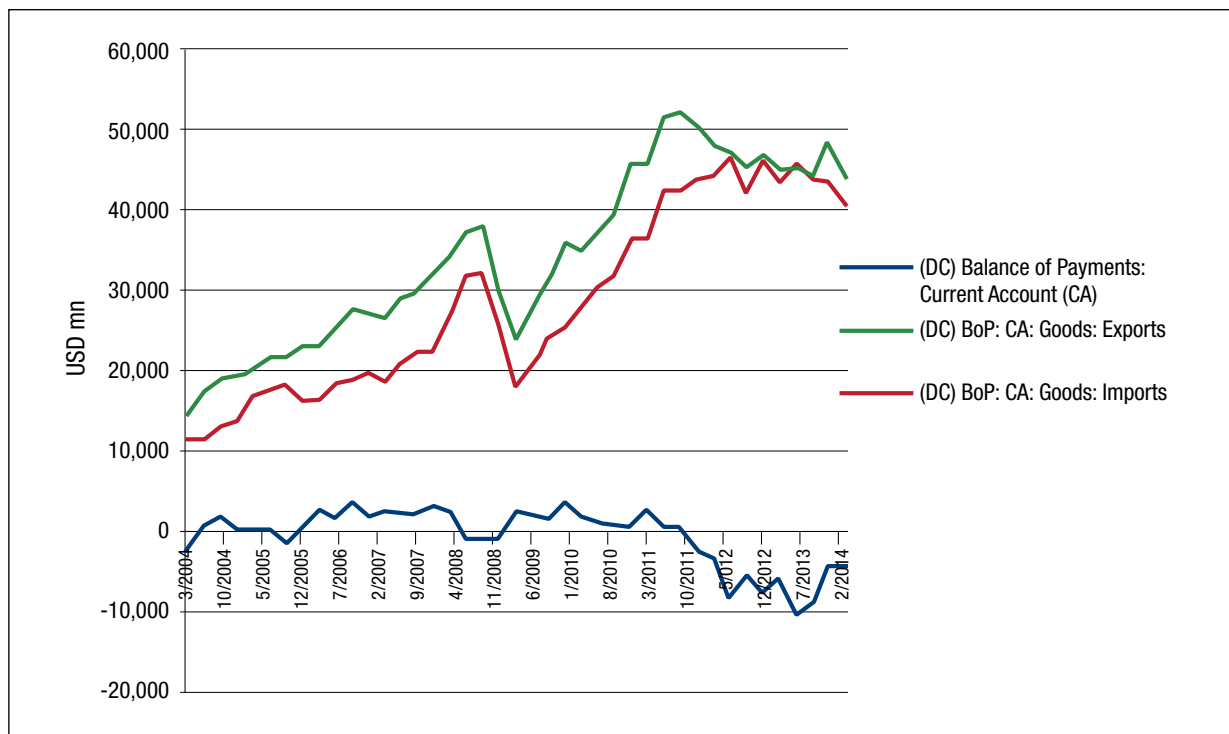
By end of September 2014, the Rupiah had depreciated to a recent low of Rp.12,100/ US\$ passing the psychological barrier of Rp.12,000/ US\$. Many factors could have contributed to this: political uncertainty for investors awaiting the appointment of cabinet ministers in late October, economic

FIGURE 1. BALANCE OF PAYMENTS



Source: CEIC.

FIGURE 2. CURRENT ACCOUNT BALANCE



Source: CEIC.

uncertainty over the market reaction to increasing foreign debt payments due this quarter, as well as private investors beginning to shift capital back to the U.S. amid its improving economic climate.

With the uncertain global economic environment plus pressures on the fiscal budget, it is likely that Bank Indonesia (BI) will keep its interest rate high (currently 7.5 percent) and continue with its pro-stability stance in order to sustain capital flows and lessen inherited risks. BI is also:

- maintaining a flexible exchange rate with selective sterilized foreign exchange intervention;
- enhancing monetary operation strategy;
- conducting capital flows management, as well as imposing targeted macro-prudential measures.⁴

The central bank believes that such a comprehensive policy mix could maintain the capital inflows trend, shift the composition of investment in financial instruments, expand foreign direct

investment (FDI), and eventually contain exchange rate volatility.

Concerns over Liquidity Constraints

Liquidity constraints will continue to be a concern at least until next year. As of April 2014, the loan to deposit ratio (LDR) of the banking system had reached 90.8 percent, almost hitting Bank Indonesia's 92 percent threshold for individual banks, at which point they have to increase their minimum reserve requirement.⁵ Deposit growth has been declining since July 2012. This has constrained the supply side of credit. However, the demand side of credit also shows weakness, especially in the mining sector, possibly due to lower commodity prices and the ban on mineral exports implemented at the beginning of this year. This is partly evident from the narrowing of the net interest margin, where increases in the deposit rate have not been accompanied by increases in the lending rate,⁶ indicating weak credit demand because of the inability of banks to pass on the higher cost of deposits to lenders of credit.

The Mineral Export Ban and its Impact on Exports and Fiscal Revenues

The big elephant in the room for Indonesia is its recent ban on mineral exports and the resultant pressures it has placed on export and fiscal tax revenues. The ban was introduced in 2009 through the Law on Mining of Coal and Minerals.⁷ One of the most significant changes under the law is the requirement for miners to “increase value added” by conducting ore processing and refining activities domestically (Article 102-103). Then, on January 1, 2014, the government went further by banning exports of all raw minerals except coal, though some mining companies are engaged in high-level talks with the government to secure exemptions.

At a time when Indonesia must narrow its current account and fiscal deficits, the mineral export ban has proved to be a further burden on growth. The contribution of net export growth to year-on-year growth in the first quarter of 2014 declined to minus 0.1 percent, compared to the fourth quarter of 2013, when exuberant minerals export growth was the main driver of growth. The mineral export ban not only hurts the current account balance but also the fiscal balance given lower tax revenues from mineral exports.

By January 2014, the Investment Coordinating Agency had issued investment permits for 30 companies to build smelter plants. If projects stay on track, three will be completed this year and the rest in the next two years, with total value of over \$12 billion. The question remains whether the rate of investment in smelters and the rate of exports of smelted products can make up for the rate of loss in exports of raw minerals and fiscal tax revenues.

FDI as a Stable Source of External Financing

Investment has been relatively strong in Indonesia for the past few years. Gross fixed capital formation has increasingly contributed to Indonesia’s

growth—from 17 percent in Q1-2009 to 24 percent in Q1-2014, reaching a peak of 45 percent in Q2-2012. Similarly, from the external balance’s point of view, net FDI inflow has also been significant for the past few years—from \$1.9 billion in Q1-2009 to \$4.5 billion in Q1-2014.

FDI has been an important and relatively stable source of external financing, while portfolio investment has been much more volatile. Net FDI was \$2.2 billion in 2007, and increased to \$22.3 billion in 2013 with relatively low volatility, while net portfolio investment was \$5.5 billion in 2007 and \$9.8 billion in 2013, with relatively high volatility reaching \$13.2 billion in 2008. FDI is important since some parts of Indonesia’s current account deficit are structural, such as trade in services and the oil-and-gas industry, which need stable, long-term foreign investment.

Although volatile, portfolio investment in Indonesia’s sovereign bond market, Surat Utang Negara (SUN), has been stable. Currently, about 30 percent of Indonesia’s SUN is foreign-owned, compared to 16.6 percent foreign ownership at the end of 2007. As part of macroeconomic prudential measures in response to massive capital inflows from 2009 to mid-2012, the central bank set policies to shift the composition of portfolio investment in financial instruments to a more productive portfolio.⁸ By February 2011, the central bank stopped the issuance of the Central Bank Certificate, Sertifikat Bank Indonesia (SBI), with maturity less than nine months.⁹ Investors shifted their investment from SBI, a monetary instrument and not an investment instrument, to bonds and stocks. While, foreign ownership of SBIs dropped from 39 percent in 2009 to just 1.2 percent in September 2012, foreign ownership in SUN remained strong at around 30 percent. By 2010, FDI also began to play a more dominant role in the capital flows composition. Whether or not this trend will continue will partly depend on the premium of investing in the financial market versus the real sector.

Much of the increase in FDI since 2009 has been driven by the primary sector—invested mainly

in the mining sector (including coal) and food crops and plantation industries (including palm oil)—and the secondary sector—mainly in motor vehicles and other transport equipment, the food industry, and metal, machinery, and electronic industries.

Setting the Right Mindset for Trade and Industrial Policy¹⁰

One of Indonesia's greatest reform challenges is to set the right policies and mindset to tap Indonesia's potential for investment and complete its structural transformation. The end of the commodity boom in 2012 means that the appetite to invest in the commodities sector is likely to continue to decline. This encourages the government to set an industrial policy to contain imports by protecting or developing import-substitution industries and to boost non-commodities exports.

There is a sense of *déjà vu* inherent in Indonesia's 2014 trade and industry laws. These new "twin sisters" protect domestic markets and import-substitution industrialization, just as they had in the 1970s and early 1980s, and serve only to confirm Indonesia's increasingly inward-looking trade and industrial policy. The government has stated as much publicly: "The trade law affirms our standpoint that Indonesia does not fully embrace free trade,"¹¹ and "with the implementation of the newly approved industrial law, Indonesia will have a strong legal base to promote import substitution as well as downstream industries in efforts to reduce the manufacturing sector's heavy reliance on imports of components and machinery."¹² The detailed articles of the trade and industrial laws permit significant discretionary protectionist actions by government.

Although what is stated in the law is important, what is omitted is much more significant. There are at least two important clauses missing from the trade law, which might give some indication as to how the law will be implemented. Firstly, the law does not mention Indonesia's international

obligations under WTO agreements and the ASEAN legal framework. In fact, it goes so far as to state that the government, with the approval of parliament, can review and/or cancel the existing international trade agreements.

Secondly, the law makes no mention of how the huge discretionary power given to the minister of trade over the implementation of regulations will be made accountable and transparent. This is particularly important since the regulation-making process is still extremely weak, if not absent, and allows for loopholes to be exploited for rent-seeking activities related to licenses and quotas. Although Indonesia has a national law to regulate the issuance of regulations, namely the National Law No.12, 2011, which requires some cost-benefit analyses, academic studies and public consultation before issuance of high-order regulations, the implementation rules for this law have yet to be published. Also, it does not apply to lower-order ministerial decrees. The silence on good regulatory processes in the law could create uncertainties and huge economic inefficiencies, such as those stemming from Indonesia's export policies on raw minerals, foreign-ownership restrictions on mining investment and agricultural and livestock trade policies.

What can we learn from the past? It is remarkable how easily we forget about the failures of protectionist trade and import-substitution industrial policies, as Thee Kian Wie recorded in his 1984 paper.¹³ Trade and industrial policies will impact the nature of FDI and, in the longer term, any structural transformation in the future. During the period of import-substitution trade and industrial policies, FDI in manufacturing served Indonesia's protected industries. Only with Indonesia's shift to an export-oriented strategy did FDI in manufacturing follow suit. From 1987 onwards, Asian Newly Industrialized Countries (NIC)—namely South Korea, Taiwan, Hong Kong and Singapore—that were suffering from increasing domestic real wages and rents, dominated Indonesia's FDI with export-oriented projects. The share of NIC investment out of total approved FDI rose from 14.6 percent in 1987 to 57.9 percent in

1990, and the share of export-oriented projects in 1990 from Asian NICs reached 83.6 percent.¹⁴ By contrast, in the years prior to 1987, dominant Japanese FDI was very much “anti-trade oriented” because it came in to fill in the protected domestic market’s demands for banned imports products. Moreover, most of the components and parts of Japanese FDI were imported from Japan through implicit agreement between Japanese investors and their Indonesia counterparts.

What impact on trade and industrial policies do we expect to see with the passage of the new laws? Import-substitution industrialization seems to be the way chosen for Indonesia. Inward FDI will tend to flow more towards industries for which inputs are available domestically, i.e., those products with no high-import components, which are very limited at this stage. With a lack of regulatory clarity creating uncertainties in the imported intermediate input markets, coupled with its underdeveloped infrastructure, Indonesia is less likely to attract FDI for global value chains. How does this import substitution affect the domestic economy? Import substitution can take the form of protecting upstream industry from foreign competition, essentially by taxing downstream processes involving protected inputs. As a result, the economy will likely become less efficient.

In addition, as a result of excessive domestic protection for import substitution industries, there will be fewer incentives for domestic producers to focus on globally competitive products. How will these inefficiencies affect the economy? Studies show that all forms of protectionist measures have negative effects on growth and trade.¹⁵ A decline in growth will undermine the government’s objective to reduce unemployment and poverty, which leads to the question of just how long the economy can sustain lower growth.

Given the sizeable challenges for domestic industry, such as dilapidated infrastructure, as well as a huge untapped domestic market and emerging consuming class, import substitution may make some sense. But at the least, such measures must

be pursued in an accountable and transparent way. Discretionary decision-making processes to protect trade and certain domestic industries will simply institutionalize corruption and rent-seeking activities.

Given such “open-ended” trade and industrial laws, monitoring the subsequent implementation of regulations will be necessary. Ministers must adhere to good regulatory practices as required under National Law No.12, 2011, even if the law does not technically apply to ministerial decrees. The government should also take into account the views of consumers, which risk losing out to those of the more politically influential domestic producers. Without such precautions, Indonesia will continue to suffer from uncompetitive industries, lower growth, and higher rates of unemployment and poverty.

Inequality and Regional Convergence

Inequality has been rising steadily since 1999 in Indonesia, as elsewhere. Between 2003 and 2010, consumption among the poorest 40 percent grew at only 1 to 2 percent per year, while for the richest 10 percent it grew at 6.5 percent, and 5.5 percent for the second richest decile.¹⁶ Indonesia’s strong growth hides distributional problems. Inequality rose 11 percent between 2000 and 2013, and even that figure is likely to be underestimated because of the absence of top income earners from household surveys.¹⁷

What explains this rise in inequality? There are two reasons. The first reason is rising inequality in capital income. This is essentially Thomas Piketty’s argument that the rate of return on capital is much higher than the growth rate.¹⁸ Though data on capital income are sparse, we can estimate the return on capital. Between 2002 and 2013, the Indonesian Stock Exchange Composite Index rose by 22 percent per year (11 times in nominal value), while the corresponding property price index increased by 23 percent per year (12.5 times in nominal value),

compared to a 7 percent annual rise in the consumer price index.¹⁹ High returns to capital would not be a problem except for the fact that access to capital remains extremely limited and ownership of capital is highly concentrated. For example, in 2013, only about 1.2 percent of Indonesian households had active mortgage loans with banks.

The second reason for rising inequality in Indonesia is rising inequality in wage income.²⁰ Real wages for more highly skilled workers (those with tertiary education) have grown by about 20 percent between 2002-13, while wages for unskilled workers (those with primary education or below) have grown much less rapidly, by around 9 percent.

Conclusion

For the past decade, Indonesia's strong growth has hidden serious structural issues. Strong growth

has not led to equally distributed growth. Indonesia's reform agenda in the short-term should be to continue with its pro-stability monetary policy. In the medium and long terms, the government should set the right policies and mindset to tap Indonesia's potential for investment and complete its structural transformation. Regulatory and policymaking reforms will be key. Indonesia's next administration under the presidency of Joko Widodo will face enormous fiscal challenges, especially in reforming fiscal subsidies. It will also face a very complex political system with a parliament dominated by a coalition of opposition political parties.

Indonesia's reform challenges are not unique among emerging countries but point to the country-specific challenges that will determine whether or not the country converges with advanced economies.

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1. These are the author's personal views that do not necessarily reflect the views of the World Bank nor those of its Board of Directors
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10. This section is taken from unpublished article by T. Anas and M.M. Wihardja, 2014.
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Sluggish Growth in the Eurozone: The Long Journey Ahead

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The Depth of the Crisis in the Eurozone

Six years after the Great Recession in 2008-2009, the economic conditions of the vast majority of euro area countries remain critical, with recession in many southern European economies and stagnation in the rest. Deflation risk is increasing and unemployment, particularly with youth, is persistently high in the majority of eurozone members. The protracted crisis for the euro area as a whole has become worse than the Great Depression of the 1930s.

The first months of 2014 showed signs of a very modest recovery, but with unchanged policies, growth in the eurozone is likely to remain slow and stagnant. It may be a new normal in Europe that could be extended until, or even after, the end of the decade. In this prolonged stagnation scenario, there are three main risks. First, since levels of public debt will continue to rise as a share of GDP, owing to slow or negative output growth, the issue of public debt restructurings in several peripheral eurozone countries could become very likely. Second, financial market fragmentation will continue to restrain credit and keep the system exposed to financial shocks. Finally, the risk of populist revolts and extremist political forces against EU-driven policies will increase and become permanent.

With reference to the secular stagnation debate about slow growth in advanced countries, the slowdown in observed output growth in the eurozone is mostly due—as explained in this chapter—to gaps between actual and potential output. A large part of this sluggish growth is due to a lack

of aggregate demand. This is a function of both the balance sheet recession that almost all euro economies have been facing after the financial crisis and the austerity fiscal policies adopted so far to contrast the former. There are also problems of structural supply-side factors which stem from both the current prolonged recession and the difficult adjustment of many eurozone countries to the new global competitive environment.

Given all this, it becomes even more important for the eurozone to return to potential output as quickly as possible by pursuing policies likely to stimulate economic growth as well. The immediate challenge for the eurozone is thus to engineer a recovery of above-trend growth, especially in the crisis-hit countries, all of which are still well below pre-crisis peak output levels. The “orthodox” handling of the euro crisis by national governments, led by Germany, has greatly contributed to the actual distress. A possible solution is of course not an exit from the euro as proposed today irresponsible by many Euroskeptics, but one that tries to change and discontinue the policies implemented so far within the eurozone. In this case, the recent rise of populist parties and protest movements in the recent European elections could turn into a positive salutary shock. But the road ahead is indeed very hard.

The Euro is Safer, the European Economy is Not

A few months after the European parliamentary elections that generated a massive protest vote in favor of Euroskeptical and anti-European parties, the economic conditions of many European

countries remains critical. Twenty-seven million are still unemployed, and barely touched by the modest recovery now underway. At the same time, monetary and financial markets have undoubtedly improved in the eurozone by providing greater stability to the single-currency euro. Over the last year and a half, the financial markets have become surprisingly stable and spreads have decreased to pre-crisis levels.

Several developments helped to restore calm but the most notable came from European Central Bank President Mario Draghi who promised to do “whatever it takes” to save the euro. The statement was quickly institutionalized by establishing the ECB’s [“outright monetary transactions”](#) program (OMT) to buy distressed Eurozone members’ sovereign bonds. What the system needed to cope with the liquidity crisis in many member countries was a lender of last resort and, even with a two-year delay, the program of the ECB, supported politically by Angela Merkel, provided in fact a lender of last resort operations.¹ Without having spent a single euro so far, the OMT program managed to defeat pervasive panic and convince the markets that the survival of the single currency was no longer at risk, and that no country would have to abandon the euro. Even if the risks of future financial turmoil are not reduced to zero, it is highly likely that we will not come back to the stratospheric spread levels at the beginning of the European crisis.

Following the accommodative monetary policy that was instituted by the major central banks, concerns of a eurozone breakup have receded. The real economy of the eurozone, however, has showed a fragile improvement after more than six quarters of recession. The recovery is slow to occur and, in any case, will be too modest either to boost employment or to exit from the crisis.

If there are no changes, the more realistic scenario is that of a long stagnation of the euro area, even beyond the current decade. This risk refers to both a persistent slower growth of actual output and to a slower potential output growth. The first is the result of a prolonged period of what it is called a

“balance sheet recession” made worse by fiscal austerity policies in the eurozone. In addition to long run determinants, potential output growth is also slowing. A declining labor force growth rate and a slowdown in the pace of total factor productivity growth are leading to a gap between actual and potential output, which is in turn linked to short and medium term aggregate demand constraints in Europe. In the eurozone, a prolonged negative output gap has affected potential GDP negatively, mainly by reducing investment. There has also been a continuous deterioration of investment dynamics, particularly in southern European countries, thus penalizing the long run growth perspective.

Hence, in order to find explanations for the current output stagnation and high levels of unemployment in Europe, we should look first at the drivers of aggregate demand and especially investment dynamics. We must take into account, in fact, that European sluggish growth is also the result of a growth model that in many countries—and primarily in Germany—is driven largely by exports and only to a small part by domestic demand. Over the last six years the biggest contribution to growth came from net exports. (Growth of exports outpaced that of imports). In 2008, the Eurozone had a deficit of around €85 billion (less than 1 per cent of GDP); in 2013 it had a surplus of close to 2.5 per cent of GDP.

The Orthodox Approach in Berlin and Brussels

In Brussels, and especially in Berlin, officials continue to be rather optimistic about the future of the eurozone and expect that the current modest recovery may soon turn into a highly stable growth path. They are confident that the adjustment policies adopted so far—a mix of fiscal austerity plus structural reforms—are effectively working and require only more time to be successful. Hence, we’ve seen the proposal of a more flexible application of these policies at country level in order to produce the expected results. France and Spain

were among the first countries to have benefited from this higher margin of flexibility.

But this will not work. There are reasons to believe that the eurozone's orthodox approach even in its more flexible version is not able to offer a viable exit strategy to escape the prolonged debt crisis. One should recall that the orthodox approach is based on three pillars. First, monetary policy should provide the main counter-cyclical support (i.e. demand) at the European level. Second, fiscal policy should be rigidly oriented almost anywhere to fiscal consolidation (according to timing and modalities laid down by the European procedures). Finally, structural reforms would promote the competitive adjustment of the peripheral economies by increasing their labor market flexibility (in output and wage) and growth potential.

But over the past three years this pattern did not find validation in practice. In depressed economies suffering from a liquidity trap, such as in many eurozone countries, monetary policy has lost its ability to provide counter-cyclical support even if short-term interest rates have become close to zero. Meanwhile, the real interest rate (nominal rate net of expected inflation), which ensures those amount of savings and investment needed to achieve full employment, has become negative in many euro countries, due to a sharp fall in aggregate demand. In addition to a powerless monetary policy, fiscal tightening began in 2010-2011 in almost all eurozone countries and proved contractionary, given weak domestic demand. This mix of fiscal retrenchment and lack of monetary stimulus failed to sustain the policies required to support private sector deleveraging and ultimately triggered what turned out to be a long-running crisis, in terms of worsening recession, increasing unemployment, and a deepening spiral of depression.

The austerity programs have not stopped the explosive growth of government debt to GDP ratios; sovereign debt in Greece is still over 170 percent of GDP; in Ireland, Italy and Portugal over 120 percent; and in France and Spain rapidly approaching 100 percent. By deciding that the crisis was

due to the fiscal profligacy of the debtor countries, eurozone policy makers ignored the root cause of the crisis in sovereign debt—that it was a financial crisis that generated fiscal consequences—thus confusing the causes with the effects. The contrast with what happened in the U.S. is stark. While from 2011-2012 in Europe economic growth started to slow down and ultimately became negative, in the U.S. the recovery was sustained because expansive fiscal and monetary policies were tightened only gradually. The U.S. has also been relatively successful in deleveraging, with private debt back to the early 2000s levels, relative to GDP, due to more growth and higher repayment levels than those that occurred in most eurozone countries.

A significant change in policies, however, is not given consideration even today by those in charge in Berlin and Brussels. One reason—reiterated at the official level even in the last European Council meeting—is that the performance of the crisis-hit countries has definitely improved, in terms of both strengthening their competitive positions and effective fiscal adjustments. Not surprisingly, because the burden of adjustment has been borne almost exclusively by the most indebted countries in the periphery while creditor countries with large current account surpluses—like Germany—have so far contributed only marginally to the rebalancing of the euro area. This asymmetry has produced, first, a deflationary bias in the eurozone as a whole that has generated a recession-stagnation, particularly in the peripheral countries. Second, it has imposed restructuring processes of the most indebted countries, primarily based on internal devaluations and a type of recovery fully driven by exports.

To be carried out effectively, these adjustment processes taking place in the periphery need adequate time, and need to be expanded to the European level. The present zero-sum-game approaches are very risky for the stability of the euro area. The mechanisms of adjustment are simply that of the old gold standard. Given the very low growth and the inflation of the eurozone at the aggregate level, real adjustment will take place mainly through

deflation in the deficit countries, which is both very painful and raises their debt burdens relative to their GDP.

To cope with such gloomy scenarios the solution is certainly not, as now claimed by many Euroskeptical groups, the exit of one or more countries from the eurozone or the total dismantling of the single currency area. If a country were forced to or encouraged to leave the euro, the consequences for the credibility of the euro could prove devastating. Exit would have large spillover effects on the entire system. The final costs would be dramatic. A more viable therapy is to try to radically change the policy approach that has been pursued thus far.

What Is to Be Done?

All in all, a continuation of current economic and policy trends raises serious risks of a Japanese-style stagnation scenario and a fragile sovereign debt sustainability. The vulnerable countries are suffering economic depression and difficulties with debt likely to last many years. The categorical imperative for Europe is to return to a high and stable growth path. Ultimately debt manageability depends on the relationship between the growth of nominal GDP and the interest rate. Only high growth can allow peripheral countries to pursue a strategy of fiscal consolidation and unemployment reduction that is sustainable and effective at the same time.

As mentioned above, sluggish growth of the euro countries today is due to a lack of aggregate demand, which is a function of both the balance sheet recession that almost all euro economies have been facing and the austerity fiscal policies wrongly adopted thus far to combat the former. There are also problems of structural supply-side factors, stemming from both the current prolonged recession and the difficult adjustment of many eurozone countries to the new global competitive environment.

Escaping stagnation requires a balanced policy package involving strong, mutually reinforcing policy interventions that can simultaneously deal

with both weak aggregate demand and supply weaknesses. These policies should be implemented at the eurozone level as a whole, rather than at only a national level as has been done in the past. Only from this perspective, can one see a shortage in aggregate demand and a needed change in the combination of fiscal and monetary policies.

In the first part of the coordinated policy package is the European Central Bank's monetary policy which should soon launch its own "quantitative easing" and negative interest rates to avert worrying deflationary tendencies. After the measures adopted last June, and facing the slowdown in the already modest recovery, the ECB announced in September this year that it would begin buying packages of loans separated into products known as asset backed securities (ABS) and covered bonds. This will be done to help free up banks' balance sheets and spur lending, particularly to small and medium-sized enterprises.

In addition to the ECB's recent measures, President Mario Draghi has previously announced the intention of an open market purchase of public and private bonds, aimed at bringing the size of the ECB balance sheet to 2012 levels. This makes sense. It was an error to let it shrink by approximately 10 percent of eurozone GDP when other central banks were avoiding premature withdrawal of such support. It signals that there is now a clear direction by the ECB toward government bond purchases if the economy and inflation don't recover.

The measures adopted by the ECB so far, although useful, are unlikely to bring the low inflation in the eurozone to a normal target (close to 2 percent). In the year leading up to July 2014, consumer price inflation in the eurozone fell to 0.4 percent. Moreover, long term inflation expectations, calculated on the basis of financial indicators, had seen a rapid deterioration in the summer of 2014, falling for the first time below the 2 percent threshold. The continuous fall in inflation has increased the risk of a negative trend in prices. If this takes root in agents' expectations, the trend would be very difficult to reverse.

Given this low inflation environment, the ECB should launch a massive “quantitative easing” of asset purchases. This would buy time for European inflation rates to return to normal and avoid the risk of a debt default by individual countries. It is well known that the transition from a prolonged period of low inflation to a classical deflation is uncommon but leads to a vicious cycle. The deflationary spiral is seen as a process that feeds on itself and is difficult to counteract once triggered. The dramatic experience of Japan confirms this. The eurozone is also, now, probably not too far from a deflationary outcome.

But monetary policy alone is not enough to bring the European economy back to a path of sustainable growth. In a liquidity trap, monetary policy loses traction. Today, in most eurozone economies, stagnant income, high unemployment, and uncertainty about the future, all contribute to the compressing of private spending and demand for credit across the eurozone, while they increase the appetite for liquidity.

It is on fiscal policy that the revival of aggregate demand and, hence, growth in Europe will have to depend. As previously argued in this paper, one should look at the eurozone as a whole rather than simply its constituent parts. There is a strong argument in favor of the coordination of fiscal policies among member states. The overall fiscal stance in the eurozone as a whole is too tight, even though interest rates are at the zero lower bound; the OECD has forecast that the cyclically adjusted fiscal deficit of the eurozone would shrink from a mere 1.4 percent in 2013 to an even more austere 0.9 percent in 2014.

For an expansionary fiscal policy at the eurozone level, symmetrical adjustment mechanisms are needed to impose on both surplus (primarily Germany) and deficit countries. Large trade surpluses remain a powerful pull on economic activity in the eurozone and place large obstacles in the way of needed adjustments between member states especially, when interest rates are close to zero³. It follows that a smooth adjustment of intra-euro

area macroeconomic imbalances requires a positive-sum-game policy approach in Europe.

Due to German positive net export, the euro area has developed large external surpluses that are exporting deflation to the rest of the world and revaluing the euro exchange rate, thus penalizing the adjustment efforts of peripheral countries. But the German model—that of an open export-driven economy—may not be extended to the entire eurozone. The eurozone is not a small and open economy, but the second largest economy in the world. Additionally, German surpluses have, over the last three years, surpassed on average the 6 percent threshold. These surpluses should be reduced by imposing on Germany, under the Macro-Economic Imbalances Procedure (MIP), a rise in domestic demand to benefit the recovery of the entire euro area. The more Germany and the North expand overall spending, the less difficult it is for the South to carry out necessary adjustments and close the competitiveness gap.⁴

The new European economic governance structure devotes insufficient attention to policies capable of favoring these economic adjustments. The current framework remains weak in parts and incomplete in others. In this regard, over the past years, neither the European Commission nor the European Council, with their expanded jurisdiction and strengthened mandate, were able to put in place procedures and policy instruments that work. They are not details, but key elements that can affect the ability to cope with the current crisis and to offer, throughout Europe and the euro area, a stable path for future growth. New policy and governance priorities are thus required in the eurozone that put more emphasis on cooperation in convergence and competitiveness.

The second important policy intervention is to complete and strengthen the agreement on the European Banking Union (EBU) with its three pillars, namely the Single Supervisory Mechanism (SSM), the Single Resolution Mechanism (SRM) and the Single Deposit Guarantee Scheme (SDGS). Financial stability is necessary for the exit from the crisis.

The Banking Union could help to rebuild a correctly functioning interbank market, thereby sustaining the economic recovery. As Mario Draghi wrote in a recent intervention "... by mid-2010, most advanced economies were showing signs of returning to growth, albeit at a slow pace. At this point, however, the trajectory of the euro area departed from others. While the recovery gained ground in the U.S., in particular, the euro area entered into a second recession that lasted until the second quarter of 2013. This divergence happened for two reasons that were specific to the euro area. First, the sequencing of policy responses, after the first bail-out for Greece, aggravated concerns about bank and sovereign debt sustainability. Second, these concerns interacted with an incomplete institutional framework in a self-reinforcing way".⁵

In 2010 and 2011, the euro area followed the reverse policy sequence, compared with that of the United States, by giving precedence to the sovereign debt crisis rather than that of the banks. It was a mistake. The combination of sustained austerity and a credit crunch did enormous structural damage. Many now agree that a fundamental problem remaining for the euro area is to break the perverse relationship between bank and sovereigns and to address the credit crunch that it has generated.

After several years of delays, we are finally addressing the problem of our banks. We know what has been wrong with Europe's banks. What should be done is clear enough: recapitalize much of the sector and restructure those parts without a viable business model. This should be completed by the banking union which is under construction after the European Parliament and the Council negotiated an agreement on March 2014 to establish this entity.

Progress in the EBU so far has been very significant. There still remain, however, shortcomings related to the common resolution mechanisms, in terms of too complex decision-making for bank resolution and the lack of a fiscal backstop in the interim period.

The most important obstacle that remains is to reach agreement on how the costs, both of injecting capital into failing institutions and of protecting depositors, are to be shared across the euro area. The solutions adopted so far seem more connected with the narrow national interest of northern European creditors, and in particular to the objective of not exposing taxpayers to the risk of having to pay for the mistakes of other member countries. These national selfish interests are a major obstacle for creating a stable and durable economic and financial union. Furthermore, by undermining the role of federal actions they disregard the risks a major financial crisis could have for the euro area as a whole.

The Strategic Role of Medium and Long-term Investments

As previously mentioned in this paper, in order to sustain and consolidate a recovery in the euro area, one must address not only the problems of aggregate demand but also supply-side problems. It is not enough to simply produce more of that which was needed at pre-crisis levels. Firms should instead anticipate production levels that will be profitable for the future. In this regard, substantial productivity advances are needed. These in turn require a more tangibly and intangibly efficient infrastructure, a more highly educated and skilled labor force, and a more productive environment for technological innovation and renewable energies. To achieve these things, structural reforms in individual countries are indeed crucial, but medium- and long-term investments, which are public and private and occur across a range of sectors that could become new areas of growth, are indeed even more significant.

In previous years, reducing public investment has been the main instrument for fiscal consolidation within many countries. In the eurozone as a whole, the fall in private and public investment was almost 17 percent in the period between 2008 and 2013, compared to more than 14 percent in the U.S. in the same period. In almost all eurozone countries,

public investment as a share of public spending decreased dramatically compared to the 1980s and 1990s. While the capital stock grew between 2 and 2.5 percent before the crisis, its growth rate fell below 1 percent thereafter. In Greece, Italy, Portugal, and Spain, the capital stock shrank dramatically.⁶

Quite obviously, this lasting reduction of capital inputs to production must have slowed down the capacities of producing (potential) output. Furthermore, falling investment rates have caused productivity performance rates to deteriorate in all EU countries. They have also reduced the quality of tangible infrastructure networks (in transport and energy) and intangible networks (education, communications, and research spending). These negative trends should be reversed. Countercyclical fiscal interventions through investment should be targeted to these new areas of growth, on the supply side, through public and private investments. To justify these interventions one could use the traditional Keynesian demand argument, emphasizing not only short run demand effects but also the long run growth effects. These interventions would also work through the supply side of the economy. Successful reallocation of labor and capital could increase potential output in conjunction with supply side structural reforms (the creative destruction mechanism outlined by Schumpeter.⁷ The issue of medium- and long-term investments should thus be considered strategic for the future of the euro and the euro area. These are not simply temporary devices but should become a future permanent features of our economies.

These additional investments should be targeted to the European internal market so as to break the bottlenecks to build up effective service networks in Europe. The internal market still has a high potential to be exploited, and should become the new center of gravity for the revival of European domestic demand. As stated above, the eurozone is simply too big an economy for the rest of the world to keep it afloat. In the second quarter of 2014, real domestic demand in the eurozone was 5 percent lower than in the first quarter of 2008. Foreign demand and exports to the rest of the world are not

able to compensate for the continuing weakness of European internal demand and the market. Moreover, the European market is simply too big and rich to be supported externally by American and Chinese consumers.

The problem, of course, is finding new financial resources to invest in the medium and long term. But if there is a consistent effort to find them, they can be found. At the European level, the argument for boosting public investment seems to have gathered strength and has been discussed at the last European Council meetings. But the size of the investment plan should be much larger than Jean-Claude Juncker's so-called plan (about 300 billion euros over three years for the EU as a whole). The magnitude of the effort should be at least twice the size. Action, on this front, that is too timid would be at risk of wasting a potentially good plan.⁸

At the same time, new regulatory frameworks that are friendlier to long-term investment should be explored. In general, there is a need to enlarge the worldwide share of financing for long-term capital investment at the expense of short-termism and speculation. New rules should include accounting standards, prudential principles, corporate governance rules, and ad hoc systems of fiscal incentives. If successful, new financial instruments will be an interesting long-term investment opportunity for private institutional investors, such as pension funds, insurance companies and households.

Investment could be significantly increased at the national level as well. In this regard, one should note, first, that most of this additional investment need not add to net financial liabilities if they are repaid through future revenue.⁹ Budget accounting in the U.S. and Europe fails to distinguish between self-financing capital projects and those financed by general revenues.

One could also think about bilateral negotiations with the Commission to exchange increased space for investment for structural reforms, and through the introduction of a kind of golden rule for individual countries, as many have proposed. In

this regard, one should define common, detailed guidelines on fiscal accounting and work toward greater cohesion in the eurozone with regards to the nature and quality of public spending vis-à-vis growth.

Furthermore national governments are now able to borrow at interest rates that are historically low—in fact, close to zero or even negative in real terms. If the public sector can create assets that are useful to the economy, it can actually improve its balance sheet and reduce its degree of indebtedness by spending more today. In most advanced economies, infrastructure spending toward lower logistical costs seems to offer obvious opportunities in this direction.

The Road Ahead is Hard

The orthodox policies of national governments, led by Germany, to manage the euro crisis have greatly contributed to the actual depressed condition of the eurozone. These policies consisted of fiscal austerity and asymmetrical adjustment with all costs falling on deficit countries, rather than conventional monetary policy and limited recapitalization of banks. As a result, many eurozone countries are trapped in a vicious circle of stagnation and unemployment, from which they have not yet been able to escape. It now looks as though high debt countries might never regain pre-crisis rates of economic growth.

The slowdown in observed output growth in the eurozone is mostly due to gaps between actual and potential output. Given the size of the recessions, economic policy should seek to generate a prolonged period of above-trend growth. Effective policy measures toward the revival of growth and employment should comprise—as pointed out in this paper—a major support to aggregate demand through unconventional monetary policy, a higher symmetry in the macroeconomic adjustment processes, and

a strong investment cycle in tangible and intangible assets at the EU and national level. A key role should be assigned to a medium- to long-term approach to restructure our economies and create jobs via massive new investment in infrastructure, upgraded skills, human capital improvements, and low-carbon energy structural policies. Increased long- and medium- term investment would help to stimulate economic activity, growth, and employment and could address long-term problems as well—including inequality in most countries.

We emphasize that these policies should be implemented at the eurozone level, as a whole, rather than within its constituent parts. It is only when one examines the euro that one can identify the deficiencies of current policies.

Only after such a profound policy renewal was implemented, as a way out of the crisis, could a further deepening and revision of the institutional structure of the EU take place. It is not inherently obvious that European governments genuinely want to move in the direction of change and greater cohesion. The mutual distrust between the North and South has increased in the eurozone during these years of crisis.

Thus, the EU is now experiencing a bottleneck. To exit from the crisis, we would need new policies and more integration. But establishing these policies is very difficult today, given the prevalence of national interests. The collective interests of the common institutions are still being pursued too weakly, especially compared to the national interests of the stronger countries such as Germany. The question is whether a viable solution can be found before it is too late. These problems do not just affect the eurozone exclusively as the euro area is the second largest economy in the world. The real risk is that a deepening of the eurozone crisis, if not properly addressed, could turn into a dramatic global crisis.

Endnotes

1. As shown by De Grauwe, P., Ji, Y. 2014. "How much fiscal discipline in a Monetary Union?" *Journal of Macroeconomics*, 39 (Part B). pp. 348-360.
2. See Koo, Richard C. 2008. *The Holy Grail of Macroeconomics - Lessons from Japan's Great Recession*. John Wiley & Sons.
3. In the case of Italy, for example, trade balances shifted from significant surpluses in the 1990s to increasing deficits in the first decade of the new century.
4. See Wolf, Martin. 2014. *The Shifts and the Shocks*. Penguin Press, New York.
5. "A consistent strategy for a sustained recovery," Lecture by Mario Draghi, President of the ECB, at Sciences Po, Paris, 25 March 2014.
6. The downturn has hit Italy in particular, severely affecting productivity; the public investment share to GDP fell in 2013 to 17 percent, the lowest since the 1950s. The spending cuts stemming from austerity policy have rocked public investment, with a reduction of one-third in 2010-11.
7. The classical reference is Schumpeter, Joseph A. 1934. *The Theory of Economic Development*. New York: Oxford University Press.
8. Of course, one should assume that the eurozone countries, unlike what happened in the past, will efficiently use the new investment opportunities. Italy, for example, for over two decades has mostly wasted the opportunity to benefit from the European structural funds. The state of progress for the 2007-2013 EU budget programming period shows that Italy has used just 55 percent of its slice of EU regional funds.
9. See IMF, *World Economic Outlook*, Ch.3, Washington D.C., October, 2014.

Defining Exit from Deflation

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More than six years have passed since the global financial crisis. The bold and timely policy responses, often involving international coordination, helped contain the impact of the crisis and the stability of the financial system now seems broadly restored. Nonetheless, the growth of the world economy has been sluggish. The Great Recession may be over, but the prospect for a return to robust longer-term growth remains uncertain.

Given the unprecedented scale of the global financial crisis, no one would have ever dreamed of a quick and strong recovery in advanced economies in its aftermath. The bold and sustained policy responses by governments and central banks helped prevent the Great Recession from turning into a Great Depression. Despite these policy measures, however, economies have remained weak in countries where the financial crisis was most severe. The drastic changes in the regulatory environment for the financial industry, including tightened credit standards, affected financial intermediation. Fiscal deficits, while supporting the economy in the short term, adversely impacted longer-term consumer and business confidence as well. The prolonged weaknesses of the economy and the uncertain prospects for the future have prompted a new debate on the possibility of secular stagnation or prolonged deflation in advanced economies, often citing Japan as an example.

This note focuses on the recent economic developments in Japan and considers potential pitfalls that policymakers in advanced economies may face in the post-crisis environment.

Signs of a Turnaround

It is unfortunate that Japan has come to symbolize economic stagnation and deflation, particularly when its present economy is showing emerging signs of recovery and growth. Japan embarked on bold monetary, fiscal and growth policies in early 2013, the so-called “Abenomics,” named after Prime Minister Shinzo Abe. The main goal was to ensure an exit from deflation and revitalize Japan’s economy. A year and a half has passed since its launch, and Abenomics initiatives seem to have succeeded in gradually reversing deflationary expectations and creating optimism that the economy is finally on course to regain solid growth and dynamism.

Images and headlines linger in our mind while changing realities are hard to detect and slow to be accepted. There is therefore little wonder why Japan has come to be regarded as a lesson in what not to emulate in the post-crisis policy debates. First of all, Japan’s economic stagnation, after its own banking crisis in the 1990s, persisted for many years. The period of prolonged lackluster economic performance was labelled as the “lost decade.” The incipient recovery from its own financial banking crisis in mid-2000s was interrupted by the global financial crisis in 2008, which plunged the economy again into a recession, prolonging the “lost decade” further. Secondly, the long-term demographic trends of an aging population and declining labor force also provided a stark background to the country’s image of stagnation and decline. Thirdly, the unemployment rate in Japan—5.5 percent at its peak—was not as high as it has been in the United States or in Europe, but

this likely reflected the willingness of workers to accept reduced wages rather than lose their jobs, an important feature which nonetheless reinforced deflationary expectations. Fourthly, while fiscal policies helped sustain domestic demand, the demographic trend has posed difficulties in restraining fiscal outlays for pensions and other social services. The resultant fiscal deficit became higher than most industrialized countries. In addition, the earthquake and tsunami of March 2011, which caused the loss of more 15,000 lives in the Tohoku region, inflicted real and psychological damage to the nation's economy and consumer and business sentiments. The image of low growth and deflation thus lingered on until very recently.

The perception of Japan as an economy suffering from long-term stagnation is finally changing, a year and a half after embarking on proactive anti-deflationary policies. The Nikkei index rose by about 50 percent from the beginning of 2013 to the end of July 2014. The signs of reversal in consumer and business sentiments in Japan have become pronounced in recent months, despite the hike in the consumption tax rate since April 2014. Deflationary expectations are being replaced gradually by stable inflationary expectations. The rise in consumer sentiments has been helped by the gains in nominal wages, particularly for non-regular payments, which in turn were prompted by the emerging shortage of labor. The increase of nominal wages in the services industry has been markedly high, supporting the structural changes in the economy. Business sentiment too has improved significantly, and in March 2014 the Tankan diffusion index, published quarterly by the Bank of Japan, recorded its highest positive level since the early 1990s (+12), partly reflecting accelerated consumption in anticipation of the planned hike in consumption tax. It had been expected to flatten out in June (+1) due to the tax hike, but came in at a much higher positive level (+7) than generally predicted, reflecting the view in the market that the effect of the consumption tax will be absorbed over time without significantly affecting the general upturn of the economy.

The reversal of consumer and business sentiments is also helping the rebound of the real economy. In light of higher corporate earnings and rising business confidence, the government has been engaged in a kind of "reverse incomes policy," a moral persuasion to increase wages of the employees by spreading the benefit to increase wages, a significant challenge for business leaders who have become prone to deflationary mindset. The unemployment rate was brought down to 3.7 percent in June 2014, and the ratio of job offers to job seekers has gone up to 1.10, the highest since June 1992. While consumption is being affected by temporary factors, such as the consumption tax hike and the unseasonable weather, the improvement of labor market conditions is expected to exert favorable effects to consumption over time. Private sector fixed investment in real terms has been increasing steadily since the first quarter of 2013, indicating the disappearance of over-capacity, the tightening of labor markets and the greater willingness of Japanese manufacturers to invest in domestic production facilities for strategically important products and research. Net exports have remained weak, mirroring the shift of production bases by Japanese manufacturers over the years stimulated by the prolonged period of a highly appreciated Japanese currency, combined with possible erosion of their competitiveness in certain sectors. But overall developments so far have clearly been positive and encouraging, culminating in 2.3 percent GDP growth for the fiscal year which ended in March 2014.

The most important development in Japan's recovery has occurred in price movements. Up until early 2013, the core consumer price index either remained flat or recorded small declines, continuing its long-standing deflationary trend. In March 2013, for instance, it was minus 0.4 percent. Beginning in the middle of 2013, it became consistently positive. In July 2014, the Bank of Japan predicted that it will be around 1.3 percent in March 2015, 1.9 percent in March 2016, and 2.1 percent in March 2017, in line with the price stability target of 2 percent in the consumer price index set out jointly by the central bank and the government in January 2013. Reversing deflationary expectations

and anchoring inflationary expectations have been the major challenges for Japan. It now seems that the nation is finally overcoming this conundrum.¹

The image of a stagnant Japan may have concealed one important aspect of the country that was not dormant throughout the many years of low growth. During that time, a number of structural and regulatory reform initiatives were implemented as a major domestic policy drive to diversify the channels of financial intermediation and strengthen the role of financial markets. At the same time, many of these initiatives have been pursued in response to the internationally coordinated efforts to strengthen the global financial system in accordance with the globally agreed standards and codes laid out by international organizations—in particular the Basel Committee of Banking Supervision (BCBS) and the International Organizations of Securities Commissions (IOSCO), and subsequently by the G-20 Leaders Meetings since 2008. These reform efforts encompassed a complete overhaul of the regulatory structure, with the creation of an integrated financial regulator, the Financial Services Agency, to cover banking, insurance and securities markets. The overall reform included full implementation of the Basel Accords for internationally active banks, the overhaul of accounting and auditing standards, the strengthening of the resolution regimes for banks and other financial institutions, and the general reforms of bankruptcy regimes. The role of self-regulatory organizations (SROs) in the securities markets has also been strengthened in line with the IOSCO principles. Thanks to this overhaul of the financial regulatory system, Japanese financial institutions weathered the global financial crisis relatively well. Japanese banks have continued their role of domestic financial intermediation without any disruption and also played a role as a financial anchor in the tumultuous post-crisis years.

The critical change that these reforms in the past decade have brought about is a drastic transformation of Japanese capital markets. Significantly, they included measures to enhance corporate disclosure, to strengthen accounting and auditing

standards aimed at international convergence, and to improve corporate governance. As a result, the cross shareholdings by large corporations, a prominent feature of Japan's stock markets until the 1990s, have been reduced drastically, from almost 50 percent in the early 1990s to about 16 percent in 2014, or from about 30 percent to 11 percent in the same period, if holdings by insurance companies are excluded. The shares held by banks declined from 15.7 percent in March 1988 to just 3.8 percent in March 2013.² This trend was prompted not only by the regulatory initiatives to limit shareholdings by banks in a drive to upgrade the quality of their capital, but also by the introduction of fair-value accounting for financial instruments and the successive implementation of the Basel Accords. The steady integration of the Japanese capital markets into the global financial markets also reinforced and accelerated such trends, gradually transforming the governance and management styles of Japanese corporations. Currently, approximately half of the share transactions of listed companies on Japan's stock exchanges are conducted by international investors. A significant percentage of the shares of all listed companies in Japan—30.8 percent at the end of March 2014—are owned by investors based abroad. Such developments, along with the presence of international financial firms and active direct investments abroad by Japanese corporations, are gradually changing the landscape of Japan's economic system.

Recent policy initiatives are focused on strengthening corporate governance, a welcome development in accelerating further reform. The commitment made until the end of August 2014 by 160 major institutional investors, including the government's pension investment fund (GPIF), to uphold the newly promulgated stewardship code to enhance the quality of their engagement with public corporations is also expected to play a key role in this regard.

It is still too early to proclaim that the recent macroeconomic and structural policies will put Japan on a long-term sustainable path to growth. Japan, the third largest economy in the world, is enjoying

enviable conditions—high per capita income, a large pool of private savings and highly developed and vibrant financial markets. However, in order to take advantage of this position, Japan is facing many challenges, including the issues posed by the demographic outlook. Sustained efforts for reform will be essential. Structural and regulatory reforms are the most important, but these reforms alone would not produce innovation and growth. The crucial additional ingredient needed is dynamism in the corporate sector to encourage innovation and productivity growth, underpinned by the encouragement of appropriate risk-taking and entrepreneurship. It is only through vibrant dynamism that a better allocation of capital and human resources can be achieved, bringing about productivity growth and structural changes in the overall economy. Corporate dynamism to take advantage of these reforms and translate them into productivity growth can only flourish in a non-deflationary environment. Deflation not only encourages postponing consumption and investment and benefits those who do not take risks. Deflation also stifles a forward-looking mindset, discourages competition and reinforces the status quo. The prospects of declining nominal prices and wages after financial crises are more prevalent than are generally believed in a post-crisis environment and can be the stickiest impediments to reform. While structural policies are ultimately important, the policy sequencing is crucial, and the success of structural and regulatory reform will depend crucially on how firmly inflationary expectations is anchored in the difficult post-crisis economic and political environment.

The Threat from Similarity with the “Lost Decade”

While many problems that have plagued Japan are caused by factors unique to the country, the possibility of prolonged stagnation after a financial crisis is more universal than has been generally thought. The high leverage of consumers and corporations during boom years has to be adjusted to the grim post-crisis reality of slower growth, persistently

high unemployment and more stringent credit standards applied by banks. Such an adjustment, particularly by households, takes much longer than predicted by economic models, which probably fail to capture behavioral changes in consumers and businesses that occur as a result of traumatic experiences. These experiences may even affect sentiment for a generation. The erstwhile optimism is replaced by pessimism and the “animal spirits” of entrepreneurs become subdued, with the result that business investment embodying innovation or reallocating resources is depressed, adding to the slowdown in productivity growth and lowering growth potential.

The anti-deflationary policies pursued by Japan after its own crisis in the 1990s have been applied vigorously by other countries following the global financial crisis. The very low interest rate policy, quantitative easing, and other unconventional policies, piloted by the Bank of Japan but considered anomalous and heretical when implemented, have almost become a standard textbook approach. Central banks pursued expansionary monetary policies perhaps more boldly and confidently than was initially the case in Japan. These policies have contributed to stabilizing financial systems and containing the adverse impact of economic downfall. The bold monetary policies pursued by the United States and Europe seem to have so far contained the possibility of deflationary expectations becoming entrenched. The fiscal stimulus has also helped to prevent their economies from falling into a downward spiral. Despite these timely and bold efforts, however, growth has continued to be viewed as subpar and prospects remain uncertain. The similarity of the current situation with Japan's earlier lost decade is now posing the threat of prolonged stagnation. It is therefore worth reviewing some of the difficulties in preventing deflation in the post-crisis policy environment.

Potential Pitfalls

There are several types of pitfalls which may pose particular difficulties for policymakers in preventing long-term stagflation or deflation after a

financial crisis. They are broadly related to three aspects: the analysis of the causes of deflation, distributional implications, and ideological divisions about the role of governments and central banks.

In analyzing the causes of deflation, it is not easy to distinguish between normal price stability and the dangerous signs of deflation. Price stability is traditionally measured in terms of the consumer price index (CPI) excluding fresh food. Japan's annual average change in the CPI was minus 0.3 percent over the 15 years since 1998. In a post-crisis environment, aggregate demand is weak due to excess capacity, the lack of strong investment and also the slow growth or reduction of wages and bonuses. In an open economy, increasing competition from imports from lower labor-cost countries also exerts downward pressure on the general price level. Under these circumstances, a price stability of zero percent can easily be considered normal, if not desirable. In addition, on a more technical level, the CPI is known to have an upward bias, partly because of the innovation and technological changes which affect relative prices and resultant consumption behavior. Namely, the CPI is calculated on the basis of a presumed fixed basket of consumer goods, ignoring the effects of relative price changes on consumption of substitutable goods, particularly those involving technology-intensive consumer goods such as personal computers and mobile phones, where downward price changes are significant. Zero percent CPI movement likely overestimates price stability, and effectively means that deflation is creeping into the economy. The CPI may also underestimate the general price trend faced by businesses, particularly in manufacturing where product innovations are actively taking place and international competition is intense. Therefore, the recognition of these deflationary pressures tends to be delayed. In the case of Japan, policymakers, particularly the central bank, had been aiming at a price stability increase of above zero percent, but had seemed hesitant to set an inflation target of significantly above zero, presumably mindful of possible damage to their credibility and independence if such a target were not met. The absence of such a target

may have further reinforced deflationary expectations. The mild price inflation target of around 2 percent, which is the normal price stability target for most of the advanced economies, was not set by the government and by the central bank until early 2013.

Secondly, there is a potential distributional aspect to formulating anti-deflationary policies. Those segments of the population that rely on fixed nominal income, including pensioners and those who have large bank deposits or fixed-income financial assets, benefit from deflationary tendencies at least in the short term. Conversely, the forward-looking segments of the population suffer, including the young workforce expecting advancement and an increase in nominal wages. Business managers and entrepreneurs with debt and households with mortgages and other debt also suffer, as persistently high interest rates in real terms increase their real debt burden. Since the elderly tend to be more politically active in voting than the young, it becomes difficult to install anti-deflationary policy as a major political agenda. Only political leaders with strong support from their legislature and with great communication skills can promote anti-deflationary policy forcefully.

The third and possibly the most difficult aspect is the ideological division that may emerge on the role of anti-deflationary policies when deflationary tendencies persist for a longer period of time. Proactive policies may gain strong public support as an immediate response to the crisis. But if they are used for a few years and prove slow in producing a robust turnaround in the economy, which would normally be the case in a post-crisis environment, then there will likely emerge frustration from all corners of ideological camps, leading to a division as to how long such supportive policies should be sustained or how forcefully they should be continued. Both fiscal and monetary policies conceptually have long-term trade-offs, requiring careful balancing.

As for fiscal policies, they can support the economy directly in the short term, and their active use

strengthens future growth potential, particularly through well-targeted upgrading of infrastructure. The low interest rate environment provides favorable conditions for the success of such a fiscal policy. Fiscal support to provide robust social safety net also plays an important role in facilitating structural changes and mitigating post-crisis difficulties. Nevertheless, fiscal stimulus could easily turn out to be ineffective or inefficient unless fiscal expenditures or tax policies are carefully designed to uplift growth potential and to avoid creating a false sense of stability. The ostensible economic growth largely dependent on public investment would likely end up creating “white elephants,” which in turn reinforce political pressures to prolong such expenditures. On this score, Japan has not been entirely successful, particularly in depressed regions; revitalizing regional economies has now become a major policy agenda for the government. Public investment should be designed to “crowd in” private investment and help create a business-friendly environment in order to ensure total positive returns to the public in terms of increased social benefits and tax revenues over the long period of time. Otherwise, it would certainly widen fiscal deficits to an abnormal level, exacerbating anxieties not only about future tax burdens but also jeopardizing the long-term fiscal viability and eventually the stability of the economic system.

As for the monetary policy, zero interest rate and quantitative easing monetary policies help support private investment and prevent deflationary expectations from becoming entrenched. Easy monetary policies also support the restoration of asset prices, which in turn help consumption and investment. However, such policies take time to produce the desired effects on the real economy, particularly when business and consumer sentiments are dampened in the process of deleveraging after the crisis and in the presence of excess capacities and inventories. Financial intermediation will also likely be affected by the balance-sheet problems of banks, consumers and businesses with high-leveraging. Moreover, the ongoing regulatory reforms and tightened credit standards

will affect the normal transmission channel for monetary policies. Such a situation can easily give rise to debates about the desirability of easy monetary policies particularly when the rise in certain asset prices is detected or some signs of price inflation, however meager, appear. Under such circumstances, a strong temptation to backtrack on the policies may develop before deflationary expectations are fully reversed. An ideological division among policymakers could also emerge, with some parties being worried about creating another asset price bubble or potential inflation in the future, and others concerned about a premature change of policies before anti-deflationary expectations are fully anchored. Some policymakers might also be troubled by the perception of central bank independence being compromised because of the large-scale bond purchasing plans that quantitative easing policies would entail.

In a post-crisis deflation-prone environment, there seems to be no easy way for policymakers to apply the pre-crisis textbook approaches comfortably and mechanically. On the contrary, the textbooks will probably have to be rewritten in light of the agonizing post-crisis experiences.³ Regardless of ideological views about central banking, nobody would deny that for central banks, controlling inflation is less difficult than fighting against deflation. The tools are now being explored to reverse deflation while containing future inflation and ensure financial stability, such as calibrated forward guidance, macroprudential and other regulatory measures. The increasingly important tool is the way the policymakers communicate with the market and the public in order to clarify the policy goals of avoiding deflation and anchoring inflationary expectations. Ideological divisions among policymakers are inevitable and healthy in a democratic policymaking environment. But the policymakers, once in charge, need to ensure the effectiveness of communication by providing consistent messages with clarity and commitment, particularly when the task is to reverse expectations. This aspect may be particularly important in the eurozone, where policymaking additionally involves an assessment of diverse economic situations in the vast economic

area. The most important goal for policymakers is to bring the real economy to a robust growth path by anchoring expectations, paying attention to the economic realities on the ground rather than pursuing their own academic prestige or vindication of their ideological beliefs.

Investment for the Future

In a post-crisis environment, macroeconomic policies play the most important role in supporting the economy and employment. Over a longer run, however, it is the structural policies and the private sector responses that matters in ensuring longer-term growth. It is the private sector that creates jobs, growth and wealth; governments and central banks cannot produce them by themselves. Only private sector consumption and investment can support stable and sustainable economic growth. What matters over the long run is the way scarce resources are allocated. The allocation of risk-taking capital in the form of investment is particularly important, as it is through investment that human resources are reallocated to more productive sectors from less efficient sectors. The quality of investment is the key to increasing productivity through innovation, and enhancing the true value of wealth. The role of capital markets is therefore essential in this regard, not only in supplementing bank financing but also in producing the signals needed to transform the economy in a rapidly changing global and technological environment.

The key role of capital markets matters not only in developed countries but also in emerging economies. It is private sector cross-border capital flows, combined with the dissemination of human knowledge and upgrading of human skills, which

ultimately play the most important role in ensuring the sustainable convergence of poorer countries with higher income countries. While capital flows are not necessarily a one-way movement, the prospect for active investment flows from high-income countries, embodying new technologies and management skills, will become brighter only where capital markets are underpinned by fair and transparent rules and institutions. This would be particularly true when corporations in high-income countries are hesitant to take calculated risks in a deflationary environment.

To reiterate, expectations matter more than past numbers in investment decisions. Policymakers are therefore required to make sure that deflationary expectations will not become entrenched so that stable inflationary expectations to encourage risk-taking investment will be anchored. They should not be content with the observed signs of stability in prices, which may not necessarily capture the true degree of deflationary expectations. The real problem of mild but persistent deflation in the aftermath of a financial crisis lies in suppressing the forward-looking mindset, particularly in high income countries, as people become defensive and inward-looking. In anticipation of lower prices in the future, they postpone consumption and investment. It rewards those who stick to the wealth accumulated in the past and take no risks. It discourages entrepreneurship, stifles innovation and deprives the young of opportunities to explore their potential through trial and error, which is the true source of innovation. A forward-looking mindset and a willingness to take measured risks only function in a stable non-deflation environment. The efforts to put our post-crisis struggles behind us are not over yet, and we are at a critical juncture in shaping our future economic well-being.

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Endnotes

1. See Kuroda (2014).
2. See Nishiyama (2014). The numbers cited in this reference are based on the estimation by Nomura Securities.
3. See Eichengreen (2014) and Haldane (2014) for interesting observations on the evolving role of central banks.

From Rapid, Shared Growth to Slow Unshared Growth?

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According to the Commission on Growth and Development (2008), since 1950, there have been only 13 economies that have grown at an average of 7 percent or more a year for 25 years or longer. Nine of them are in Asia. Even within this high-growth group, the successful Asian economies have distinguished themselves by their relatively equitable income distribution. In fact, as the World Bank (1993) emphasized, “rapid, shared growth” was the key feature of the East Asian miracle. Some of these economies, including China, Japan and Korea, got rid of their traditional social hierarchy and carried out land reform in one form or another to change people’s expectations for social mobility and improve wealth distribution. All successful Asian economies invested in people and actively engaged in international trade to exploit their comparative advantage in labor-intensive manufacturing and produce broad-based growth and dynamic learning opportunities. They also adopted proactive policy measures to ensure social cohesion, while staying away from European-style welfare state models.

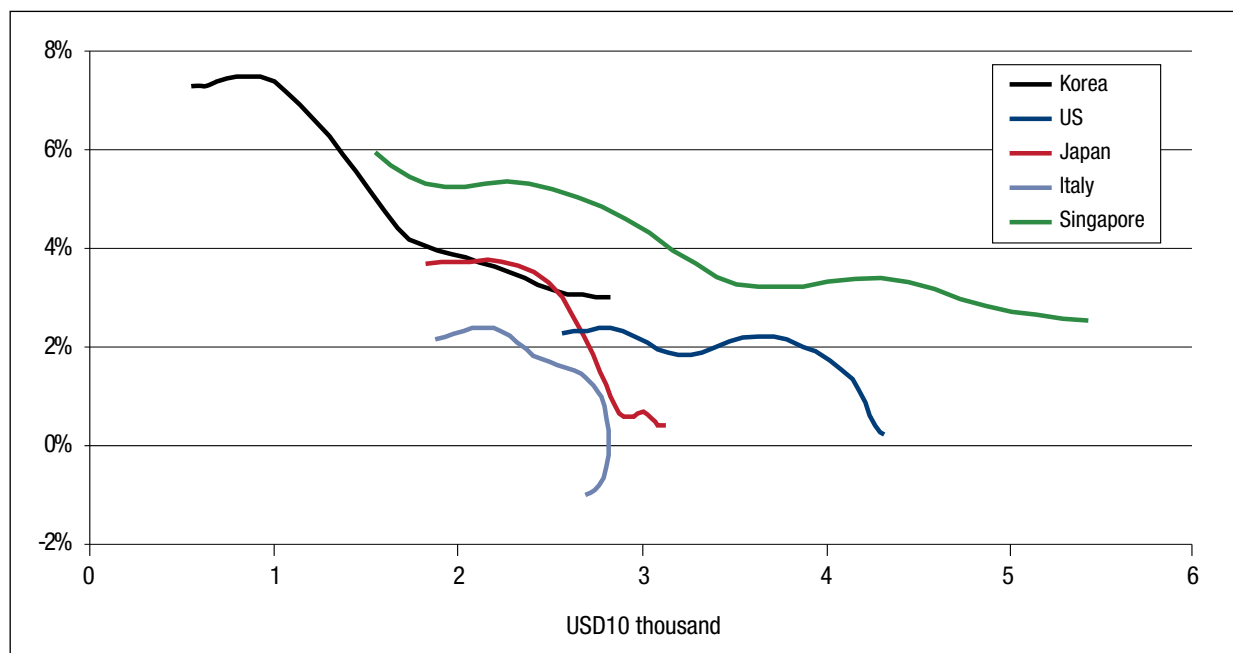
However, it is becoming increasingly clear that the past catch-up strategy based on human resource development and export-oriented industrialization, with some measures for social cohesion, may not be enough to sustain rapid, shared growth. As the Asian economies approach the technology frontier, they must move from emulation to innovation to generate growth and stay ahead of late-developing countries. At the same time, because skill-biased technical change tends to aggravate income distribution, they must redouble their efforts to strengthen education and address economic and social disparities.

Korea is a prime example of a country that was able to achieve rapid, shared growth, but is now facing the challenge of what appears to be slow, unshared growth. As shown in Figure 1, the question for Korea is whether it can continue to grow strongly over time like Singapore, or whether its growth will fall as has happened in Japan, Italy and perhaps now the United States. It provides a number of lessons for maturing economies that are going through a midlife crisis of their own.

From a starting point as one of the world’s poorest countries ravaged by war, Korea has raised its per capita income to more than \$20,000 at the market exchange rate and around \$30,000 in purchasing power parity (PPP) terms. While countries that belonged to low-, middle-, and high-income groups in 1962 respectively raised their per capita income at 2.0, 2.1, and 2.0 percent per year between 1960 and 2007, Korea’s per capita income increased at 5.7 percent per year over the same period.¹ Korea indeed was one of the most successful cases of convergence, whereas most of its low- and middle-income cohorts in 1962 hardly converged with the high-income countries. In addition, according to the World Bank (1993), the income of the top 20 percent was less than seven times the income of the bottom 20 percent over the 1965-1989 period in Korea; whereas the top-to-bottom income quintile ratio exceeded 25 in such high-growth countries as Brazil and Botswana over the same period.

What was the formula for this rapid, shared growth in Korea? Initial wealth redistribution changed expectations for social mobility and helped to facilitate human resource development in the 1950s, which in turn created comparative advantage in labor-intensive manufacturing. Export-oriented in-

**FIGURE 1. INTRA-REGIONAL OR EXTRA-REGIONAL CONVERGENCE?
PER CAPITA INCOME TRAJECTORY: LEVEL VS. GROWTH RATE (1980-2012)**



Note: Based on 2005 PPP exchange rates. Per capita income was smoothed out using the Hodrick-Prescott filter.

dustrialization then began to generate broad-based growth in the 1960s. In subsequent decades, Korea successfully upgraded its comparative advantage with a view toward increasing the domestic value added of its exports, while adopting some proactive measures to address economic and social disparities.

The collapse of Korea's traditional hierarchy during Japanese colonial rule (1910-1945), combined with the leveling effect of the 1949 land reform and the Korean War (1950-1953), essentially placed all Koreans at the same starting point in the 1950s. These initial conditions had tremendous implications for human resource development, because Koreans came to believe that hard work in school would pay off in the form of upward social mobility.

Although Korea was one of the poorest countries in the world in the 1950s, it invested its limited resources to promote human resource development. With the introduction of universal primary education in 1950, Korea's primary school enrollment rate increased from 59.6 percent in 1953 to 86.2 percent in 1960. The illiteracy rate dropped from 78 percent in 1945 to 28 percent in 1960.² As a result, by 1960, Korea had primary and sec-

ondary school enrollment rates similar to those in countries with two or three times its per capita income.³ Although investing in people alone was not enough to promote growth in the absence of complementary industrial and trade developments, it provided the basis for Korea's initial takeoff.

After changes in political economy introduced by the student revolution of 1960 and military coup of 1961, Korea was able to exploit its latent comparative advantage through export-oriented industrialization. It is important to note that for a country that has a comparative advantage in the labor-intensive sector, as Korea did in the 1960s, export orientation can improve the welfare of workers. The reason is that international trade allows a country to provide greater opportunities for its relatively more abundant factor of production. As a result, Korea's switch to export-oriented industrialization in the early 1960s supported broad-based growth.

Even as Korea embarked on its export-oriented industrialization, it also made serious efforts to raise agricultural productivity and narrow the urban-rural income gap, which had widened from zero to 33 percent over the course of the 1960s.

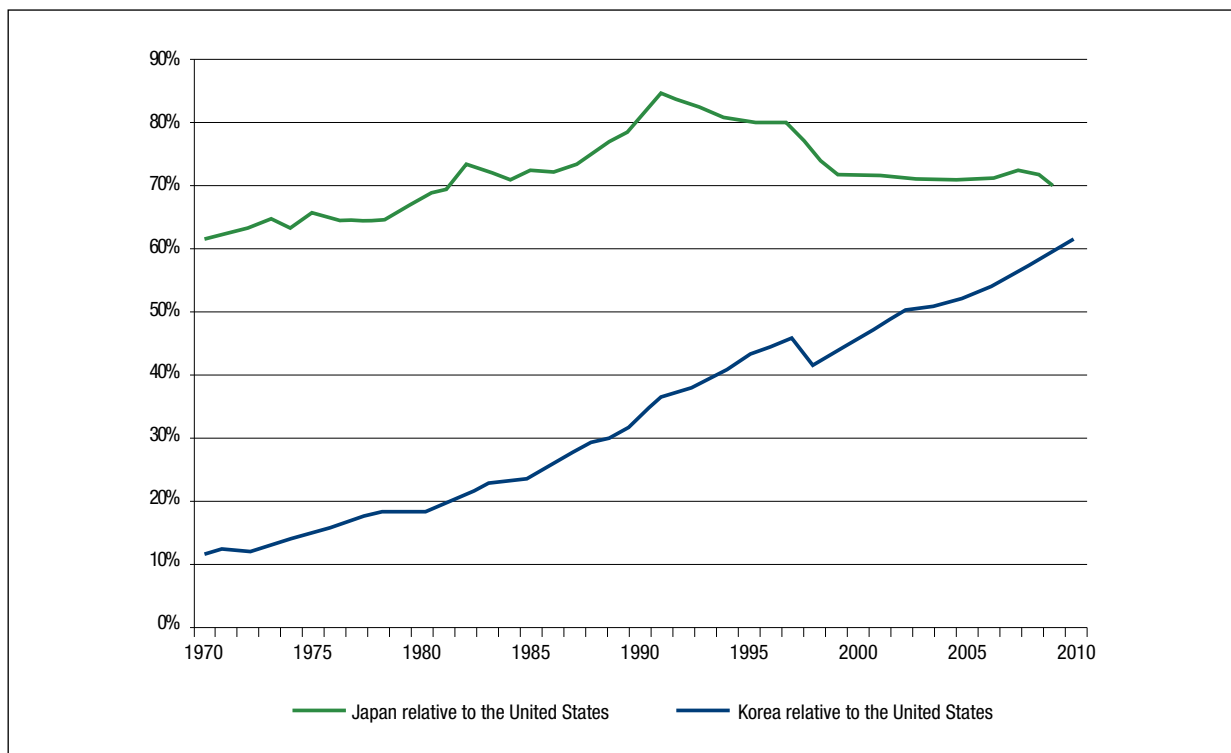
In 1970, Korea adopted *Saemaul Undong* (New Village Movement), of which the core elements included community empowerment under the principles of “diligence, self-help, and cooperation”; peer learning and inspiration; and performance-based support from the government.⁴ In addition, the construction of multi-purpose dams and other infrastructure, combined with the green revolution, helped to increase agricultural productivity. A dual grain price system, through which the government procured grain at higher prices than it subsequently sold for, further supported rural income, even though it increasingly became a fiscal burden. Thanks to these efforts, Korea was able to eliminate its urban-rural income gap by the mid-1970s.

In subsequent decades, Korea retained ownership of its development and progressively built domestic anchor institutions and companies that played a leading role in adding value and managing risks, even as it actively learned from, and traded with, the outside world. Through the joint efforts of the government and the private sector, Korea was able

to discover and upgrade its comparative advantage, and reinforce successful experiments through rewards based on performance in competitive global markets. Korea’s coordinated and broad-based program of trade, industrial, and human resource development generated rapid, shared growth.⁵

In recent years, however, Korea has been faced with diminishing growth prospects and increasing socioeconomic disparities. Korea’s potential growth rate was as high as 8.6 percent in the 1980s, but it declined to 6.4 percent in the 1990s and 4.5 percent in the 2000s. It is projected to decline further to 3.6 percent in the 2010s and 2.7 percent in the 2020s. Korea’s realized GDP growth rate in the 2010s is even lower than the potential growth rate, and there is an increasing concern that Korea may follow Japan’s footsteps and achieve only “club convergence” with Japan (see Figure 2). Meanwhile, Korea’s income inequality as measured by the Gini coefficient has increased since the mid-1990s, and among the 34 OECD countries, Korea had the sixth worst income distribution in 2010,

FIGURE 2. INTRA-REGIONAL OR EXTRA-REGIONAL CONVERGENCE?



Note: Based on 2009 purchasing power parity exchange rates.
Source: OECD Economic Outlook database.

after Chile, Mexico, Turkey, the U.S. and Israel. The question is how to achieve a virtuous cycle between growth and equity on a sustained basis given Korea's changed economic and social conditions. It would be irresponsible to set an unsustainably high annual GDP growth target (for example, 6 to 7 percent) and adopt loose macroeconomic policy (not productivity-enhancing reform) in a vain attempt to try to achieve it—and risk creating a bubble instead. Also, given Korea's changed comparative advantage and global production network, it would be unrealistic to expect international trade to generate broad-based growth. Finally, given Korea's relatively low tax rates, “trickle-down” policy based on tax cuts for the rich would likely aggravate the fiscal situation and worsen income distribution without accelerating economic growth. An effective new policy package would require a nurturing business ecosystem to promote innovation, an integrated labor market to provide compensation linked to productivity, and a proactive public finance system to address economic and social disparities.⁶

Korea's industrial sector is dominated by a handful of family-based business groups, known as the chaebol. They are among the most technologically and commercially sophisticated agents in the Korean economy, but they may unduly concentrate and entrench economic and political power. The best solution for Korea is for the government to strengthen investor protections and make it easier for shareholders to seek private remedies against “tunneling” and breaches of fiduciary duty, while enhancing intellectual property protection, strengthening competition, and expanding access to finance to promote the kind of entrepreneurship and entry that are vital to innovation but threaten to be stifled by the presence of very large business groups.

Korea's labor market is characterized by duality, according to which workers are segmented into regular and non-regular employment, which is a significant source of inefficiency and inequity. Enforcing the principle of equal pay for equal work should help improve productivity as well as income distribution. In addition, overhauling the traditional seniority-based wage system should

support sustainable employment. Whereas in most OECD countries the female labor participation rate remains high but hours worked drop for women in their thirties as they have to take care of their young children, in Korea, child-rearing women drop out of the workforce altogether because, under the seniority system, the wage component based on hours worked is not large enough to make up for the childcare cost. Older workers in large firms are forced to retire early, around age 53, because their wages cannot be justified by their productivity. Reforming personnel management practices so that large firms retain more of their still-productive older workers would reduce the pressure to open up mom-and-pop stores in the service sector. Better still would be to adopt salary systems that more closely link pay not to seniority but to productivity.

A final distinctive feature of the Korean economy is an unusually low level of total tax revenue (including social security contributions) and social expenditure (27 percent and 10 percent of GDP, respectively) compared with OECD averages (34 percent and 19 percent, respectively). This tax-benefit system does too little to reduce inequality and promote inclusive growth. Korea needs to restructure the income tax system to increase progressivity and broaden the personal income tax base.⁷ Korea also has a low share of social services in employment by OECD standards. This points to the availability of a quick fix where increased tax revenue and social expenditure are used to create jobs in social services and address problems of inequality and poverty.

In short, to go beyond “club convergence” with Japan or “regional convergence” within East Asia, Korea should overhaul the old catch-up strategy. An innovation-promoting business ecosystem should help firms with new ideas to flourish and generate growth. An integrated labor market with productivity-based pay should improve efficiency as well as income distribution. A proactive public finance system should help to achieve a virtuous cycle between growth and equity.

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Endnotes

1. Winters et al. (2010)
2. McGinn et al. (1980)
3. World Bank (1993)
4. Park (1998)
5. Lim (2011)
6. Policy recommendations contained in the next three paragraphs are based on the conclusion of Eichengreen et al. (2015).
7. OECD (2011)

The Challenges to Achieving Sustainable Growth in Latin America

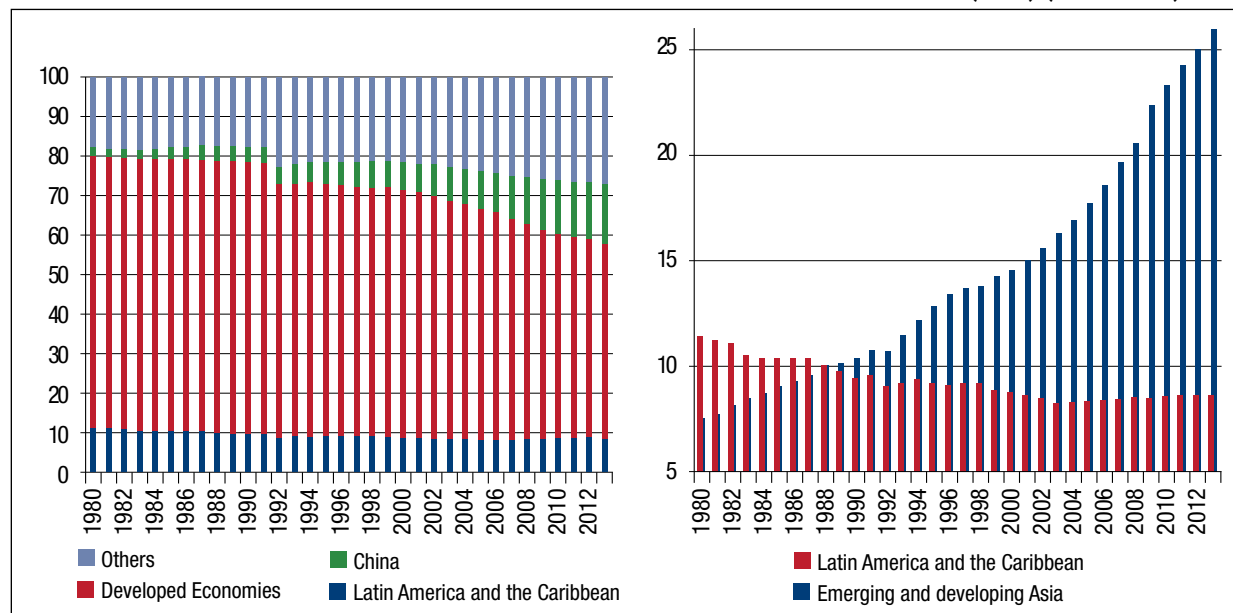
Guillermo Ortiz *Chairman, Grupo Financiero Banorte; Former Governor, Bank of Mexico; Former Secretary of Finance and Public Credit, Mexico; Former Chairman of the Board of the Bank for International Settlements*

Introduction

The economic recovery after the Great Recession has been quite disappointing. Growth in advanced economies has been repeatedly revised downwards with respect to IMF projections. In this context, output in developed markets has underperformed measured against the IMF's original forecasts by 1.2 percent, on average, over the past five years.¹ In emerging markets, the initial phase of recovery was strong due to the use (for the first time in many cases) of countercyclical monetary and fiscal policies. However, the recent pace of growth has been disappointing in these economies as well. The slowdown is broad based particularly in emerging Asia and China, after the initial post-crisis surge,

in which growth has been significantly below the pace sustained during the decade before the crisis. Latin America is not an exception. After experiencing strong growth before the crisis, the situation has changed dramatically. The pace of growth has slowed, and some countries need to address inflationary pressures and certain imbalances in order to maintain their macro stability. In addition, the growth experienced for the region compared to other parts of the world has been disappointing. As Figure 1 shows, Latin America's current share of world GDP has dropped to 8.6 percent, down from 11.4 percent in the 1980s.² Therefore, it is fundamental for the region to undergo a supply-side structural reform agenda and achieve a sustainable path of higher growth rates, similar to those observed before the crisis.

FIGURE 1. SHARE OF WORLD GDP BASED ON PURCHASING PARITY TERMS (PPT) (PERCENT)



Source: IMF.

Improvements in Latin America During the Last Decade

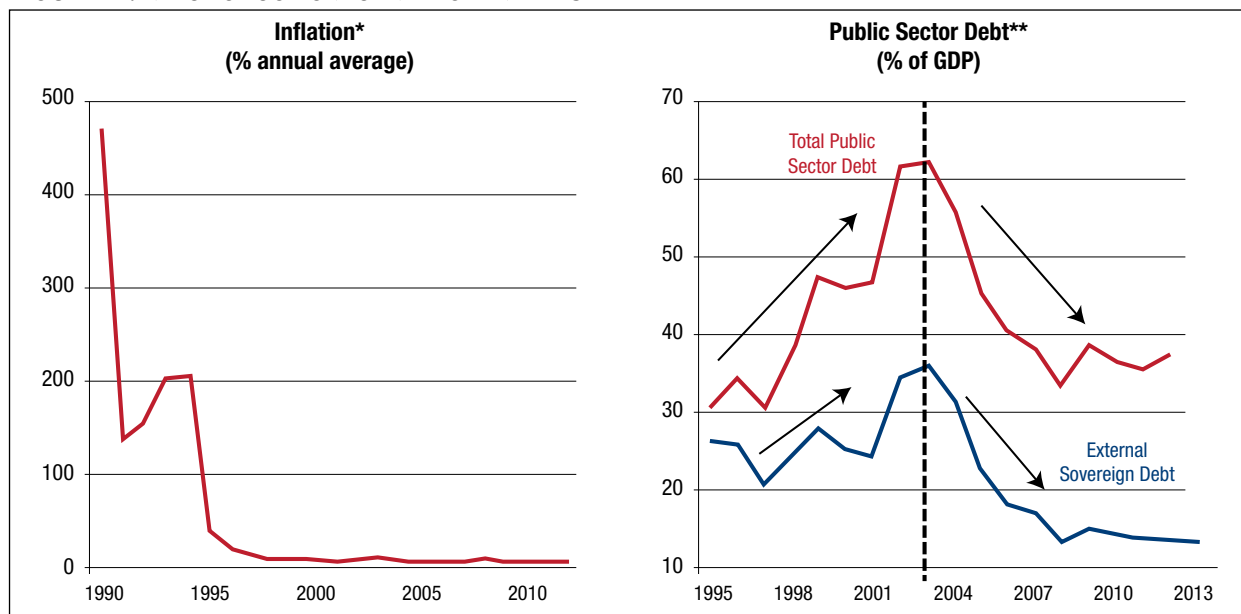
The improvements Latin America went through during the last decade are quite striking. From 1990 to 1995, the average annual inflation rate in Latin America was over 200 percent, while average inflation since 2010 has been about 6 percent.³ The second outstanding shift in the Latin American picture is a substantial reduction in the traditional weaknesses of the region, particularly in terms of financial stability, the debt structure and the balance of payments. Total public sector debt, which peaked at slightly above 62 percent of GDP in 2003, declined sharply to around 37 percent by 2012.⁴ The same goes for external sovereign debt (Figure 2).

In addition, reserve accumulation has increased significantly. On average, the nine largest economies of the region accumulated the equivalent of 16 percent of GDP in international reserves during 2003-2011.⁵ This means that some of the traditional components that hurt Latin America in

the past, such as large current account deficits and huge exposure to sudden stops, have substantially improved over the past eight years. Correspondingly, the balance sheets of most Latin American countries are much stronger now compared to a decade ago. This is clearly reflected in the spreads of Latin American debt. For instance, during 1998-2003, the average spread of the Latin American EMBI+ (Emerging Markets Bond Index Plus) was more than 800 basis points (bps). In contrast, the average from 2003 to 2013 was less than half, at around 380 bps (Figure 3). This development allowed Latin America to weather the recent crisis. This represented a significant milestone for the region: For the first time in a very long time, Latin America was able to implement strong countercyclical monetary and fiscal policies in response to extreme external shocks of the nature seen during the Great Recession.

This is the result of a substantial improvement in the region's macro policy framework. Latin America had been building fiscal cushions in the decade prior to the Great Recession. The average primary surplus of Latin American countries was slightly

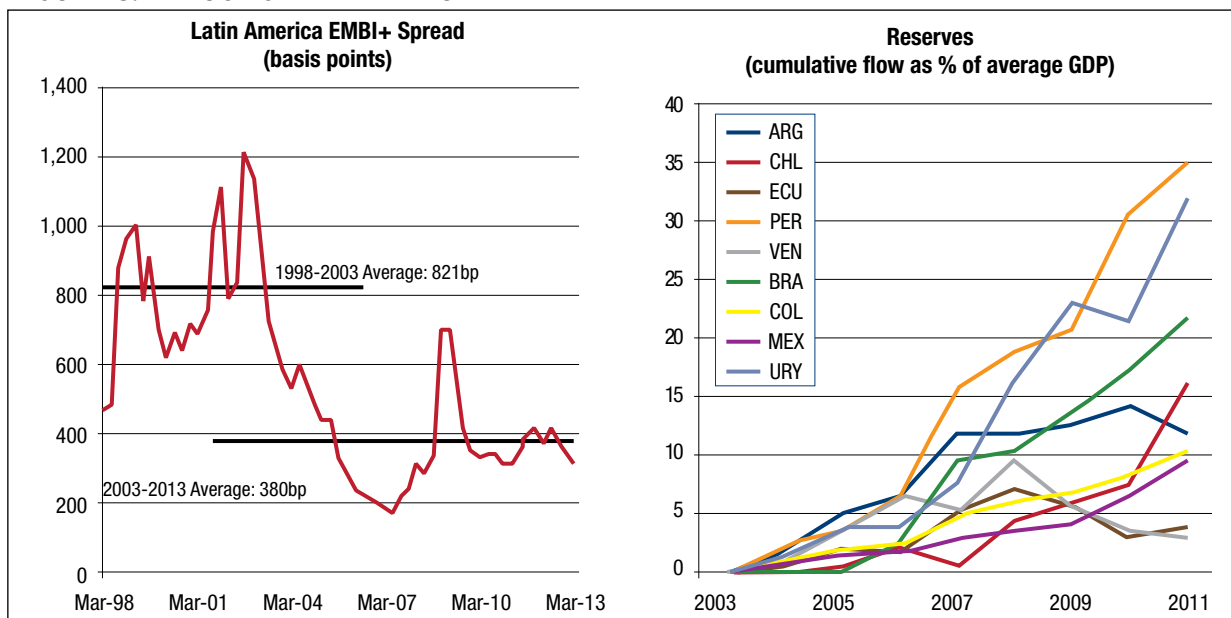
FIGURE 2. MACROECONOMIC IMPROVEMENTS



*Average inflation of Latin America and the Caribbean
Source: IMF.

**Simple average of Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, Uruguay and Venezuela
Source: JP Morgan.

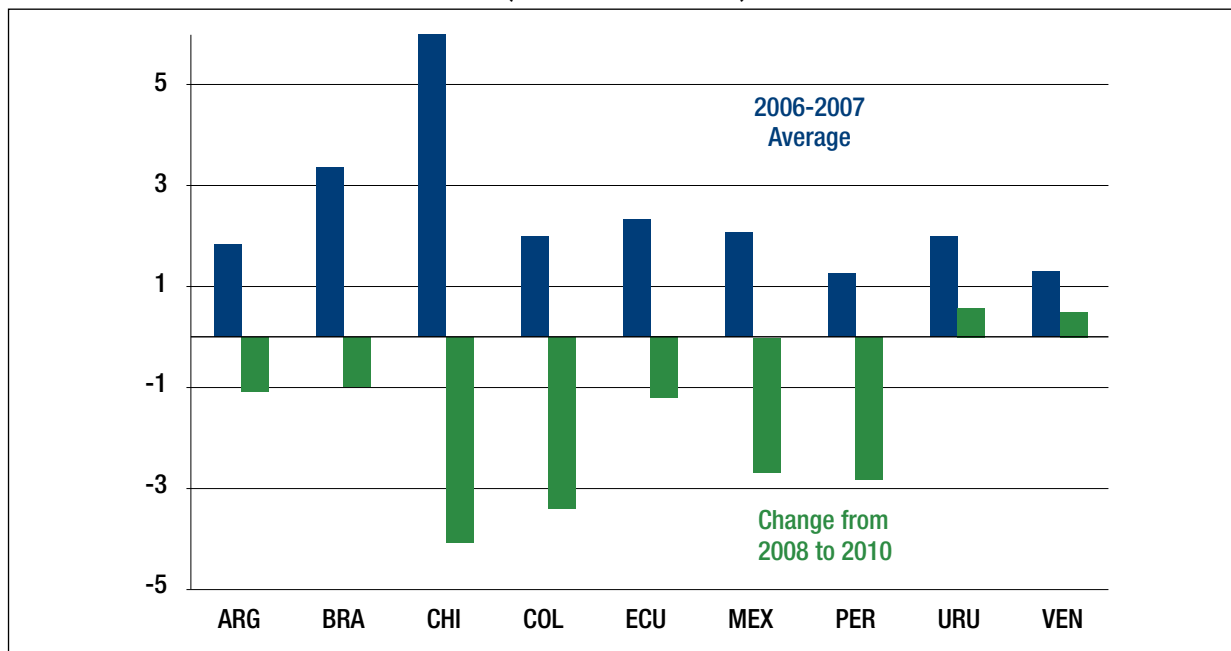
FIGURE 3. REDUCTION IN DEBT VULNERABILITY



Source: JP Morgan.

Source: World Bank.

FIGURE 4. PRIMARY FISCAL BALANCE (PERCENT OF GDP)



Source: JP Morgan.

above 2.5 percent of GDP before 2007. During the crisis, the reduction in primary balances was substantial, particularly from 2008 to 2010. In the case of Argentina, Chile and Colombia, the change was quite drastic, with an average reduction in the primary balance of these countries of nearly 3 percent of GDP. Moreover, several other countries

also implemented countercyclical fiscal policies in a very active way. Between 2008 and 2010, Mexico and Peru reduced their primary balances by 3 percent of GDP. Similarly, as Figure 4 shows, Brazil, Ecuador, and Venezuela averaged slightly below of 1 percent of GDP.⁶

The same is true for monetary policy. For example, from January 2009 to March 2010, Brazil lowered its policy interest rate by 500 bps, Chile lowered its rate by 775 bps, and Colombia followed suit with a 700 bps reduction from peak to trough. Noticeably, there was a strong policy response in the region. Governments used both monetary and fiscal policies to mitigate the impact of the 2007-2009 economic downturn, without suffering a greater economic dislocation as a result. This approach was largely unprecedented in Latin America, and in stark contrast to the region's experience during the 1990s, when high levels of indebtedness, currency mismatches, and poorly capitalized financial systems tended to amplify external shocks and limit countercyclical policy intervention. As a result, the growth performance of Latin America from 2003 to 2013 has been substantially better in most countries than in the previous decade. According to the IMF, Latin America experienced an average growth rate of 4 percent per year, almost twice the rate recorded in the 1980s and 1990s⁷ (Table 1).

TABLE 1. LATIN AMERICA'S GROWTH RATE COMPARISON

	GDP Growth (%)	
	1990-2002 Average	2003-2013 Average
Argentina	2.1	6.9
Brazil	1.9	3.5
Chile	5.7	4.6
Colombia	2.8	4.7
Ecuador	2.7	4.6
Mexico	3.1	2.5
Peru	3.1	6.4
Uruguay	1.5	5.2
Venezuela	1.8	4.6
Latin America and the Caribbean	2.7	4.0

Source: IMF.

There is no doubt that the significant modifications to the macro framework, led by the important fiscal and monetary policy changes, were key for Latin America's higher growth in a more stable

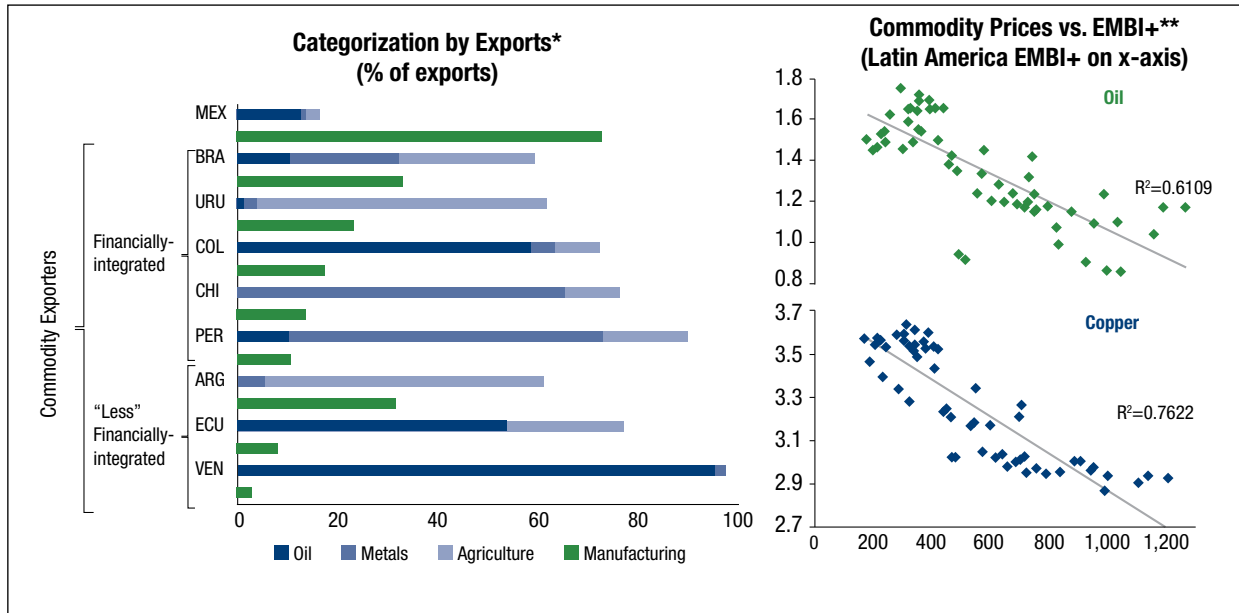
environment. But it is also worth noting that China's high growth rates since its accession to the World Trade Organization in 2001, as well as the commodity price boom, each contributed to higher growth rates in Latin America, particularly among commodity exporters and in those countries with a higher degree of financial integration (Figure 5).

Heterogeneity and the Reasons Behind Latin America's Improvements

The major economies in Latin America—with the exception of Mexico—are commodity exporters (57 percent of total exports). For example, Brazil's commodity exports are around 59 percent in total. However, the concentration of commodities that are exported varies across countries. In the Brazilian case, agricultural products account for 27.5 percent and metal products account for 20.4 percent of total exports. Chile, on the other hand, is concentrated in metals (around 59 percent). Colombia mainly exports oil, which represent 58 percent of total exports, while Peru is concentrated in metals (about 65 percent).⁸ These countries represent the financially integrated commodity exporters. Similarly, the less financially integrated exporters are also heavily weighted toward commodity exports. Commodities account for 76 percent of Argentina's exports, with a substantial concentration in agricultural products. Ecuador's exports are concentrated in oil (57 percent) and agricultural products (24 percent). Venezuela specializes almost entirely in oil, representing 98 percent of total exports. Given the country's greater specialization in manufacturing exports (72 percent of exports), and strong commercial links with the United States (79 percent of all exports), Mexico stands apart, with commodities representing just 16 percent of total exports.

The improvements Latin America experienced over the last decade were to a great extent due to very favorable external conditions. Increasing external demand—led by the advanced economies and China—created favorable terms-of-trade for most

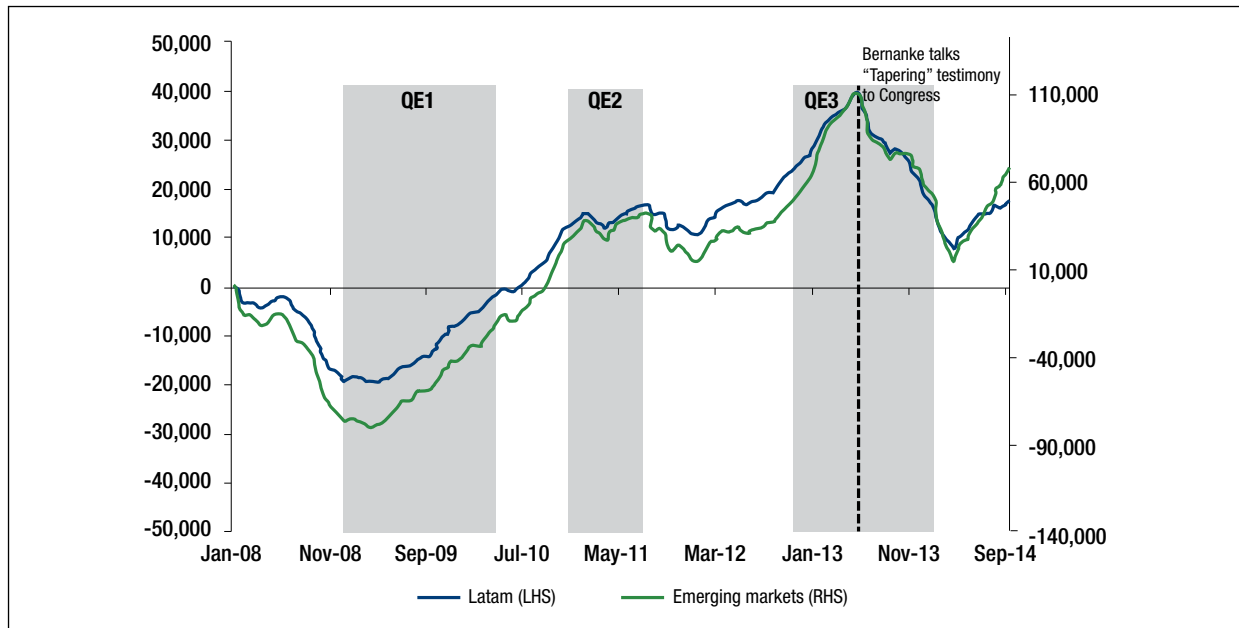
FIGURE 5. THE IMPORTANCE OF COMMODITIES IN LATIN AMERICA'S ECONOMIES



*Categorization of commodity exporters due to IMF; see Regional Economic Outlook: Western Hemisphere (April 2012). Source: JP Morgan and WTO.

**Oil and copper are in logs of 1982 U.S. dollars: data from 1998 to 2013. Source: JP World Bank and Bloomberg.

FIGURE 6. FOREIGN INFLOWS INTO DEBT AND EQUITIES IN LATAM AND EMERGING MARKETS (CUMULATIVE SINCE JANUARY 2, 2008 USD MILLION)



Source: EPFR Global, Banorte-Ixe.

Latin American countries. Furthermore, the rise in commodity prices, driven mainly by increasing demand, helped to increase fiscal revenues for the commodity exporting countries. For example, one IMF study in 2010 estimated that the cumulative contribution to GDP growth from a one standard deviation shock to commodity prices in Argentina

between 1993 and 2008 was around 2.5 percent. The equivalent figures for other countries were 1.3 percent for Brazil, 1.1 percent for Chile, 2 percent for Colombia, around 1 percent for Ecuador and 0.6 percent for Mexico.⁹ In addition, some countries, especially the financially integrated economies, benefited from favorable financial external

conditions. After advanced economies relaxed their monetary policy stance, these countries became very attractive for large capital inflows in search of higher yields (Figure 6).

Domestically, labor accumulation played an important role in output growth. Factor accumulation accounted for 3.75 percentage points of annual GDP growth in 2003-2012.¹⁰ Low unemployment in many countries was the main reason behind this growth, but capital accumulation from global capital inflows into financially integrated commodity exporters also played a part. Today, however, external conditions are no longer as supportive as they used to be, and episodes of renewed volatility have exposed certain vulnerabilities in Latin America.

The New World

In recent years, Latin America has experienced a rather complex cycle. Global economic conditions are not as favorable as they used to be, with global growth forecasts for 2014 having been adjusted to reflect a slower pace. The 2014 IMF World Economic Outlook indicates that the projected growth for this year is 3.3 percent, which is 0.4 percent lower than its initial projections. In this context, advanced economies are only expected to grow 1.8 percent. Meanwhile, the GDP growth rate in China has fallen to around 7.5 percent, down from 10 percent at its height. This has all contributed to a decline in commodity prices. According to an IMF report, commodity prices have already softened over the past 12 months and are projected to moderate further over the medium term, as supply is increasing¹¹ while demand growth from large emerging markets is expected to slow. On top of that, the reduction of monetary stimulus measures in some of the developed economies is reversing the flow of money Latin America attracted during the extended period of ultra-lax monetary policies. Therefore, the present global situation is likely to be characterized by slower external demand, abundant capital, and lower commodity prices.

In this context, Latin American economies are facing a cycle of lower growth and higher inflation,

particularly those countries that have followed unorthodox policies and implemented no structural reforms. The projected growth for Latin America for 2014 is 1.3 percent, well below the 3 percent experienced in year 2012. In addition, inflation, which remains contained, is now starting to approach the “upper limits” in several countries. Relatively weak growth in financially integrated economies’ exports has decreased their revenues. The moderation of revenues is likely to persist over the period ahead, reflecting softer commodity prices, rising commodity extraction costs, and lower potential growth. In addition, primary public spending, as a share of GDP, has increased steadily since the financial crisis, even though revenue growth has started to slow. At the same time, pressures on expenditure are growing, including from higher interest bills, critical infrastructure needs, and demands for better public services. Aging-related spending is also expected to increase in the medium term.¹² More significantly, some supply constraints are starting to arise. Growth of physical capital is expected to moderate, as the low global interest rates that facilitated large capital flows to the region start to rise and commodity prices stabilize. In addition, the contribution of labor will likely be constrained due to an aging population and the unemployment rate likely to its natural levels.¹³

This new reality of lower growth and tighter financial conditions creates common challenges for Latin American countries. On one hand, Latin American countries need to preserve macroeconomic and financial stability to be more resilient to external shocks. On the other hand, the region needs to boost growth that is more reliant on domestic factors. In order to maintain stability, Latin America needs to keep strong balance sheets, credible policy frameworks, and a prudent macroeconomic stance. For this, the region needs to rebuild its policy buffers that were worn out by fighting the last recession, especially in commodity-exporting countries. In this context, it is important to create macroeconomic policies that address the vulnerabilities of the region. For instance, keeping inflation low with well-anchored inflation

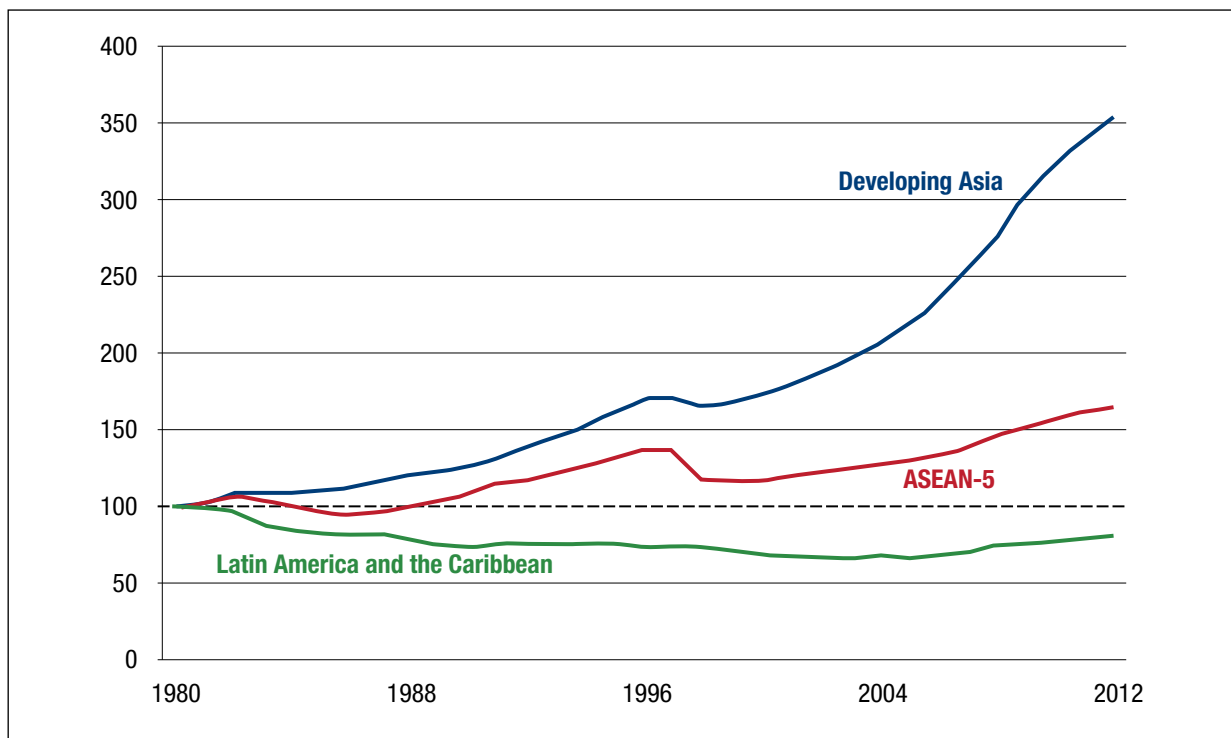
expectations, together with a flexible exchange rate and a “high” level of foreign reserves, decreases the potential risks of volatility. Also, flexibility to ease monetary policy would allow the region to respond in case of a slowdown. It is fundamental for countries to adopt prudent fiscal policy and improve the efficiency of public spending, in order to apply countercyclical policies if needed. Over the longer term, boosting growth seems like a much greater challenge. This is especially stark when one looks at indicators of the relative performance of the region. Since 1980, Latin American income per capita, relative to the U.S., has decreased by around 20 percent. In contrast, developing Asia and the ASEAN-5 economies have increased their level of income per capita relative to the U.S. by 365 percent and 150 percent, respectively, in the same period.

A recent study by the Inter-American Development Bank (IDB) found that, by deconstructing the trend using growth accounting techniques, total factor productivity (TFP) is by far the most

important determinant of the income gap between these regions and the U.S. It is striking that TFP in Latin America declined by around 30 percent relative to the U.S. between 1980 and 2007, while in emerging Asia it increased about 20 percent. The simplest explanation for this divergence in TFP is a substantial misallocation of resources in Latin America. The IDB study attempted to measure the effect of improving resource allocation in the region and found that just a modest improvement would go a long way in elevating TFP.¹⁴ A counterfactual exercise suggests that a gradual adjustment in the allocation of resources to that of the U.S. (in terms of efficiency) would have translated into a gain of 50-100 percent in TFP and an additional 1 percent of annual GDP growth on average, in the period of study.¹⁵

Latin America has to utilize those resources more efficiently. This is clear from the regional comparison in the World Economic Forum’s competitiveness index. In this dimension, Latin America

FIGURE 7. INCOME PER CAPITA RELATIVE TO USA* (INDEX, 1980=100)



*Income per capita is in purchasing parity terms.
Source: IMF.

scores lower than not just China and East Asian countries, but also Central and Eastern European countries. These rankings are based on the aggregate composite index but, on closer inspection, it is not difficult to see that Latin America falls behind these regions across the board. Only in “macro-economic environment and business sophistication” does Latin America score higher than Central and Eastern Europe. In terms of institutions, infrastructure, health and education, labor and goods markets, financial sector development, as well as in technological readiness and innovation, the region lags behind both regions.¹⁶ To rectify this situation, Latin America needs to implement important structural reforms. This implies, first of all, strengthening the institutional framework to secure property rights and eliminate corruption. Also, reforms should be focused on developing infrastructure, which the IMF has recently endorsed as an effective way to strengthen growth financial pressures if invested “appropriately.” In addition, promoting deeper and more efficient financial markets, increasing the quality of education, further developing the labor market, and investing more in innovation and technology will create the appropriate environment to boost productivity across the region. These reforms will allow Latin America to enjoy greater growth rates and be less vulnerable to external shocks. On top of that, if the region manages to successfully implement these reforms, it will be able to compete with economies with higher technological and skilled production. In this context, Latin America will possibly become a group of high-income countries, and leave behind the so-called middle-income trap.

Moving From Stability to Reform

Latin America has improved from a macroeconomic perspective over the last decade. The region was able to weather the Great Recession without painful dislocations. Moreover, it was able to implement countercyclical policies to reduce the impact of the crisis. However, global conditions have changed. The positive environment that allowed the region’s development over the last few years is

starting to vanish. China’s growth deceleration, the decrease in commodity prices and the withdrawal of ultra-lax monetary policies from advanced economies are the main external causes of Latin America’s recent performance. In addition, lower growth in major economies and tighter financial conditions bring new challenges to the region. Consequently, the next step is to maintain the macroeconomic and financial stability achieved over the decade and, at the same time, to press ahead on an important structural reform agenda. This will allow the region to finally escape from the “middle-income trap” and address its major development gaps.

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Endnotes

1. The forecasts published in the World Economic Outlook of April 2014, covering the last 5 years.
2. IMF (2014)
3. IMF (2014), Latin America and Caribbean average.
4. JP Morgan (2014). Simple average of Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, Uruguay, Venezuela.
5. World Bank (2013), author’s calculations.
6. JP Morgan (2014)
7. Average of the 9 largest economies: Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, Uruguay and Venezuela.
8. JP Morgan (2014)
9. Medina (2010)
10. Tsounta and Sosa (2013b)
11. IMF Regional Economic Outlook: Western Hemisphere (2014)
12. IMF Regional Economic Outlook: Western Hemisphere (2014)
13. Sosa and Tsounta (2013b)
14. IDB (2013)
15. The time period varies between countries depending on data availability, but is fixed at ten years in all cases.
16. WEF Report (2014), using the Region IMF division 2013

Russia: Prospects for Growth and Convergence

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Russia dramatically transitioned over the last quarter century from a centralized planning economy to the one of the world's biggest developing economies, a member of the G-20 and one of the five BRICS economies. In that time GDP per capita in Russia more than doubled.¹ Russia's high economic growth, especially in the early 2000s, was fueled by sustained oil price growth and a global investment boom. This changed with the advent of the 2008-2009 global financial crisis as real GDP in Russia fell by 7.8 percent. Russia went through the crisis without increasing public debt and kept the government budget nearly balanced. In the aftermath of the crisis, the price of oil recovered, holding steady at around \$100 per barrel (bbl) since 2011, the financial sector suffered minor losses (some second-order commercial banks failed in 2009, but those cases did not have serious implications) and inflation went down to the one-digit range for the first time since market reforms began. On the other hand, income inequality in Russia, as in many other developing economies, remains high and the Gini coefficient currently stands at 0.42. After the second half of 2012 the economy's growth rate slowed considerably and now tends to be close to zero, and experts forecast low growth and the possibility of stagnation.

Oil Prices and the Commodity Economy

In recent times, Russia has been considered a commodity-based economy as its welfare has mainly depended on the extraction and export of hydrocarbons. The country has one of the biggest oil and natural gas endowments in the world, dominates the European crude oil and natural gas markets and extensively exports oil and gas to China and South-

east Asia. Oil and gas account for two-thirds of exports, and taxes from those industries provide more than 50 percent of federal budget revenues. But the world is changing, traditional assumptions are not still valid and the oil and gas sector is no longer a key driver of Russian economic growth.

The oil and gas sector was historically important in Russia, but the Russian economy has become much more diverse, making the effects of oil prices less acute. According to the Gaidar Institute estimates of the oil and gas sector peaked in 2005 at 25 percent of GDP. Since then, this figure has progressively contracted and now the industry accounts for at most 21 percent of GDP. In fact, the level of oil extraction has remained virtually constant since 2005 producing around 500 million tons a year, meaning the industry's real output has not grown at all in 10 years. Our estimates predict that this trend will continue through 2020, where the share of oil and gas will fall to 18-18.5 percent of GDP.

Oil and natural gas are not the only commodities exported by Russia. Metals (various non-ferrous metals and steel) are a close second amounting to 20 percent of Russia's exports. While a projection of the broad metallurgy industry input to GDP was not conducted here, this industry is very important for the Russian economy in terms of employment and impact on particular regions of the country. Agriculture is also an important industry that has great export potential but is tied to natural resource constraints. Russia has the largest reserves of unused rural land and a lot of capacity to increase productivity of land currently in use (for example, the average wheat yield per hectare in Russia is currently 2.5-3 times lower than in Canadian or European regions with similar climate conditions).

Though the country's role as major global player in the natural resources markets (energy, metals, food and other commodities) remains important and can become even stronger, the burden of a resource-based economy over the medium term pushes the country towards rather low rates of economic growth. However, we are convinced that the resource sector cannot become a leading growth factor as it was in Middle East or some African countries. Maintaining such a strategy inevitably leads to very low growth rates and a preservation of the distance between Russia and advanced economies.

The current decline in oil prices also presents risks for budget policy. The acting budget rule is based on the 10-year average oil price (Urals) as a benchmark. For 2015 the benchmark oil price is \$96 bbl, however the budget is actually balanced at the price of \$100-\$105 bbl. Thus, if oil prices go down to \$80 or \$75 bbl, the budget deficit rises to 3-4 percent of GDP. The reserve fund, accumulated during the period of high oil prices, is now 4.5 percent of GDP, so it can only protect the budget from a drop in oil prices for one year. Should oil prices remain low, the Russian government will need to tighten its policy and consolidate the budget with lower levels of public expenditure.

Limits to Growth Potential

Many politicians and investors were accustomed to high growth rates in Russia in the 2000s (recall Goldman Sachs's forecast on growth in BRIC economies²). Since then the domestic public and political discourse has not changed, centering on the expectation of at least 5 percent annual economic growth. In our view, such growth rates are not feasible for Russia in the medium term for four key reasons.

First, in the 2000s economic growth in Russia was *inter alia* determined by a recovery after the geopolitical transformation of the region. In the 1990s Russia experienced a major slowdown (which was also observed in all CEE and former USSR countries) and a four-fold devaluation of the Russian

ruble in 1998. While these factors positioned Russia to have a high potential for growth, each were unique and non-repeatable.

Second, the economy has now approached its production potential frontier. Evidence for this includes Russia's extremely low unemployment rate (unemployment in Russia is currently lower than it was at the peak of economic boom in 2007-2008) and the increasing growth of labor costs along with virtually constant labor productivity. Due to political and social reasons, no necessary structural reforms have been carried out until now. The capital utilization ratio is rather low (60-70 percent), which is either related to the presence of technologically or physically outdated capacities or to the impossibility of using this capital without a qualified labor force.

Third, the demographic trends in Russia are extremely bad for economic development. The labor force will lose several hundreds of thousands of people annually for years to come. Such a situation is unique—there are very few historical examples of economic development and growth given the presence of a permanently shrinking labor force. To increase the labor force, policymakers often consider increasing the retirement age and liberalizing migration procedures. This can only solve part of the problem; some retirees are already involved in production and there are not enough possible migrants who can address the economy's demand.

Fourth, Russia is in a middle-income trap now. International research shows that many countries face a slowdown in growth rates entering the GDP per capita interval of \$15,000–\$30,000.³ The reason is that breaking the middle-income threshold requires a transition to a different economic model: cheap production and commodity exports can drive growth in low-income countries, but the economies of high-income countries are based on the production of technology-intensive goods, big international companies and a developed financial sector. The situation in Russia is aggravated by stagnation in the commodity sector where

production costs are very high and there is no suitable institutional environment for establishing a modern non-commodity economy.

The productive capacity of the Russian economy, even in a favorable global economic climate with restored investor trust in emerging markets, cannot grow faster than 3-3.5 percent annually. Nonetheless such growth rates are above the average in advanced industrial economies. Institutional reforms and improving the business climate can further improve the potential speed of economic growth. As Russia moves to higher growth, it should address the challenges which are inherent to advanced economies. Under tough demographic constraints on the labor force, the problem of speeding up economic growth is directly related to a deeper automatization and technological modernization in all industries, including in services, and a transition to a model of jobless growth by increasing total factor productivity within the economy.

The ongoing 'war of sanctions' is another factor preventing total factor productivity growth. Aside from the direct effect of a ban on transferring capital and technologies to Russia, we see now that domestic firms do not consider sanctions to be a long-term factor, and the business environment remains unfriendly. That's why, in my opinion, we will not see any significant import substitution, but merely a shift in foreign trade towards countries not applying sanctions. I do not consider the Iranian scenario of sanctions plausible, so Russia will continue exporting energy and natural resources, and the current structure of the economy will be preserved.

Consumer Demand

Domestic consumer demand is another avenue to stimulate economic growth, but it is sluggish in Russia. Despite the relatively weak financial sector in Russia (total bank assets are only around 60 percent of GDP) the population is surprisingly heavily indebted. Though the total amount of outstanding loans to individuals amounts to as much as one-

sixth of GDP, the population spends the same proportion of its disposable income to serve and repay loans as the U.S. population. This is entirely due to certain characteristics of the loans issued in Russia. The loans have a short maturity, there is a low share of mortgage loans and loans have very high nominal interest rates. Therefore, a further development of consumer demand driven by bank credit is not economically reasonable and bears evident risks for the financial sector.

An expansion of consumer demand based on labor income is also unlikely. Although wages kept growing and employee incomes increased, people's expectations do not favor consumer-oriented behavior. The inability of the economy to grow further increases labor costs. The demanded industrial restructuring induces releasing workers and shifts in the labor force are evident. With these shifts workers tend to be cautious regarding their future incomes and prefer saving, not spending. Pension reform inconsistencies have forced more and more people to care about pension provisions by themselves, thus also stimulating saving, not spending. Currently savings are restrained partly by rather high and volatile inflation rates, but as inflation subsides and becomes more predictable (the Russian Central Bank has evident achievements on its way to bringing inflation down and shifting to an inflation-targeting regime), the motivation to save will be much stronger.

On the whole, the Russian population seems to be a rather a stingy saver paying its debts, not a rash consumer. This is a fundamental shift in a typical Russian individual's behavior compared to the 2000s and we need more time to understand what it means for policymakers and all other parties in the Russian economy. In the medium term, the current high income inequality is a negative factor for economic growth in Russia. On the one hand, the most well-off part of the Russian population has a lot of savings and there is a clear trend of saving outside the state pension system. These factors provide good preconditions for accumulating capital within the country and financing domestic investments. However, high institutional and market

risks push a great part of the savings out of Russia even though the expected return is lower. On the other hand, most of the population has a low income and can afford only modest consumption or has a high debt-to-income ratio. Though the total amount of outstanding consumer debt is only 16 percent of GDP (as of January 1, 2014), the Russian population paid banks around 12 percent of total disposable income (more than the U.S. population with a 90 percent debt-to-GDP ratio) because of very high effective interest rates and short maturity of consumer loans in 2013. Thus, we expect that during the next several years people will pay off their debts rather than use banks loans to increase consumption. Otherwise it would heighten the risk of a large-scale crisis in the consumer loan market.

Global Context

Changes in commodity prices, limits to potential growth and consumer demand issues all point to a low probability of fast and stable growth in the Russian economy in medium term. Does this mean that the economy is doomed and Russia will plummet in the list of top economies? Our answer: No. In fact, all the arguments are valid if we assume conservation of institutional environment, business and investment climate. But if the institutional reforms take off, the country can quickly eliminate many constraints to development and achieve more stable economic growth. Much needed reforms include loosening the administrative barriers for establishing new business and entering new markets, fighting corruption and pressure against business from the side of different public bodies, better property rights protection and reforming the natural resource monopolies. Still, it is hard to envisage realistic preconditions for high growth rates in Russia as existed in the 2000s, even if all the negative consequences of the crisis are set aside. We estimate the most probable range of economic growth rates for Russia will be between 2 percent to 4 percent on average annually until 2020.

But the Russian economy will grow faster in dollar terms (both in current and PPP) due to the Balassa-Samuelsson effect and an increase in labor productivity and in total factor productivity. The Russian ruble has appreciated since 1999 and many Russian economists say it is overvalued now, but according to the World Bank estimates in 2013 the nominal ruble/dollar exchange rate was approximately 39 percent below the PPP exchange rate.

So, we think that Russia could stay on the convergence path and in 2020 it could enter the top-five economies in the world (in PPP terms), and move up from 44-60 rank (in 2013) to 28-40 rank by GDP per capita (in PPP dollars, by different methods used by the IMF, the World Bank and the CIA). At the same time, we do not expect substantial changes in the domestic labor market: jobless growth for Russia means growth along with a shrinking labor force, not growth along with high unemployment. We also forecast a rather high, sustained level of income inequality, though this factor pushes the expected rates of economic growth down.

Endnotes

1. According to the Penn World Tables GDP per capita in PPP terms grew from \$7779 in 1990 to \$24,120 in 2013
2. Dreaming With BRICs: The Path to 2050. Goldman Sachs Global Economics Paper, No. 99, 2003.
3. See, e.g., Im, Fernando Gabriel; Rosenblatt, David. 2013. Middle-income traps : a conceptual and empirical survey. Policy Research working paper ; no. WPS 6594. Washington, DC: World Bank.

Economic Convergence in Saudi Arabia

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Despite rapid economic growth over the last few decades, Saudi real incomes per capita have not converged to those of advanced economies. Instead income disparities have widened. Failure to diversify production from the capital-intensive hydrocarbon sector to employment-generating non-oil sectors, coupled with high population growth and a delay in removing restrictions on foreign investment, has exacerbated income disparities. Therefore, an economic transformation and diversification strategy that targets employment-generating economic activities will be key to achieving convergence with advanced economies.

Introduction

Saudi Arabia is one of the fastest growing economies in the Middle East and North Africa (MENA) region, yet incomes per capita have not converged with those of advanced economies. Real GDP increased five-fold, from below US\$70 billion in 1970 to about US\$365 billion by the end of 2007, averaging 5.5 percent a year over this period. Indeed, Saudi Arabia continued to register stellar growth even after the global financial crisis, with real GDP growth averaging 6.5 percent a year over the period 2010-2013, one of the highest among the G-20 economies (Figure 1). However, despite this impressive performance, the standard of living for Saudi nationals, measured by real per capita incomes, are yet to converge to the income per capita levels of developed economies. On the contrary, there has been a widening in income disparities in the country.

This paper discusses the reasons why economic growth in Saudi Arabia has not translated into standards of living comparable to advanced

economies and why income disparities in the country have increased, and then discusses policy options for achieving convergence.

Economic Convergence

The potential for, and the factors underpinning, income convergence among countries have been a subject of interest in economic literature for some time. The question of economic convergence has traditionally been analyzed based on two influential growth models; the Solow-Swan neoclassical exogenous growth model and the endogenous growth model.

According to the Solow-Swan growth model, the steady-state income level of a country depends on saving rates, population growth, technologies, and preferences. Given that saving and population growth rates are constant in the long run, the model predicts that long-run growth is solely determined by the rate of technological change, which is considered to be exogenous. The key assumption underlying the neoclassical model is that capital is subject to diminishing returns and so poor countries with lower initial capital per capita tend to grow faster compared to those with higher initial capital per capita, allowing them to catch up to rich countries in the long run. This is known as *absolute convergence*.²

In contrast, the endogenous theory emphasizes the role of human capital accumulations, and ideas and knowledge spillovers as the key drivers of growth, in addition to a country's characteristics such as natural endowments, government policies, institutional quality, political risk, cultural and religious factors, and so on.³ Further, this model

postulates that trade and foreign direct investment are the main channels through which ideas and technological knowledge may be diffused. Thus, this theory considers technology as endogenous. Some recent research on endogenous growth has emphasized increasing returns as a possible reason not to expect convergence. This is known as *conditional convergence*.⁴ Income per capita in a given country tends to converge to its unique steady-state level determined by that country's fundamentals, which does not imply that poor countries will entirely catch up to the rich and so the long-run income per capital should not be the same across countries.⁵

Features of the Saudi Economy

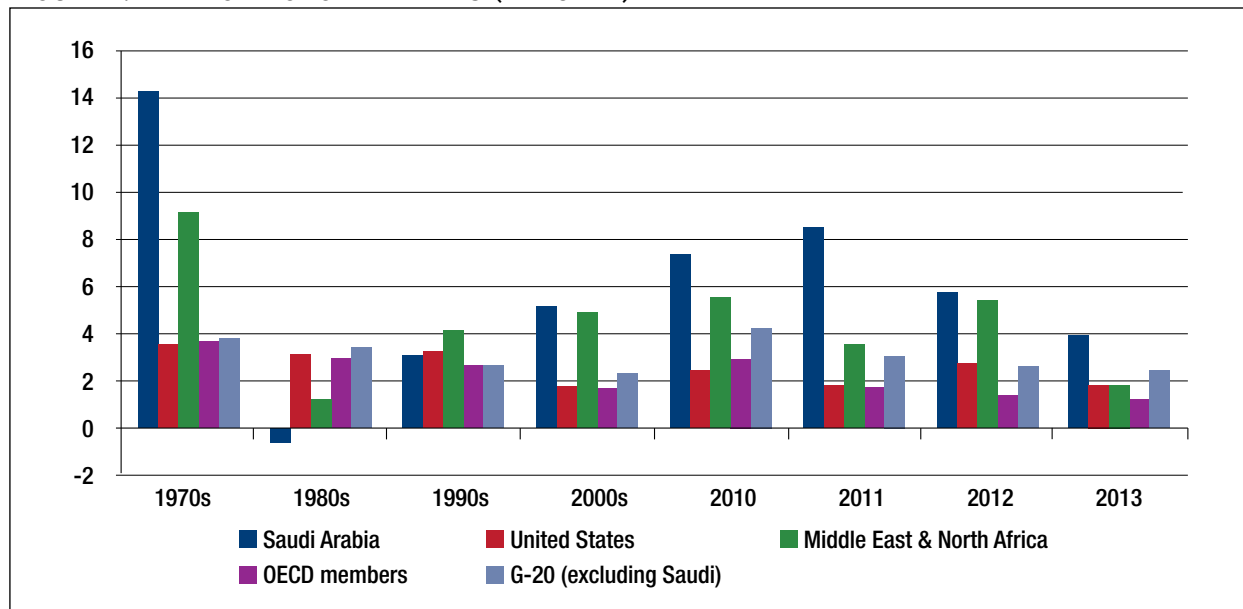
Saudi Arabia holds about 25 percent of the world's proven oil reserves and is the second largest oil producer in the world. This substantial natural resource has provided the country with access to advanced technology and allowed it to strengthen its human capacity. Through successive five-year development plans, the Saudi government has been able to direct its oil wealth toward development objectives, such as investment in social and economic infrastructure, economic diversification,

the financial sector, and macroeconomic stability. Socio-economic indicators have improved significantly. Life expectancy has risen to 75 years, the literacy rate exceeds 80 percent, infant mortality is less than one half of the world average, and primary school enrollment is approximately 90 percent of the school-age population.⁶

Economic growth accelerated significantly after 2000, benefiting from the sharp increase in oil prices and helping stimulate growth in non-oil GDP by increasing government capital expenditure and private sector investment. Between 2002 and 2013, the average annual growth rate of non-oil output was about 6 percent. The strong oil revenue growth enabled the country to achieve fiscal surpluses and accumulate very high international reserves while also reducing the debt burden. By 2013, the debt to GDP ratio declined significantly, to less than 3 percent, down from 100 percent in the late 1990s.

However, while total real GDP growth in Saudi Arabia has been very close to the worldwide median, the picture painted by real per capita GDP is not promising. Per capita incomes in Saudi Arabia are high in comparison with other Middle East and natural resource-exporting countries, but they have failed to converge with that of rich economies.

FIGURE 1. REAL GDP GROWTH RATES (PERCENT)



Source: World Bank, Economic Development Indicators, 2004

Growth rates in real GDP per capita fluctuated in line with movement in oil prices. During the first oil boom, real GDP per capita grew by about 12 percent per year. However, during the 1980s and 1990s, average growth rates of real GDP per capita were actually negative. In fact, real GDP per capita had declined to around 47 percent of its peak in 1977 and this decline continued for most of the last two decades. The modest growth in the real income per capita was compounded by a high population growth rate, averaging 3.6 percent a year over the period 1970-2013 (Figure 2).

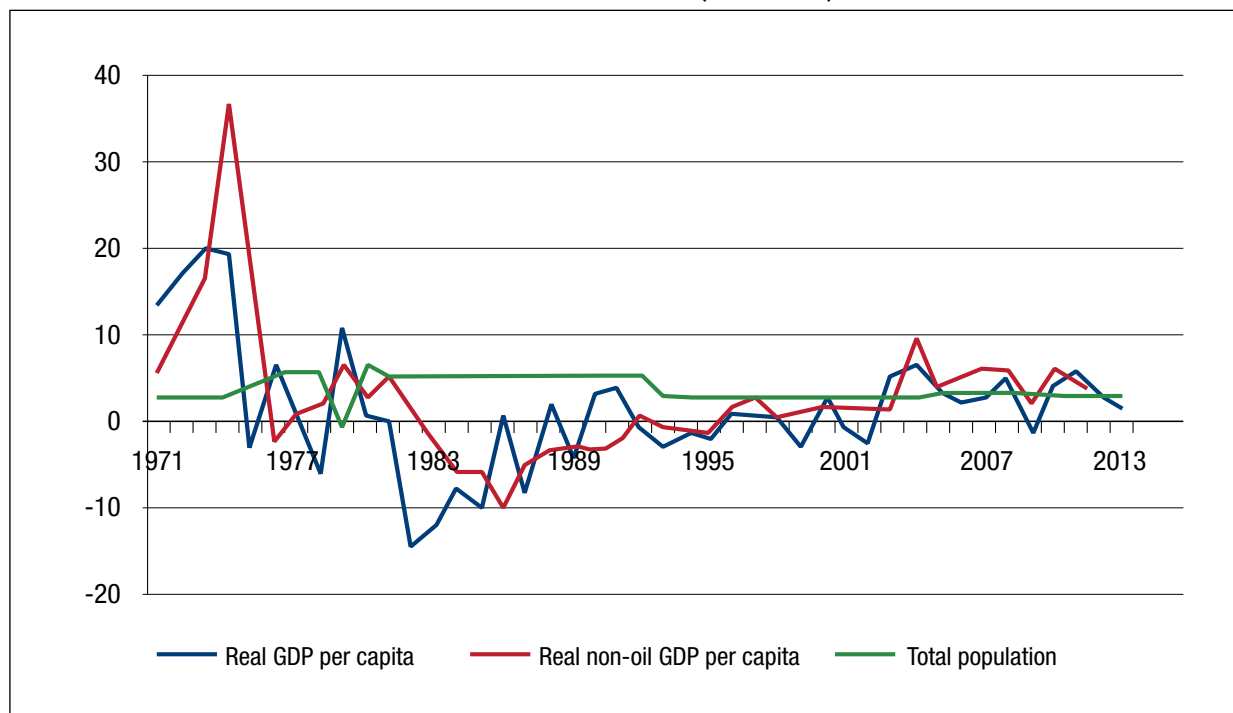
How Wide Is the Gap?

The income disparity between Saudi Arabia and advanced economies as well as peer countries has worsened. The absolute average difference between the income of the most advanced economy—the United States—and the income of Saudi Arabia was about \$6,825 in 1970, but by 2013 the gap has grown to \$22,129. The Saudi economy, even while improving, was also not able to converge to the averages income levels of OECD economies (the

income gap is about \$8,189). With respect to a peer comparison, real Saudi income per capita was higher than the real income per capita of Norway in the 1970s, but the income gap between the two countries flipped and grew significantly after 1980. As shown in Figure 3, the income trajectories of the two economies have differed, reflecting progress in Saudi Arabia's economic development and oil market changes. The surge in oil prices in the early 1970s translated into a significant increase in government spending on infrastructure which, in turn, improved the country's economic performance. During this period, Saudi income per capita was higher than that of the U.S. and Norway. However, the sharp decline in oil prices and oil revenues in the 1980s severely curtailed government spending. Total GDP was halved between 1981 and 1987, when it hit its lowest point for the decade, creating huge income gaps that continued to widen during the 1990s.

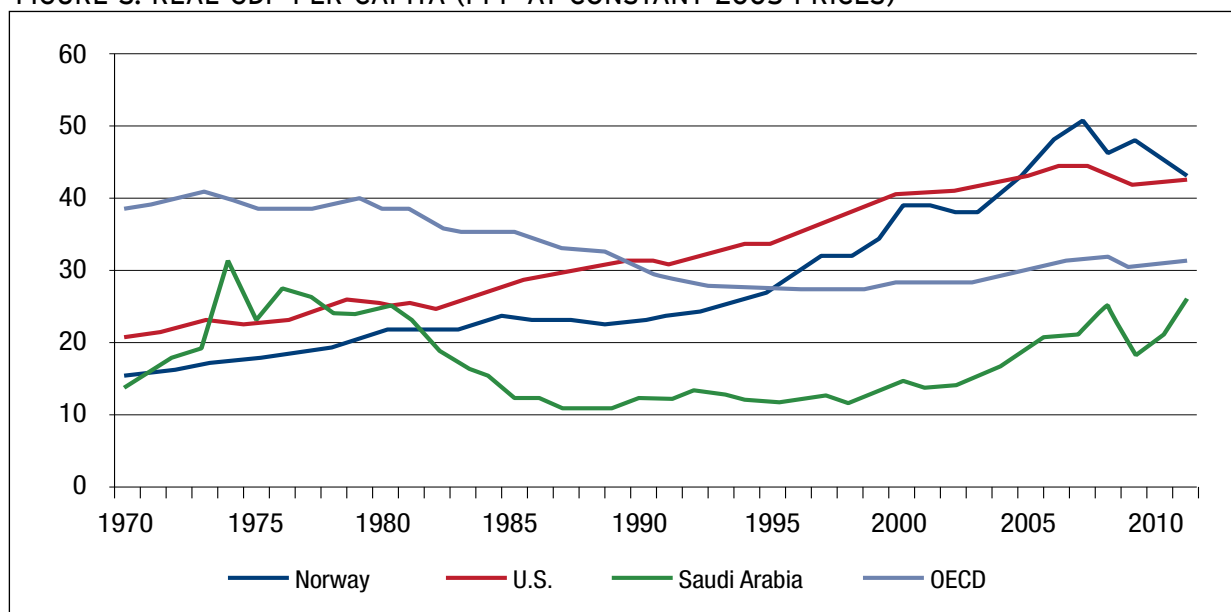
Now, the length of time that would be needed to achieve absolute convergence between Saudi Arabia's annual average income per capita and that of the U.S. is very long. Assuming that Saudi Arabia

FIGURE 2. GROWTH RATES IN GDP AND POPULATION (PERCENT)



Source: SAMA Annual Report, 2013

FIGURE 3. REAL GDP PER CAPITA (PPP AT CONSTANT 2005 PRICES)



Source: Penn World Table (version 8.0) and IMF's World Economic Outlook, April 2014

maintains a high economic growth rate, averaging 4.4 percent a year, its economy would still need about 21 years to reach the levels of income per capita of the U.S., 20 years to reach the levels of income per capita of Norway, and about 10 years to reach the average income per capita of OECD countries.⁷ However, given the observable characteristics of these economies are different, the steady-state equilibrium of the Saudi economy would be different. In other words, although Saudi capital accumulation (physical and human) has been more rapid recently, and the technical sophistication of production has greatly improved, differences in other factors such as market structure, institutional differences, values, and preferences would affect long-run per capita income differently across countries.

What Went Wrong?

Several factors have contributed to a lack of convergence, including the structure of the economy and government policies. Saudi Arabia's dependence on the capital-intensive hydrocarbon sector has encouraged a skewed income distribution. While government economic programs have

aimed to address income distribution, these have tended to favor those in formal employment.

Structure of the Economy

Despite the Saudi government's significant efforts to diversify its economic base, the economy is still dominated by hydrocarbons, mainly oil. The oil sector accounts for about 30 percent of GDP, 89 percent of total exports, and about 93 percent of budget revenues.⁸ The hydrocarbon sector is also capital-intensive and linkages with the economy are limited, so income tends to be concentrated in a few sectors. Diversification policies have thus far not been effective in ensuring a more balanced income distribution. The contribution of non-oil sectors to GDP has increased significantly over time, from about 30 percent in 1970 to about 70 percent in 2013, indicating that the Saudi economy is significantly more diversified today than it was in 1970. However, more critically, the sectors into which the economy has diversified have been in the oil-based, petrochemical and energy-intensive industries, which are also capital-intensive, and therefore have contributed little to employment.

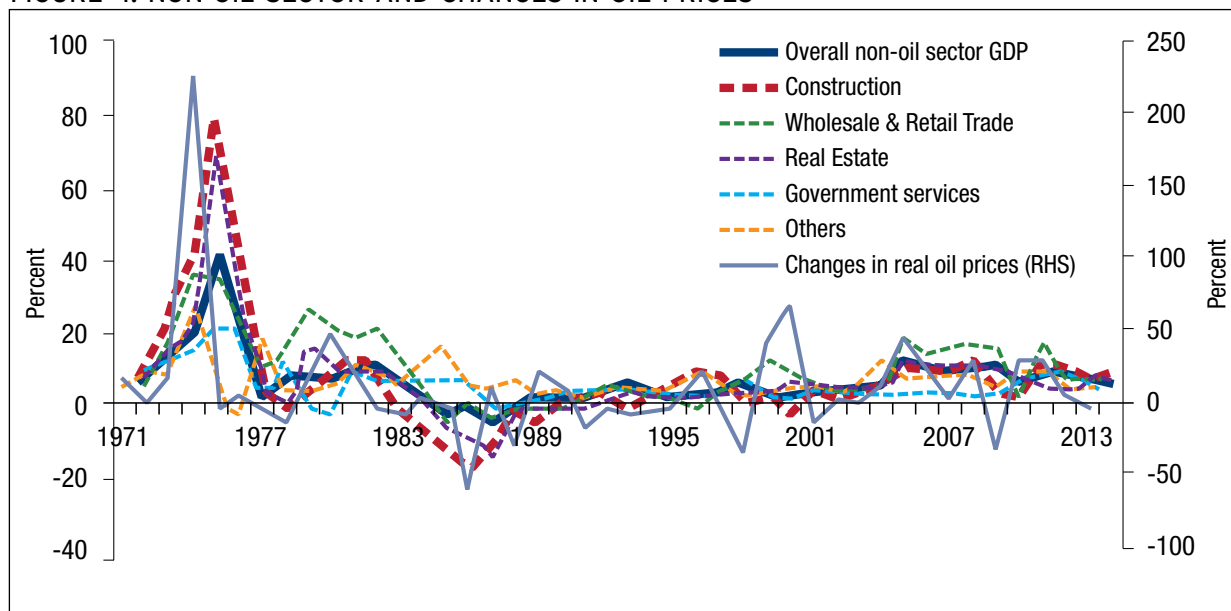
Government Policies

Delays in removing restrictions on full foreign ownership of investment companies means that development of the non-oil sector has been relying on government stimulus. With fiscal policy playing a central role, this has created a strong link between government spending and non-oil economic activity. In particular, the business cycles of the non-oil sector tend to move in line with the rapid expansion of government spending. Figure 4 shows that growth rates in the four key sectors of the Saudi economy have fluctuated and have been influenced by changes in oil prices, suggesting that the non-oil sector has been unable to escape the “curse of natural resources.”

While the Saudi government started to attract foreign direct investment (FDI) inflows by issuing the first Foreign Investment Law in 1956, FDI inflows between 1970 and 2000 were very small relative to GDP. Spillovers from FDI in terms of technology transfers and job creation were also limited since FDI inflows were directed predominantly to petroleum-related industries. The 2000 law was

enacted to provide the legal setting deemed requisite for attracting more FDI, and to create a specialized investment institution, the Saudi Arabian General Investment Authority (SAGIA). The SAGIA was tasked with issuing investment licenses, facilitating investment procedures through comprehensive service centers in all major cities, proposing measures to improve the investment climate, and promoting investment opportunities more broadly. The minimum capital requirement for starting a business as well as ownership restrictions were completely removed, and the Saudi government now provides a range of investment incentives, such as tax holidays, to encourage foreign-owned firms to invest in the kingdom. These reforms have led to a considerable improvement in the country’s ranking in the World Bank’s Ease of Doing Business Index. In 2010, Saudi Arabia was ranked first among the Arab countries and 13th out of 181 countries.⁹ According to the 2013 World Investment Report published by UNCTAD; the country was the second largest FDI recipient in Western Asia.¹⁰ However, FDI inflows still need to be directed towards non-hydrocarbon activity and strengthening the manufacturing sector.

FIGURE 4. NON-OIL SECTOR AND CHANGES IN OIL PRICES



Source: Penn World Table (version 8.0) and IMF’s World Economic Outlook, April 2014.

Can the Economy Converge in the Future?

The existing Saudi economic structure is more inclined to lead to a widening of income gaps in the absence of a well designed strategy that ensures diversification into income-generating economic sectors.

The inability of Saudi real per capita incomes to reach the levels of developed economies stems from several characteristics of the economy: its heavy reliance on oil revenues as the main source of income, which is exhaustible, and highly volatile, high population growth and unemployment rates, and low rates of return on investments in physical and human capital.

Given these challenges, structural transformation and further diversification of the Saudi economy becomes a necessity rather than a choice. It is clear that the mechanism of sharing oil wealth through public sector employment and subsidies has not succeeded in reducing income disparities. Therefore, there is a need for multi-dimensional, broad socio-economic solutions to put the economy on a sustainable growth path.

The heavy reliance on volatile and uncertain oil revenues has complicated macroeconomic management and government planning. By creating uncertainty about the future, these fluctuations have contagion effects on non-oil economic activity, which in turn have discouraged private sector investment. Furthermore, domestic oil consumption has grown steadily over the last few years to an estimated 3 million barrels per day.¹¹ This combination of price volatility and high domestic consumption could have adverse implications for fiscal and current account balances in the future.

While the Saudi authorities have been able to manage temporal volatility of oil prices through their countercyclical policy, a persistent decline in pric-

es would have an adverse impact on the economy. Even if the establishment of a sovereign welfare fund has helped the government to smooth spending in the face of exogenous shocks in oil markets, the issue of high unemployment among Saudi nationals would remain.

What Is the Solution?

It seems that the only solution to these fundamental problems, besides further labor market reforms, education and training reforms, and prioritizing government capital spending, is to boost the participation of the private sector through diversifying the economy in more export-oriented and labor-intensive industries that are not subject to the price and volume fluctuations of the oil markets.

Saudi Arabia has a very young population, with nearly 50 percent under the age of 25, and the total population is projected to double by 2025. According to the latest forecast, the unemployment rate among Saudi nationals is about 11.5 percent. These sizeable economic and demographic challenges are directly affecting labor market prospects. The government needs to create about 3.8 million jobs for Saudis in the next decade. Yet under current conditions, this will be difficult to achieve. The government sector has already reached its upper limit and the *Saudization* program has so far proven inadequate to solve the problem.

To achieve inclusive growth and sustainable development and re-redirect the economy toward its convergence path, the government must implement wide-ranging market-oriented reforms in both real and financial sectors that further improve the business environment, governance, and institutional and policymaking frameworks. More emphasis must be placed on efficiency and productivity, and encouraging entrepreneurship by developing the small and medium-sized enterprise sector is required to make progress on economic diversification. Policies should aim to attract more FDI in more knowledge-intensive industries.

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Endnotes

1. The views expressed in this paper are those of the author(s) and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.
2. Barro (1991) and Barro and Sala-i-Martin (1991)
3. Romer (1993)
4. Islam (2003)
5. A third concept is club convergence. Some countries within the same region converge to the same levels of income per capita, while other countries tend to diverge in the long-run (Islam, 2003).
6. The World Bank (2014a)
7. The real U.S. GDP per capita, Norway GDP per capita, and the average OECD countries per capita would grow at 1.8, 2, and 2.5 percent per year, respectively.
8. SAMA(2013)
9. The World Bank (2010)
10. UNCTAD (2013)
11. EIA (2014)

South Africa: Perspectives on Divergence and Convergence

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Introduction

As South Africa entered an unfettered democratic era twenty years ago, the optimistic among us expected that the economic stagnation of the last two decades of apartheid would gradually be left behind. As one of the strongest and most diversified economies in Africa, and certainly the largest, we believed that sensible policies would gradually throw off the shackles of apartheid.

It's location on the African continent which at last, half a century after the end of colonialism was asserting its own right to grow, seemed also to bode well for South Africa.

Moreover, the world was changing in a decisive way. Korea and China showed that poor developing countries could take charge of their own destinies and move steadily and swiftly towards convergence with the wealthy countries of the world.

But, as we look around the world today, it seems that South Africa was not ready to make that leap to convergence, and that it will take a great effort from imaginative and committed leaders to drive the South African economy towards a path of convergence with the industrialized world.

Long-Run Growth Dynamics in South Africa

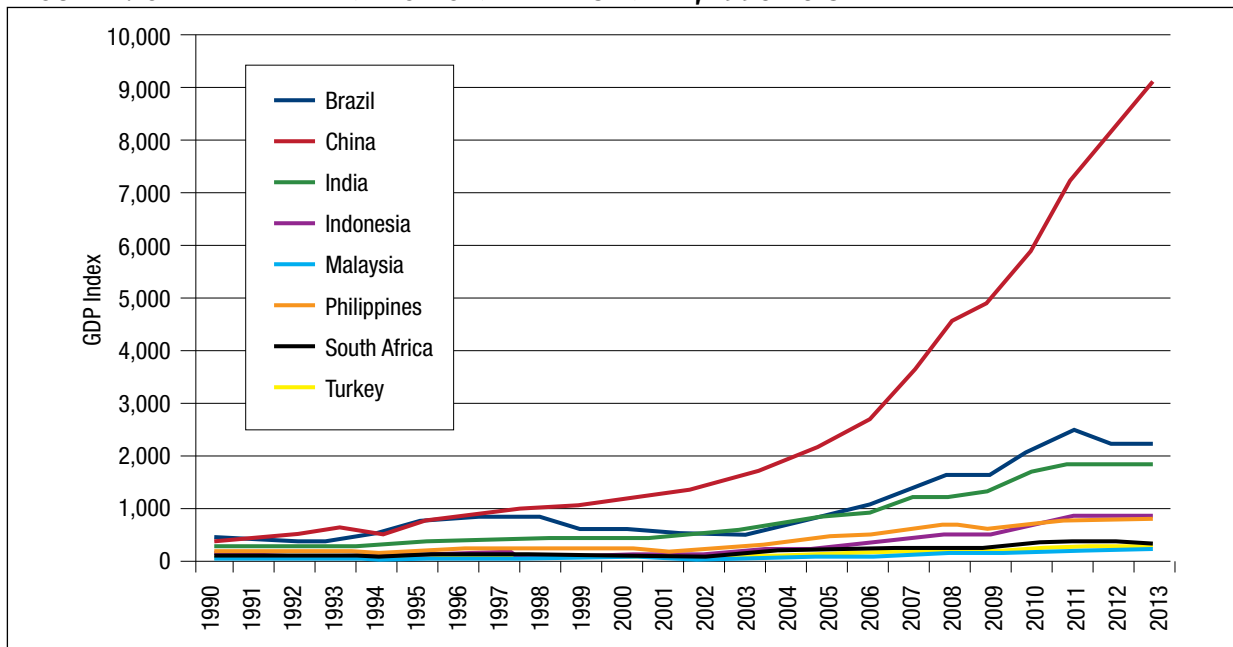
Amongst others, Derviş has pointed to a new “age of convergence in the global economy around 1990 when average per capita incomes in emerging markets began to grow much faster than in advanced

economies.” In the two decades after 1990, quite contrary to previous periods, per capita income in emerging and developing economies as a whole grew three times as fast as in advanced economies. For Derviş this marked a delinking in the trend growth rate of emerging economies in the 1990s and developing countries in the subsequent decade. Three factors supported this: globalization, through trade and investment; the demographic transition with the proportion of working age people in developing countries reaching a peak in relation to the population as a whole, and the higher rates of investment in many developing countries.²

What we can see in Figures 1, 2 and 3 is that South Africa does not conform to the general growth pattern of emerging economies, though its performance did not, until recently, diverge a great deal from most of its non-Asian peers. With regard to the overall rate of GDP growth, the rate of per capita GDP growth and the average level of income per capita, South Africa has underperformed most of its peers.

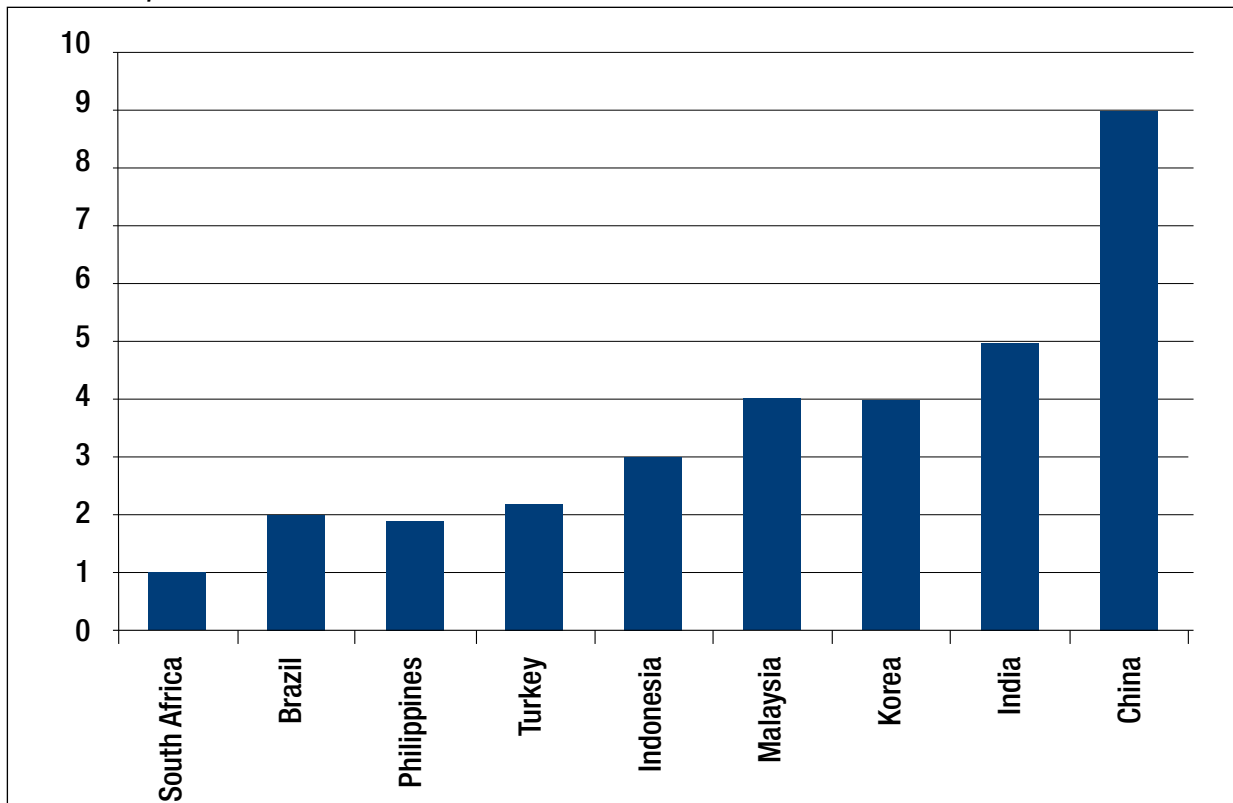
Part of the reason for this is well known. At the point of transition to freedom in 1994, the legacy of apartheid was one of the most extremely unequal societies in the world in income, wealth and social and physical infrastructure investment and human capital accumulation. This legacy weighed heavily. However, early in the second decade of freedom it seemed as if some of the backlogs were being rolled back and the growth rate picked up to levels comparable with some of its emerging market peers. After the onset of the global financial crisis, which hit South Africa quite severely, the growth rate fell back to below the rate of most of its peers.

FIGURE 1. GDP INDEX IN EMERGING MARKET SAMPLE, 1990-2013



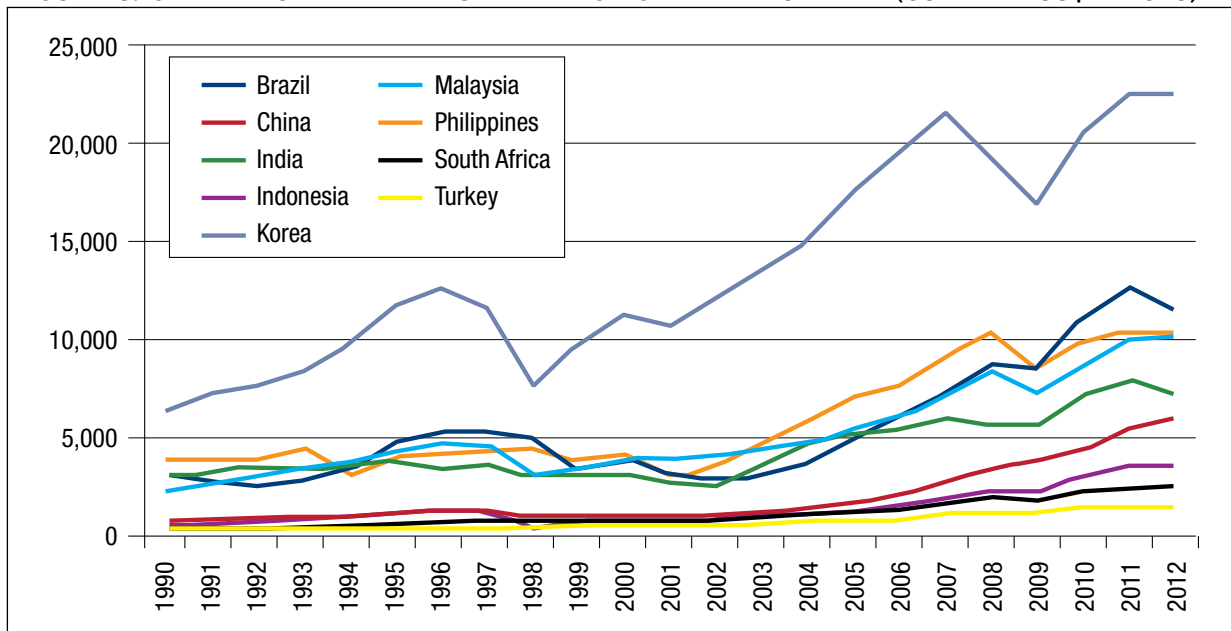
Note: GDP Indexed to 100 in 1990
Source: IMF Economic Outlook 2014

FIGURE 2. REAL GDP PER CAPITA IN EMERGING MARKET SAMPLE, ANUALIZED GROWTH RATE (PERCENT), 1990-2013



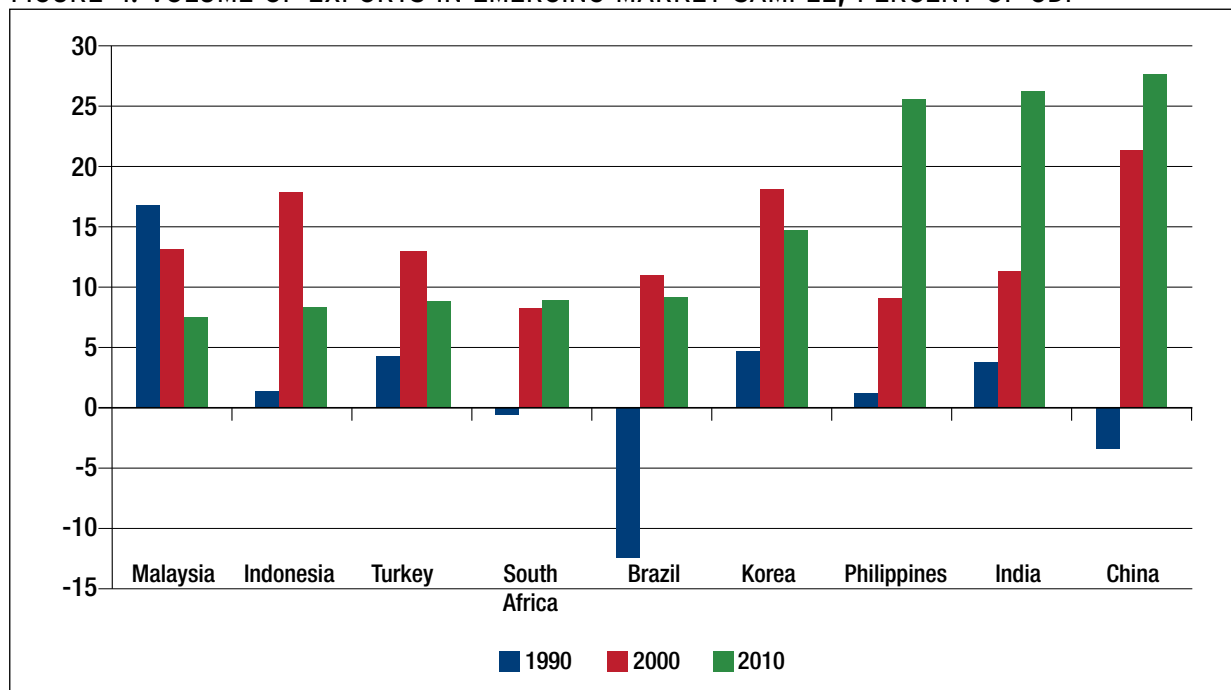
Source: IMF Economic Outlook 2014

FIGURE 3. GDP PER CAPITA LEVELS IN EMERGING MARKET SAMPLE (CURRENT US\$ PRICES)



Source: IMF Economic Outlook 2014

FIGURE 4. VOLUME OF EXPORTS IN EMERGING MARKET SAMPLE, PERCENT OF GDP



Source: IMF Economic Outlook 2014

In retrospect, the boom of the 2004-2008 period was based on a credit bubble, supplemented and underwritten by rising prices for export commodities. But real underlying growth was weak.

The poor performance of exports in a period when other emerging markets were expanding real

output was symptomatic of an overall low level of investment. Though foreign investment poured into South Africa, it was largely portfolio capital aimed at capturing strong returns in a high margin economy. Little of it was direct investment and little of it was converted into investment that increased the output of the productive sector.

Figure 5 shows the very low level of investment in relation to GDP. Though efforts to encourage it improved the rate of investment over the period concerned, the rate remained well below South Africa's peers, and well below the 27 percent average investment rate of emerging and developing economies calculated by Derviş (2012). Indeed, the average investment rate remained below the rate of 20.5 percent, the relatively low rate of investment of the advanced economies according to Derviş.

So, for many of the factors which Derviş identified as characterising the opportunity for convergence in the post-1990 period, South Africa performed considerably below its peers: we have noted that in globalisation (trade and direct investment) and in the level of investment to GDP, South Africa failed to conform to the pattern set by its developing country peers. The third factor identified by Derviş is the demographic transition. In the next section we will focus on why South Africa has been unable to take advantage of the demographic transition, so far.

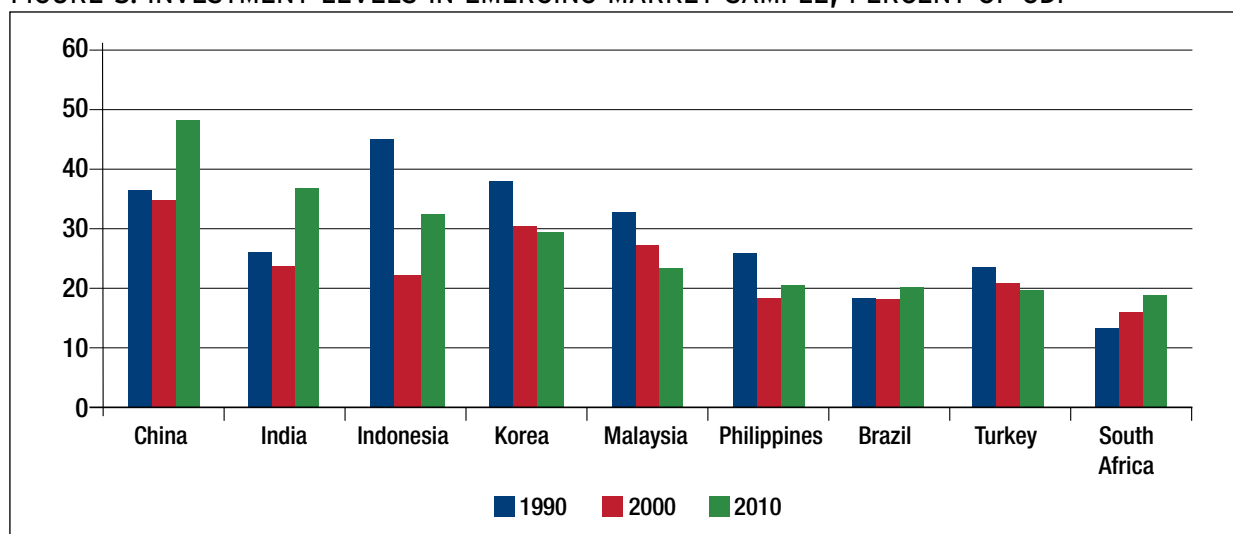
Demographic Transition, Education and Inclusive Growth

Sub-Saharan Africa's share in the world's population is expected to increase from 12 percent in

2010 to 16 percent in 2030. This demographic transition will have important implications for the size of sub-Saharan Africa's working age population and therefore, the labor market. More specifically, the region projected to have the fastest growing working age population in the world is sub-Saharan Africa. Yet this demographic dividend is not homogenous across Africa. Whilst economies such as Ethiopia, Kenya and Nigeria yield rapid increases in the working age population, South Africa lags considerably. Estimates show that over the period 2020-2050, South Africa's working age population will grow at a rate of 0.6 percent per annum, compared with Nigeria, for example, at about 3 percent per annum.

Ultimately, in the conception alluded to above, there is no demographic transition projected for the South African economy. South Africa then will not realise the growth gains which can potentially be unleashed in much of sub-Saharan Africa through the demographic channel in the form of potential untapped consumer market and a growth potential driven by the rising numbers of young people entering the labor market. If anything, the current inordinately high unemployment levels in South Africa—currently constituting more than a quarter of the economy's labor force—means that a lower demographic growth rate, is not a liability for medium-run economic growth and welfare prospects for an economy starved of jobs.

FIGURE 5. INVESTMENT LEVELS IN EMERGING MARKET SAMPLE, PERCENT OF GDP



Source: IMF Economic Outlook 2014

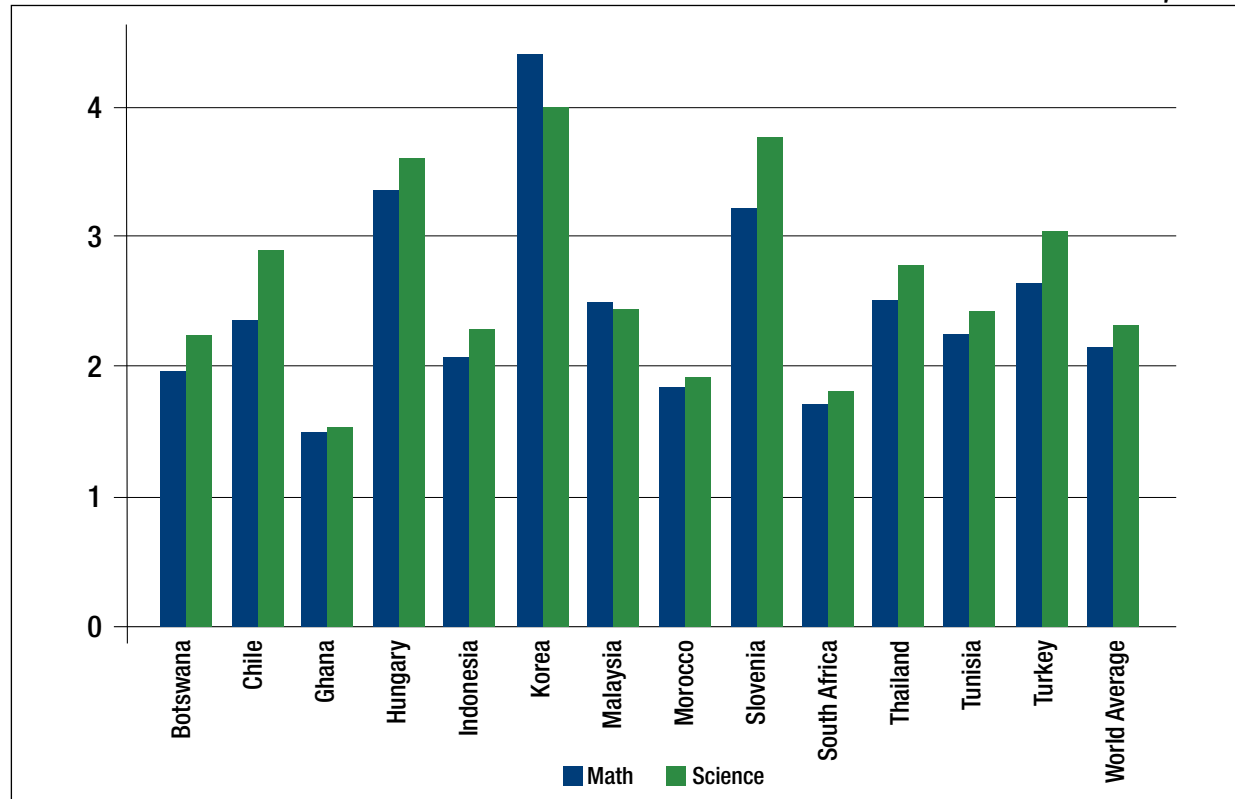
One of the possible mechanisms for convergence though, as shown by some Asian economies, remains through improved human capital accumulation across the educational pipeline. In the view of long-run economic growth, currently espoused by Thomas Piketty and others, human capital accumulation is one possible mechanism through which to overcome a growth path where the rate of return on capital (r) exceeds the rate of economic growth (g) – $r > g$. To generate a more equal growth path, thus equalizing r and g , it is argued that the schooling and educational pipeline plays a potentially crucial role in an economy's long-run growth trajectory.

So, where does South Africa find itself in this area? We noted above the very low growth levels experienced by South Africa, when compared with comparator economies, with much of this driven by low levels of GDFI (gross domestic fixed investment) and

domestic savings. South Africa's educational outcomes, however, do not suggest that the economy currently possesses this lever—arguably so essential for generating a more equal long-run growth trajectory.

The South African schooling, vocational training and higher education system does not currently provide the ingredients for the pursuit of longer-run higher and more equal growth outcomes. Figure F estimates mean scores by country based on the Trends in International Mathematics and Science Study (TIMSS). The TIMSS is an ongoing cross-country standardized testing instrument, which measures math and physics competence in-country, at various levels of the schooling system. The survey has been ongoing since 1995 and remains one of the most widely used comparisons for educational performance.³ The results for South Africa reinforce the extent to which the

FIGURE 6. STANDARDIZED MEAN MATH AND SCIENCE SCORES IN EMERGING MARKET SAMPLE, 2011



Notes:

1. 1 indicates below 400; 2 indicates at or above 400 but below 475; 3 indicates at or above 475 but below 550; 4 indicates at or above 550 but below 625; and 5 indicates at or above 625.

2. 400 indicates low international benchmark; 475 indicates an intermediate international benchmark; 550 indicates a high international benchmark; and 625 indicates an advanced international benchmark.

3. Mathematics and Science scores are for Grade 8 as only Grade 8 data was available for South Africa

Source: TIMSS (2011)

country—in a sample of emerging market peers—lags considerably in schooling performance.

The mean scores for math and science for South Africa, stand at 1.7 and 1.8 respectively. Putting this into perspective, the global average for the two subjects was between 26 and 28 percentage points higher than that of South Africa. Hungary, Slovenia and Korea readily score twice as well, whilst Turkey, Thailand and Malaysia produce results which are between 35 and 70 percent higher than South Africa. Only Ghana in this sample scores below South Africa.

Perhaps a more powerful reflection of the failure of the South African schooling system lies in the production function estimates provided below. The results, in Table 1, are based on a two-stage, semi-parametric production function which controls for both the simultaneity and non-linearity concerns.⁴ We measure, as is standard in the growth literature, the logged number of employed and those in the population as a whole, by education level.

TABLE 1: PRODUCTION FUNCTION ESTIMATES OF SCHOOLING, 1995-2012

Dependent Variable: Real GDP By Industry		
Variables	Employed	Population
None	-0.024	0.029
Primary	-0.023	0.164
Secondary	0.145	0.669***
Matric	0.159	-0.037
Certificate	-0.05	-0.025
Degree	0.104**	0.095*

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

1. Dependent variable is annualized quarterly gross domestic product by industry at constant 2005 prices.

2. Control variables are those for capital and investment expenditure. Capital, a stock variable, is measured by the rand value of tangible goods including fixed property, plant and equipment, while investment captures its gross formation. All variables are logged.

3. Capital and investment expenditure include 3rd order polynomials, which serve as additional controls, to proxy for the unobserved productivity shocks and resolve the simultaneity problem of the functional relationship between investment and capital. .

4. A constant term is not included because the model assumes that the effect of TFP is invested within labor by various levels of education as human capital gains.

Source: Bhorat, Cassim & Tseng (2014)

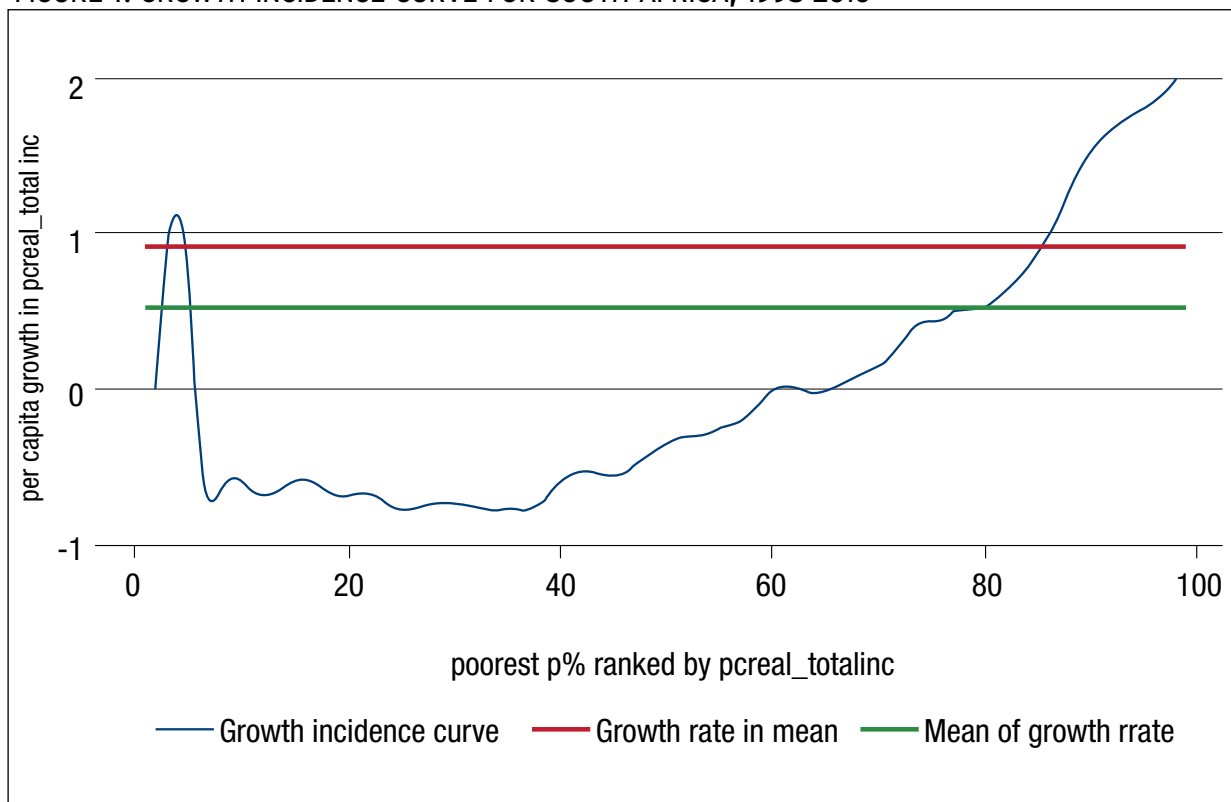
The results are stark. They suggest that when examining the employed only, the entire schooling pipeline does not significantly contribute to long-run economic growth in the South African economy. It is only the employed, with a qualification from a higher education institution in South Africa, where a significant and positive impact on economic growth is recorded. When the sample is switched to the population as a whole, the secondary schooling system does have some positive impact on economic growth. Ultimately though, the evidence suggests either a weak or non-responsive schooling system in South Africa, with respect to impacting on productivity gains and economic growth.

The notion then that income inequality can be mitigated through human capital accumulation is surely not feasible within the current schooling environment in South Africa. Put differently, it is not evident that South Africa is at a point at which the institutions of human capital can act as a mechanism for growth convergence.

The above suggests that on the basis of low economic growth, a divergence from the growth trajectory of high-income economies and poor quality outcomes in human capital, that South Africa's economic growth path would be both uneven and highly unequal. This growth path, without the channels through which to more evenly distribute the gains from growth, would be delivering growth to those with high initial endowments of land, capital and education. Indeed, this is in many ways a summary of the general nature of South Africa's long-run growth path. In order to explain these distributional outcomes from economic growth, we use a Growth Incidence Curve (GIC) for South Africa over the period, 1995 to 2010. This period covers the first 15 years of democracy in South Africa.

The graph suggests very clearly that the gains from economic growth have been unevenly shared across the income distribution. In particular, the data show that since 1995, those households at the top-end of the distribution have seen their real per

FIGURE 7. GROWTH INCIDENCE CURVE FOR SOUTH AFRICA, 1995-2010



Notes:

1. The 1995 population weights are based on the cross-entropy methodology calibrated using ASSA's 2003 population model.

2. The 2010 population weights are based on the 2001 Population Census.

Source: Statistics South Africa (1995 and 2013); Own Calculations using Per Capita Household Income

capita income rise by over 2 percent per annum. Mean income increased at a real average annual rate of just less than 1 percent, whilst median incomes declined marginally. Two additional results are important from this GIC: Firstly, those in the middle of the income distribution have witnessed a decline in their real incomes since the end of apartheid. Secondly, for the poor, the state has provided income support in the form of an extensive social protection scheme, built around support for the elderly and children. As a consequence the incomes of the poor since the end of apartheid have either remained steady or increased a little.

Ultimately, though, the poor returns from human capital accumulation, driven by the poor quality of the schooling system, have served to reproduce a highly unequal growth path in South Africa. There are limits to a redistributive state especially when growth is pedestrian, and whilst the incidence of

growth suggests some support for the poor, in the main there is a strong evidence here of the unequal and uneven nature of this economy's growth trajectory.

Conclusion

The above suggests that South Africa's long-run growth trajectory remains defined by low levels of per capita economic growth, in comparison with its emerging market peers. Low levels of investment and mediocre export growth, coupled with an unhealthy dependence on portfolio inflows, all serve to reinforce an undynamic growth path for Africa's most advanced economy.

With South Africa's very high unemployment rate, the lack of a demographic bulge may be advantageous to this low growth outlook for the economy. However, a poor social return from human capital

accumulation, driven by a low quality schooling system, provides yet another key growth constraint in the post-apartheid period. The result is a highly unequal, slow growth economic development path which, if not effectively addressed, will perpetuate the current path of long-run economic divergence.

In the G-20 St Petersburg Action Plan, South Africa committed itself to the following structural reforms:

“South Africa will take steps to resolve the energy constraint by starting the process to build a third coal-fired power plant and finalizing the process of authorizing shale gas exploration in a responsible and environmentally friendly manner. South Africa plans to improve the investment environment through streamlining the procedure for obtaining environmental impact assessments for water and mining projects.”

These proposed reforms address some important issues—the energy deficit and clumsy regulation—but not much has been achieved, perhaps thankfully, towards shale gas exploration and a new coal-fired power station.

In the 2014 Action Plan it would be welcome to see a greater commitment to critical structural impediments to growth. Most important are measures to increase the pace of investment, and the firm commitment of the government to policies that encourage savings and investment rather than growth through government consumption, consumer credit extension and reliance on foreign inflows of portfolio investments. Interventions to lift constraints in the labor market, including encouraging skilled in-migration and to reduce the level of conflict in industrial relations are crucial. Finally, a real commitment to improving the quality of basic and post-school education and training is absolutely critical.

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Endnotes

1. The authors gratefully acknowledge the superb research support of Aalia Cassim and Kavisha Pillay.
2. Derviş (2012)
3. More details on the method, testing approach, questionnaire and detailed results can be found at <http://timssandpirls.bc.edu>.
4. Olley & Pakes (1996)

The Growth Debate Redux

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The Great Recession significantly affected the world economic environment and cast a long shadow over future economic performance. Currently, output is well below its trend path in advanced economies, and emerging market economies (EMEs) have experienced a noteworthy slowdown in their average pace. Whether the global economy is subject to perpetually slow growth after the recent economic crisis has become a serious concern.

The idea that the Great Recession might be only the beginning of a new, prolonged era of high unemployment and economic stagnation has its roots in 1939. Alvin Hansen, the President of the American Economic Association, expressed this view in his presidential address to the association, in which he also underlined his particular concern regarding suppressed demand. However, increased government spending in industrialized countries driven by World War II reduced concerns about a lack of demand and, following the war, the baby boomers changed the demographics of saving. As was the case in that era, the global economy today seems to be transitioning into a period that cannot yet be characterized with precision. Deconstructing the apparent decline in economic activity into supply side and demand side underperformance is the first step to finding a prescription for economic growth.

Moreover, although the recent crisis originated in advanced countries, through trade and financial linkages, the developing world has also been adversely affected. The speed of convergence between EMEs and advanced economies has slowed, although with some exceptions.

In this essay, I will first explore the possible factors dragging down economic growth and some available policy responses to avoid stagnation. I will then turn to the EMEs and discuss the importance of external and internal factors in explaining the change in the pace of growth. In line with the *raison d'être* of this chapter, I will pay particular attention to the growth performance of Turkey.

Challenges During the Great Transition

First, it should be underlined that technological change is at the heart of economic growth. From the days of the Roman Empire to the dawn of the Industrial Revolution in Europe, including the age of exploration and opening up of the world, as well as the age of intellectual achievements in disciplines like mathematics, the standard of living of an average person changed little. Modern growth began in the mid-1700s with the invention of the steam engine and other technologies of the Industrial Revolution, which substantially multiplied human power. In the long run, the pace of technological progress is far and above the main determinant of growth performance. On this front, Northwestern University's distinguished economist Robert Gordon has argued that humanity has reached the end of truly great technological advancement, as there is nothing on the horizon comparable to electricity, indoor plumbing, or the internal combustion engine. His argument is thought-provoking, and it should be considered carefully.

Taking the United States as the bellwether country, the recent data reveal that the fall in U.S. total factor productivity (TFP) growth during the Great

Recession is responsible for more than 26 percent of the total plunge in its trend growth.¹ However, indicators show that the slowdown in productivity predated the Great Recession: the annual average TFP growth rate between 1990 and 2004 was approximately 0.7 percent, while only 0.3 percent between 2004 and 2013.² Moreover, the TFP upsurge in the 1990s and subsequent decline after 2004 was driven by IT-intensive industries.³ Today, we might even find ourselves in another tech bubble, with a recent Federal Reserve report⁴ raising legitimate concerns regarding the unjustified valuations of several technology companies. Hence, it seems fair to ask whether the impact of the IT revolution has been as profound as the inventions of the early 20th century in transforming human life.

Thus far, every pessimistic view on the future long-term performance of economic progress has been wrong. In the opening 30 years of the Second Industrial Revolution,⁵ productivity did not increase considerably for those factories that began to electrify their operations;⁶ it took several generations of managers to redesign these factories to take full advantage of electricity's benefits. Furthermore, the geographical diffusion of new technologies tends to widen the lag between innovations and the upsurge of average worldwide growth: average annual worldwide per capita growth was 1.1 percent between 1913 and 1940, whereas it was 3 percent between 1950 and 1970.⁷ Conclusions on the effects of the information technology (IT) revolution can be deceptive if learning and adjustment lags are not taken into consideration.

Another explanation for the productivity paradox is mismeasurement. The conventional measure of TFP growth as a residual—the difference between the output growth and the growth of all inputs—can be misleading. For instance, innovations that reduce the depreciation rate of inputs are not seen in productivity numbers. Today, we are witnessing the invention of reusable rockets⁸ through the use of computer chips which are to navigate returning rockets to a retrievable place, but these effects are not reflected in the data we use. Moreover, computerization is accompanied by large and protracted

complementary investments, such as organizational capital, that are not included in conventional measurements.⁹

Technology is evolving by natural selection. Society directs technological change to the sectors, products, and inputs that will best take advantage of innovations. An example is the impact of the American Civil War on the British cotton textile industry. The shift in the supply of cotton from the southern United States to Indian cotton induced the expansion of new technologies to process the lower-quality Indian cotton.¹⁰ A more recent example can be found in the U.S. pharmaceutical industry, as there is substantial evidence of more new drugs being introduced for diseases with bigger markets, linking innovation with profit incentives.¹¹ Society's seemingly infinite needs and wants will continue to drive the advancement of new ideas.

Second, another important phenomenon that deters a global recovery is the steady decrease in labor participation rates in advanced countries. A major fear is that long-term unemployed people are losing their productivity through the atrophy of skills, becoming essentially unemployable. Possible reasons for this include mismatches between the supply of and demand for labor caused by the recent shocks to the non-tradable and financial sectors, as well as low aggregate demand. In any case, economic growth has decreased with reduced consumer spending, and demographic disruption is underway.

A significant rise in youth unemployment implies an increase in the number of people who live with their parents and in the proportion of those who do not marry. This will further contribute to an aging population and low birth rates, which will increase pressure on economic growth.¹² In addition, cases of lower educational attainment among non-student adults from that of their parents¹³ have increased, raising concerns about the skill distribution of the future labor force in an age of computerization.

A policy mix of boosting labor demand through fiscal stimulus, and introducing structural reforms

to achieve sustainably high levels of labor force participation must be part of an effective remedy.

The computerization of production and services contributes to the changing structure of the labor force. Although labor's share in GDP fell in advanced countries in the last 20 years, not every type of labor lost out. Those who were able to adapt their skills to new techniques continued to obtain higher wages. From this point of view, it is possible to identify additional reforms to enable the workforce to evolve with the technological structure of the economy. Derviş (2013) argues that a new social contract that incorporates lifelong development of the workforce through on-the-job training and periods of new education in mid-life, is critical for the future.

Third, in a relatively shorter-term context, there may be a structural disequilibrium between desired savings and investments due to low investment demand, associated with a negative natural rate of interest¹⁴—the rate that prevails when production is at full capacity of the economy. In this situation, the required nominal interest rate for a higher employment level is negative, which is not possible because of the existence of currency. This is the backdrop against which Lawrence Summers updated Hansen's secular stagnation theory.¹⁵ This environment might have already come into being prior to the financial crisis of 2008 but had been veiled by successive price bubbles. The big question here is whether we are in a situation in which the natural rate of interest is *permanently* negative. Professor Summers emphasizes reductions in debt-financed investment and increasing relative wages¹⁶ in the last three decades to highlight the increasing ratio of the price of labor to the price of durable goods as one of the reasons for the low natural rate of interest. But, the issues discussed above, such as a slowdown in productivity and in population growth, can be causes of the reduction in the natural rate of interest as well.

The primary method to ameliorate the problem caused by the above mechanism should be to boost investment-driven demand, which can be

done in various ways. Introducing regulatory and tax reforms that would amplify the supply of credit through a healthy financial sector is one approach. Another is to incentivize trade to promote exports to EMEs.¹⁷ Increasing public investments to restore or create public goods can also play a substantial role in stimulating growth.

The prominent economist Kenneth Rogoff proposed the elimination of paper currency to destroy the zero lower bound interest constraint.¹⁸ The absence of paper currency would remove the risk of cash hoarding by banks and households, enabling central banks to decrease nominal interest rates below zero.¹⁹ If anything, this shows how seriously some economists take the secular stagnation risk!

A little elaboration is needed on how to promote a healthy financial sector to ease investment conditions. Currently, there seems to be a consensus on raising banks' equity capital as a means to building a shock-resistant financial sector. However, the method of bank capital funding is also important because it affects the level of bank investment. Recent research shows that internally raised equity is more effective at incentivizing bank investment than funding through outside equity.²⁰ However, independent of the capital structure of banks, efforts to "fine-tune" the economy by setting very high capital requirements can backfire by decreasing the banking sector's incentives to provide credit. Thus, the capital requirement ratio should be set very carefully.

Fourth, the importance of political rights and the strength of international order to long-term prosperity is difficult to overstate. The 20th century witnessed an upsurge in the political rights of the less privileged, which enabled a more equitable distribution of resources across the population in many nations, although it should be noted that the expansion of liberal thought did not follow the same pattern in every country, and its evolution is still incomplete. This upsurge in political rights is strongly correlated with overall economic performance in the 20th century, although the trend towards greater equity seems to have reversed in

the 1980s. Pluralistic and inclusive political institutions work to ensure a secure environment for economic activity and promote new ideas, but technological change can also contribute to the growth of personal liberties. It is not surprising that the founder of Twitter, Jack Dorsey, was inspired by the anarchist thinker Hakim Bey and his book *T.A.Z.: The Temporary Autonomous Zone*²¹ in developing Twitter.

Prescient policymakers should do “whatever it takes” to lay the groundwork for the development of political rights for future progress. Today, rising inequality and the growing influence of the rich on political decisions represent significant challenges to the evolution of political rights in advanced countries. Policies should focus on the redistribution of resources between different income groups through fiscal rules and through social reforms that encourage social mobility and equal opportunity, such as improvements in the quality of public schools. Promotion of free thought and peace in international relations are vital to better economic performance and will be important to overcoming current difficulties.

Finally, the centennial this year of the beginning of World War I offers a timely reminder of how global instability can cause significant damage to the global economic environment. For this reason, increasing tensions around the globe today should be cause for concern: Russia’s intervention in Ukraine, rising territorial disputes in the South China Sea, and the emergence of violent extremist groups such as the so-called Islamic State in the Middle East are all causing a great deal of political stress and uncertainty throughout the world. Any deterioration in these crises could further slow economic growth worldwide.²²

Slowdown in Emerging Markets

It is not just the advanced world that is being affected by the economic slowdown. EMEs are experiencing a substantially reduced average pace of growth from what they achieved in the early 2000s, and some observers see a halt to the great

catch-up of the last two decades, despite the low performance of advanced countries. The data show that the average annual per capita GDP growth in emerging economies decreased from above 6 percent to about 4 percent during the Great Recession, and IMF forecasts indicate a further reduction to below 4 percent in the next three years.²³ If realized, this would constitute a significant slowdown in convergence. It is natural to ask whether the factors that contributed to the great catch-up are now being exhausted, but it would be premature to declare the complete end of aggregate convergence.

The *potential* income of EMEs grew annually by 4.5 percent more than that of advanced countries between 2001 and 2012. However, with a correlation coefficient of over 0.9 for the relationship of cyclical components of incomes suggests strong interdependence between the two country groups.²⁴ The fact remains that the slowdown in recent years has occurred mainly in the *potential* growth rates, raising the question of whether the gains from productivity growth are coming to an end. But tapering by the U.S. Federal Reserve, as well as more volatile commodity prices, also contributed significantly to the low performance of recent years.

A closer look at country-specific TFP data reveals that only emerging Asia benefited from a rise in productivity in the era of the great catch-up. Between 2001 and 2012, China’s TFP grew by 50 percent and South Korea’s TFP grew by 30 percent. However, other important emerging economies, such as Brazil, South Africa, Mexico, and Turkey, have experienced slowdowns in productivity growth in the last decade. TFP Growth in Brazil, South Africa and Mexico between 2001 and 2012 decreased by 5 percent, 9 percent, and 12 percent, respectively. While Turkey experienced a substantial jump in productivity—by almost 12 percent—between 2001 and 2005, later developments exhausted the gains of this era and pulled the 2012 productivity level down to 2 percent below its 2001 level.²⁵ More recently, emerging Asia’s annual average TFP growth from 2011 to the present is less than 1.5 percent, contributing significantly to the recent slowdown.

The enormous growth in the productivity of emerging Asia that began in the late 1990s is probably due to the efficient reallocation of resources from low- to high-productivity sectors—especially to manufacturing—and to more efficient individual firms within sectors. The recent slowdown indicates that the potential of this reallocation may have been exhausted. In addition, it is possible that allocating only the factors of production was not sufficient to encourage the development of infrastructure in the sectors, which would enable the design of new products. In other emerging economies, the share of employment in manufacturing has not risen significantly, which leads a greater share of labor to be employed in lower-productivity sectors.²⁶

As the manufacturing sector becomes less important around the globe, it might be worthwhile to incentivize the mobilization of resources from low-productivity agricultural activities to urban service occupations. Through global agreements on the international trade of services, EMEs can achieve high growth rates by expanding their service sectors.

Larger gains from the IT sector may also be imminent. Given the increasingly fast geographical diffusion of IT, it should be possible to achieve high-productivity growth by allocating more factors to the IT sector. As technology-oriented firms seek an educated labor force, reforms that incentivize educational attainment and mobility will also provide greater benefits than before. Successful policies on this front can revive the great catch-up.

Low interest rates also contributed to the great catch-up of the early 21st century, playing a major role in the expansion of investment through increased trade and financial linkages. This period was an opportunity for EMEs to attract long-term investment through good policy to continue to expand beyond the cycle. However, the United States is now completing its asset purchase program and is signaling an interest rate hike in 2015. Despite the loose monetary policy in the eurozone,

the tightening of U.S. policy is destabilizing EME growth. Even a small interest rate increase in the U.S. will cause capital to flow back from EMEs because of high-risk premiums in EME bond yields, and will eventually cause EME policymakers to tighten their own monetary policy. Countries that are more prone to external shocks pay higher risk premiums and are more likely to be adversely affected by these decisions. The size of negative current account balances and their composition are very important in this regard. The underlying causes of external imbalances should be identified as a first step before an attempt to tackle the problem. Combined with investor trading sentiment, the effects of advanced economic policy decisions will affect those running huge external deficits adversely.

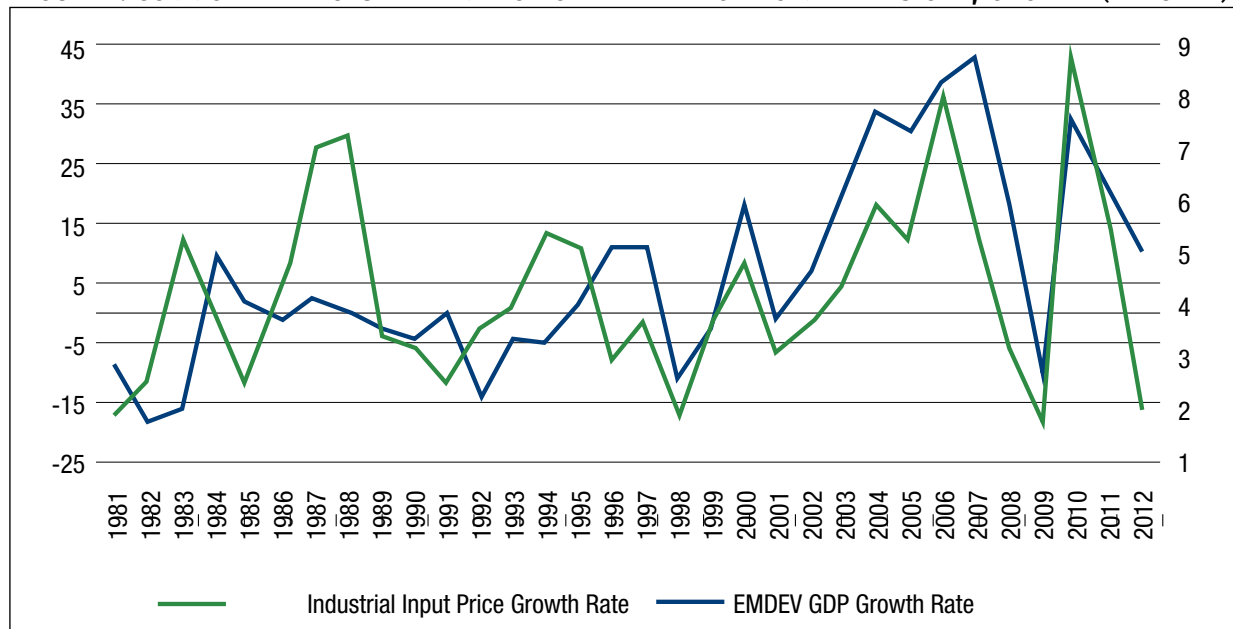
Rising commodity prices are another significant factor to consider, as many emerging and developing economies (EMDEV) are dependent on natural resource exports. As Figure 1 demonstrates, there is a strong correlation between EMDEV GDP growth and changes in commodity prices, especially after 1999. It is striking that the correlation coefficient rises as EMDEV grows faster, indicating mutual causality between these two indicators. An internationally cooperative policy on commodity prices might help in off-setting the adverse effects of this relationship.

Finally, expansion in the volume of world trade has also contributed significantly to convergence. It is important to note that global trade has grown much faster than global GDP in the last three decades. However, as discussed above, further agreements to promote the international trade of services will have more significant effects on the future of convergence.

Obstacles to Growth in the Turkish Economy

Where does Turkey fit into this picture? The risks that apply to EMEs are intrinsically applicable to Turkey as well. However, a comparison of Turkey

FIGURE 1. COMMODITY PRICES AND EMERGING AND DEVELOPING MARKETS GDP, GROWTH (PERCENT)



Notes: The left axis shows the commodity price growth rates, whereas the right axis shows the GDP growth rates.
Source: IMF WEO

with other EMEs reveals that Turkey is outperformed by most of the other EMEs. Figure 2 plots the per capita *trend* growth rates of EMDEV and Turkey. It shows that from the 1980s to the mid-1990s, Turkey performed above the EMDEV average. From the mid-1990s to the present, potential per capita growth rates consistently fell behind EMDEV average growth. The gap between trend growth rates did narrow between 2001 and 2005, owing to a strong stabilization and reform program introduced during the 2001 crisis. However, after 2005, the gap widened until 2010, when Turkey began to recover from the global economic crisis of 2009. It is particularly interesting that the differential between the growth rates of Turkey and EMDEV in 2009 was larger than the differential in 2001, the year that the economy was hit by a severe crisis. Since 2010, the gap has continued to widen again. Turkey is not only performing worse than the EMDEV average; its performance has progressively worsened since 2005.

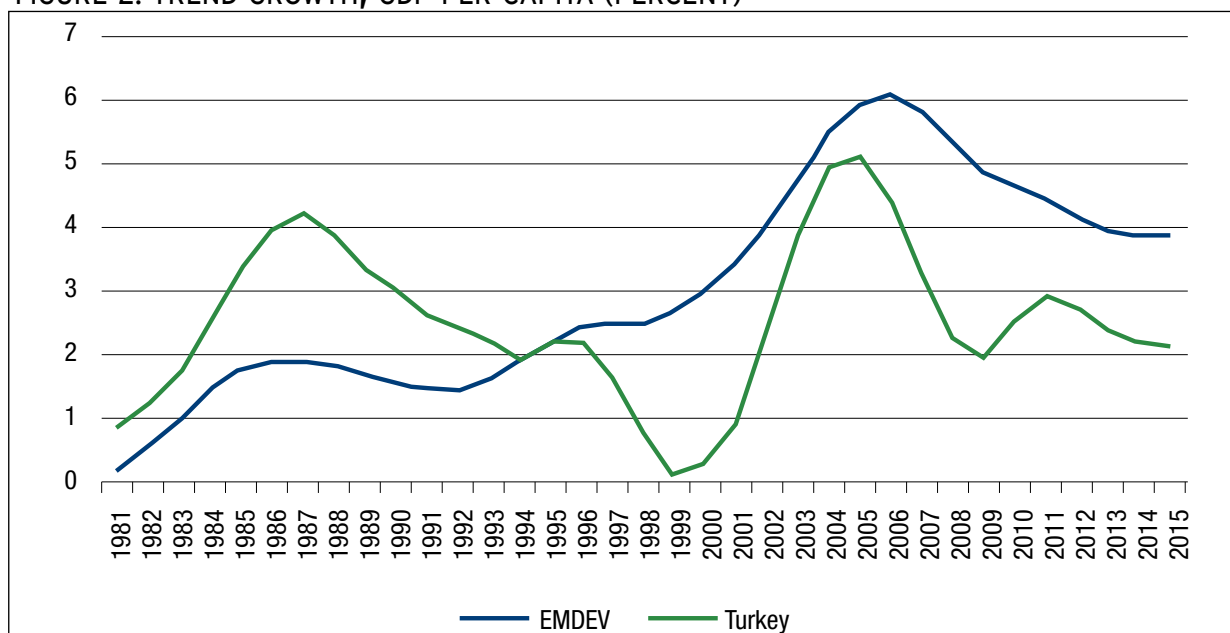
What are the reasons for Turkey’s underperformance and how can it be improved? Akkaya and Gurkaynak (2012) highlighted the paradox of the Turkish Central Bank (CBRT) “owning” a range of

key economic problems which it has no capacity to address,²⁷ suggesting that Turkey’s post-2005 performance may have been due to a lack of policy and institutional frameworks capable of responding to post-stabilization challenges.

Turkey faces difficulties in three key areas in addition to those that affect EMDEV as a whole, which further undermine inclusive growth. First, Turkey is running a huge import-driven external deficit, the second-worst among EMEs after Ukraine.²⁸ This makes the country more prone to both external and internal shocks, and it has become a structural problem. Second, low educational attainment and a low level of labor force participation among women are significant obstacles to the realization of Turkey’s potential. Third, what is perceived as an increasingly partisan approach by the administration is eroding the power of public policy and private sector confidence, undermining long-term commitments. A move towards crony capitalism would negate inclusive growth and lead to serious problems of both efficiency and equity.

First, regarding Turkey’s external imbalances, there are two salient trends that accompany the

FIGURE 2. TREND GROWTH, GDP PER CAPITA (PERCENT)



Notes: Author's calculations using the Hodrick-Prescott filter based on data from International Monetary Fund World Economic Outlook. Projections after 2014.

rise in its import-driven current account deficit: a significant rise in house prices²⁹ and the extensive expansion of credit.³⁰ The former indicates a hike in the ratio of non-tradable to tradable good prices, while the latter highlights the leveraged demand on non-tradable goods (e.g., construction projects). These dynamics shed light on the relationship between housing booms and external balances. An inefficient allocation of resources³¹ between tradable and non-tradable sectors due to high rents in the non-tradable sector (particularly in the construction industry) leads to a temporary rise in income and higher consumption of tradable goods through a wealth effect. When the tradable sector experiences a slowdown due to the incentive of firms to operate heavily in the non-tradable sector, internal demand starts to exceed internal supply, and the overflow in internal demand leads to a current account deficit.³²

On this point, Deputy Prime Minister Ali Babacan's recent remarks to the media regarding his concerns about the adverse effects of the construction boom on the overall Turkish economy are encouraging. As a short-term fix, supporting industrial production while introducing additional taxes in the

construction sector can enable the economy to rebalance through an internal devaluation, without causing the nominal exchange rate to fluctuate significantly. For a more permanent solution, fiscal policy should be accompanied by labor market and education reforms to increase labor mobility and labor efficiency.

Second, the lack of labor market restructuring is exerting a huge drag on economic growth. Recent data on the ratio of the economically active population to the overall population indicate that Turkey has prematurely ended its demographic golden age. The most severe problem is the enormous share of inactive working-age females in the overall female working-age population, at about 75 percent.³³ Hence, educating women and encouraging them to participate in the labor force should be a priority, as it is much more important than policies to increasing female fertility. From an education perspective, matters are worse. Data for 2012 reveal that only 14 percent of the population in the 25–64 age group has a college or graduate degree, and the ratio of illiterate men to illiterate women is 1:5.³⁴ There is no single solution to this problem, but training better teachers is crucial.

Among the many other important policy options, the government should focus on the quality of public transportation, increase public security and law enforcement, and support female education and female labor.

Finally, the increasing partisanship permeating administration policy needs to be addressed. Good governance facilitates the deployment of people's skills in inclusive activities such as production, job creation, and innovation, and key institutions in an economy should be able to pursue policies with the aim of improving overall standards. Appointees who run these institutions naturally work towards reaching the goals set by the political authority, but they should be selected based on their capabilities instead of their political orientations. When economic factors are distributed based on pure short-term political goals, governance becomes destructive.

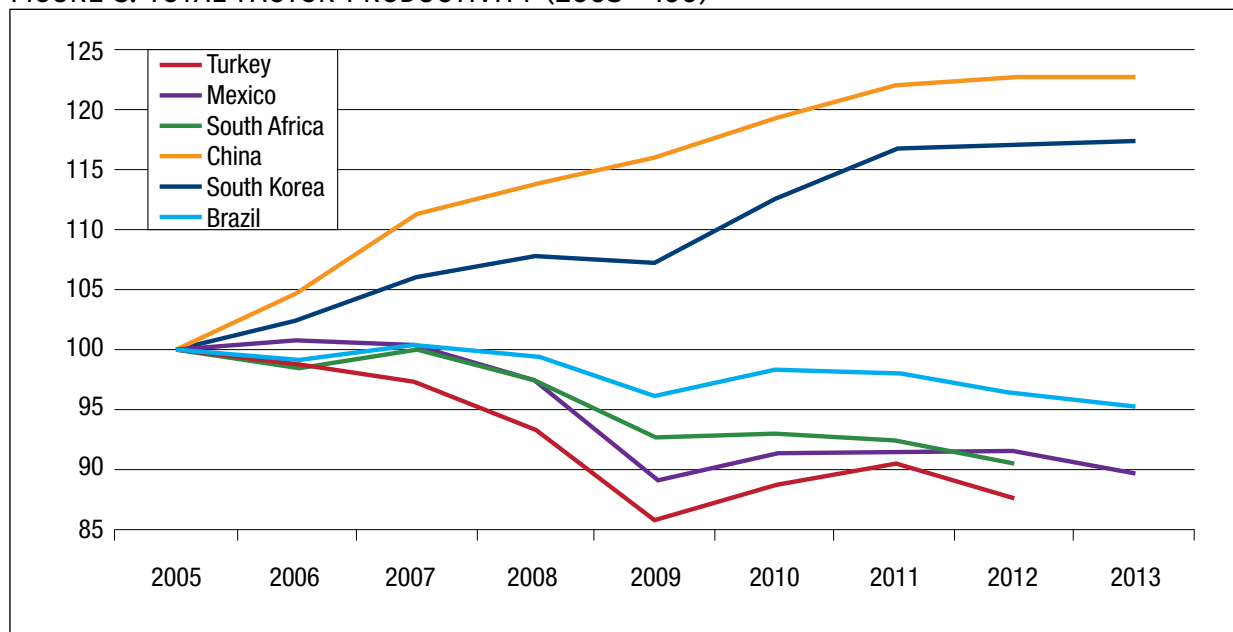
The recent poor performance of Turkish productivity growth shown in Figure 3 is partly due to

Turkey's deteriorating governance environment. Of course, the factors impacting EME TFP growth in general also play an important role, but it is certain that political partisanship and great uncertainties in governance affect the Turkish economy to a greater extent than expectations of an interest rate increase might in the U.S.

When decisions regarding the use of public resources and contracts are taken based on purely short-term political goals, equality of opportunity suffers and income and wealth distributions become skewed. Recently released OECD data ranks Turkey in the top three among OECD countries based on Gini coefficient of inequality.³⁵ In the long run, inclusive politics are essential in a global environment where confidence, long-term commitment to investment projects and social stability hold the key to lasting success.

Turkey may be her own special case in many respects, but the country's progress has to take place in an increasingly interconnected global economy.

FIGURE 3. TOTAL FACTOR PRODUCTIVITY (2005 = 100)



Note: 2013 data are not available for Turkey and South Africa.

Source: The Conference Board Total Economy Database, January 2014, <http://www.conference-board.org/data/economydatabase>

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Endnotes

1. Author's own calculations based on Hall (2014). The trend is measured from 1990 through 2007; and the shortfall of output from trend is calculated after 2007, until 2013. See Hall (2014) for a detailed discussion.
2. Author's own calculations based on The Conference Board Total Economy database. Source: The Conference Board Total Economy Database™, January 2014, <http://www.conference-board.org/data/economydatabase>
3. Fernald (2014).
4. Monetary Policy Report (2014).
5. In line with Gordon (2012), one can argue that we have had three industrial revolutions to present: i) the invention of the steam engine and railroads from 1750s to early 1800s, ii) the advent of electrification, and the invention of the internal combustion engine, indoor plumbing, and the telephone from late 1800s to early 1900s, and iii) the invention of the computer, the internet and the mobile phone from 1960s to present.

6. Brynjolfsson and McAfee (2014).
7. Derviş and Ozhan (2013).
8. Rocket technology was fully expendable until 21st century. SpaceX's Elon Musk argues that the cost of fuel is about 0.3 percent of the cost of a rocket, and effectively reusing a rocket provides a 100-fold improvement in the cost of spaceflight.
9. Brynjolfsson and Hitt (2003).
10. Hanlon (2014).
11. Acemoglu (2012).
12. Additionally, unlike many EMEs, including Turkey, the trend which saw an increasing share of women in the labor force is coming to an end in advanced countries.
13. A recent OECD publication highlights that in Austria, Denmark, Germany, Norway, Sweden and the U.S., more than 15 percent of non-student adults have lower educational attainment than that of their parents.
14. So called Wicksellian rate of interest.
15. Summers (2014).
16. Although median wages are stagnant over the last 30 years, due to decreases in the price of capital equipment, wages in terms of capital equipment have almost doubled in the same period.
17. This option will work as long as there is a sufficient increase in the income of EMEs. IMF estimates show that a 2 percent decrease in the growth of EMEs is associated with a 0.5 percent reduction in the growth of advanced countries due to a reduction in trade.
18. Rogoff (2014).
19. Although both the Danish Central Bank and the European Central Bank introduced slight negative rates in some of their instruments, elimination of paper currency can enable them to substantially pull their main policy rate down into negative territory.
20. Saracgil (2014).
21. According to Bey, T.A.Z. is about creating ephemeral freedom in the immediate present whilst avoiding confrontation with the state.
22. Derviş (2014b).
23. To be precise, EMEs' annual average per capita GDP growth rate was 6.2 percent between 2003 and 2008, and 4.2 percent between 2010 and 2013. Calculations are based on IMF WEO, April 2014.
24. Numbers indicated are author's update of Derviş (2012).
25. Author's own calculations based on The Conference Board Total Economy database. Source: The Conference Board Total Economy Database, January 2014, <http://www.conference-board.org/data/economydatabase>
26. Rodrik (2011).
27. This also goes against Tinbergen's famous principle that "number of independent objectives must be equal to number of independent policy instruments."
28. IMF estimates for Turkish current account to GDP in 2013 is -7.9 percent.
29. The increase from 2010 to present is about 60 percent. Source: CBRT, data start from 2010.
30. Average annual growth in banking sector credit volume is about 25 percent from 2006 to present. Source: CBRT.
31. Inefficient allocation of capital and labor fall into this category. In Turkey, employment in the construction sector has doubled since 2004. See Gurkaynak and Sayek-Boke (2012).
32. In a rigorous setting, Ozhan (2014) lays out a similar mechanism under incomplete international financial markets and rigid labor mobility between sectors.
33. OECD.
34. Author's own calculations based on TUIK data.
35. <http://www.oecd-ilibrary.org/sites/factbook-2013-en/03/02/01/index.html?itemId=/content/chapter/factbook-2013-25-en>

Convergence Determines Governance - Within and Without

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Convergence across nation-states is about the poor catching up with the rich, even as growth continues for all. Convergence is about “the global south” achieving parity with “the global north.” Convergence is about the distribution of incomes of people around the world flattening towards equality, and thus about the shift in the planet’s economic landscape curving to better fit the world’s spatial distribution of people.

Of course, how exactly convergence is studied and discussed does not always achieve that goal. When economists study the dynamics of income per capita, say, and assess if that measure shows a tendency to return to some steady-state long-run trend, obviously such an exercise will always be remote from achieving an understanding of the poor catching up with the rich. When researchers seek to explain the dynamics of, again, just income per capita, obviously such an exercise can give no insight into what happens to the incomes of the bulk of the world’s population nor into what happens to the very poor and the very rich of different societies.

But these shortcomings are conceptually, at least, easily overcome. Policy discussion and research can factor in population size and the distribution of income within nation-states, and thereby sharpen understanding accordingly. Other deficiencies, however, are less easily addressed.

Economic policymaking and academic research on economic growth and convergence have traditionally focused on the economic, institutional, and political organizations *within* the nation-state: It is these, in the conventional thinking, that determine if growth is sustainable.

Much less studied is how the external or global environment might matter for growth and convergence. Historians¹ and international relations scholars² of global power shifts in particular and geopolitics more generally provide ready counter-examples. These researchers study the conditions that surround the rise of a challenger to the incumbent world superpower: What is such a rise but exactly the convergence of a poorer economy towards the leading nation-state? In this research the failure of global governance to adjust to such challenges can set in motion violent events that either topple the incumbent or disrupt the continued rise of the challenger, and inflict damage to worldwide economic growth more generally.

The positive tradition in such foreign policy analysis is strong. In that thinking the global hegemon dominates world leadership because it can: it is the world’s economic superpower; it issues the world’s reserve currency; it has the strongest military capabilities. But an economics perspective would suggest global hegemony also needs a normative foundation: The world leader leads, not just because it can, but because in doing so it improves the well-being of humanity. That leader provides global public goods; it keeps the world safe and the global economy stable. What happens to the global economic landscape, as convergence takes place or fails to do so, then has profound implications for what global governance might be appropriate.³

But do such considerations matter for growth and convergence today?

This Point in History

Twenty-five years ago the Soviet Union collapsed. This brought to an end the then-largest convergence challenge of the previous century. To understand this, observers considered a range of possibilities. The most prominent of those described itself in terms of the “end of history”:

*Today [...] we have trouble imagining a world that is radically better than our own, or a future that is not essentially democratic and capitalist.*⁴

Only one path offered prosperity and growth:

*[L]iberal democracy remains the only coherent political aspiration that spans different regions and cultures around the globe. In addition, liberal principles in economics—the “free market”—have spread, and have succeeded in producing unprecedented levels of material prosperity, both in industrially developed countries and in countries that had been, at the close of World War II, part of the impoverished Third World.*⁵

Liberal democracy and free-market economics constituted the only pathway to prosperity.

In the same vein 20 years ago a similar end was predicted for East Asia, then still perilously close to “the impoverished Third World,” and which like the Soviet Union was also attempting a different pathway to prosperity:

*From the perspective of year 2010, current projections of Asian supremacy extrapolated from recent trends may well look almost as silly as 1960s-vintage forecasts of Soviet industrial supremacy did from the perspective of the Brezhnev years.*⁵

There was only one route to economic success, and East Asia was not on it.

The claim that a specific growth trajectory is un-

sustainable can indeed be confirmed by evidence, and thus shown to be right. But, as a matter of logic, it can never be proven wrong. (Whenever an economy keeps growing, it could still show dramatic collapse in the future.)

We are now past the year 2010, and so we can usefully examine prospects and reality on the predicted East Asian collapse. If the evidence suggests, however, that the projections and assessments described in this section are incorrect, perhaps so too do their underlying assumptions need to be re-examined.⁷

Empirical Evidence

The preceding discussion flags two dimensions of interest regarding economic performance across countries. First, how have different parts of the world performed relative to one another in a metric that lends itself to geopolitical comparison? Looking at purchasing power parity (PPP) correction in per capita incomes gives guidance on how the well-being of different populations have evolved, as these adjust for size and for different living costs across the world. But PPP correction will not accurately describe the relative footprints of different parts of the world in competition with each other. For this, it is GDP evaluated at current prices and market exchange rates that will be more revealing. By the same token, for geopolitics, size matters: it is the overall economy that must be studied here, not just per capita GDP.

Second, what are the underlying longer-run trends in GDP that shift more permanently the relative economic positions of different parts of the world? Looking at just measured year-on-year growth rates, say, highlights only shorter-term fluctuations (for the technical reason that a first-difference filter has frequency-domain representation that is 0 at frequency zero and, moreover, is everywhere continuous). Kemal Derviş⁸ has demonstrated how for per capita GDP, Hodrick-Prescott-filtered long-run trends show emerging markets and developing economies growing strongly and thus catching up with the initially advanced economies,

while, in contrast, short-run cycles across these groups co-move strongly. Thus, empirical techniques that fail to separate explicitly these dynamic behaviours—but instead just look at measured annual growth rates, say—will likely end up incorrectly concluding that the poor will remain poor and the rich, rich.

I follow Derviş’s insight for studying convergence but my empirical evidence differs from his in two ways. First, I am interested not in per capita quantities but in total incomes—again, because the latter is what matters for geopolitics. Second, I use a band-pass filter—that implied by a symmetric rectangular 5-year average, not the Hodrick-Prescott technique—to disentangle longer-run trends and shorter-run cycles. There is no single best technique for this estimation, so the more that different methods are applied, the greater confidence we have in the collective body of findings.

Begin with just the raw data. Table 1 shows the shares of world total GDP that different individual countries and groups contribute, averaged over the decades since 1980. The final column in the Table shows the results from using the IMF’s forecasts of GDP in individual economies.⁹

Begin with the world’s leading advanced economy.

From a 31 percent share of the world economy in the 1980s, the U.S. contribution has declined by over 8 percentage points; the figure is predicted to be even lower in the next five years. In this time, similarly, the G-7 group of advanced economies has seen its share decline 18 percentage points, from being two-thirds of the global economy to now less than half.

In contrast, the group of emerging markets and developing economies (EMDE) has seen its share of the global economy *rise* 16 percentage points, with over 10 of those percentage points from emerging and developing Asia, and eight from China alone.

It is striking that, in the IMF’s October 2014 forecast, the EMDE group has continued to advance despite the predicted slowdown for the global economy overall and, in particular, for the richer, developed economies—previously the bedrock of stable world economic growth and the market for developing economy exports.

The picture that emerges is convergence, pure and simple. A large part of this convergence had already taken place by 2014. Within the next five years, the EMDE group—at market exchange rates, not PPP—will achieve parity with the EU and the

TABLE 1. SHARES OF WORLD GDP AT CURRENT PRICES AND MARKET EXCHANGE RATES.

Shares of World Total	Decade Averages				Forecast
	1980-1989	1990-1999	2000-2009	2010-2013	2014-2019
G-7	66.0%	66.0%	60.0%	48.0%	44.6%
EU	29.0%	30.5%	29.0%	24.3%	22.8%
Emerging Markets and Developing Economies	21.0%	19.1%	24.4%	37.0%	41.1%
Emerging and Developing Asia	6.3%	5.7%	9.2%	16.6%	20.7%
US	30.6%	27.2%	28.4%	22.4%	22.2%
China	2.5%	2.6%	5.3%	10.9%	14.4%
UK	4.3%	4.3%	4.7%	3.4%	3.7%

Source: Author calculations from IMF World Economic Outlook, October 2014

U.S. combined. (Measured by PPP, in a table omitted in the interests of article length, the catch-up had already happened by the 2000s, with the trend simply continuing, so that the EMDE group was by the early 2010s 20 percentage points larger than the EU and U.S. combined.)

Setting aside the raw data, I turn now to the underlying trend and shorter-run fluctuations previously described. I compute the underlying trend by taking 5-year moving averages; short-run cyclical fluctuations are then defined to be the difference between the original raw data and this estimated underlying trend. To reduce the length of the discussion, hereafter, I focus on just EMDE and the G-7.

Figure 1 shows the dramatic convergence of the EMDE group towards the G-7. Figure 2 sharpens the point by showing the gap between EMDE and the G-7, calculated as a percentage of G-7 GDP. The reduction of this gap over time is neither linear nor monotone; there is nothing mechanical or automatic about convergence. From the early 1980s the distance between EMDE and the G-7 first grew, then plateaued, and finally fell dramatically. From a peak of 74 percent, where the gap remained for nearly a

decade beginning in the mid-1980s, EMDE began to catch up sharply to the G-7 from the mid-2000s. By 2013 there was only a 17 percent gap; based on the IMF's October 2014 forecasts, I estimate the gap will be just 6 percent by 2017.

But how does this finding square with the impression so many contemporary observers and financial market participants have, that rising globalization and ever-tighter coupling between advanced and poorer economies mean that the emerging and developing economies will not grow without advanced economies providing the locomotive of export demand? Figure 3 addresses this, making the same point that Derviş¹⁰ had previously argued. When observers draw conclusions based solely on raw GDP data, perhaps mentally calculating or visualizing growth rates, it is the higher-frequency, shorter-term dynamics that they implicitly use. Growth rates, being the result of a first-difference filter, emphasise high-frequency movements. In Figure 3 those high-frequency dynamics display tight co-movement between EMDE and the G-7. Indeed, the raw correlation between those two series over the entire sample period is 0.7. Moreover, for those with the stylized impression that the world has become only more tightly coupled,

FIGURE 1. LONGER-RUN TRENDS 5-YEAR MOVING AVERAGE

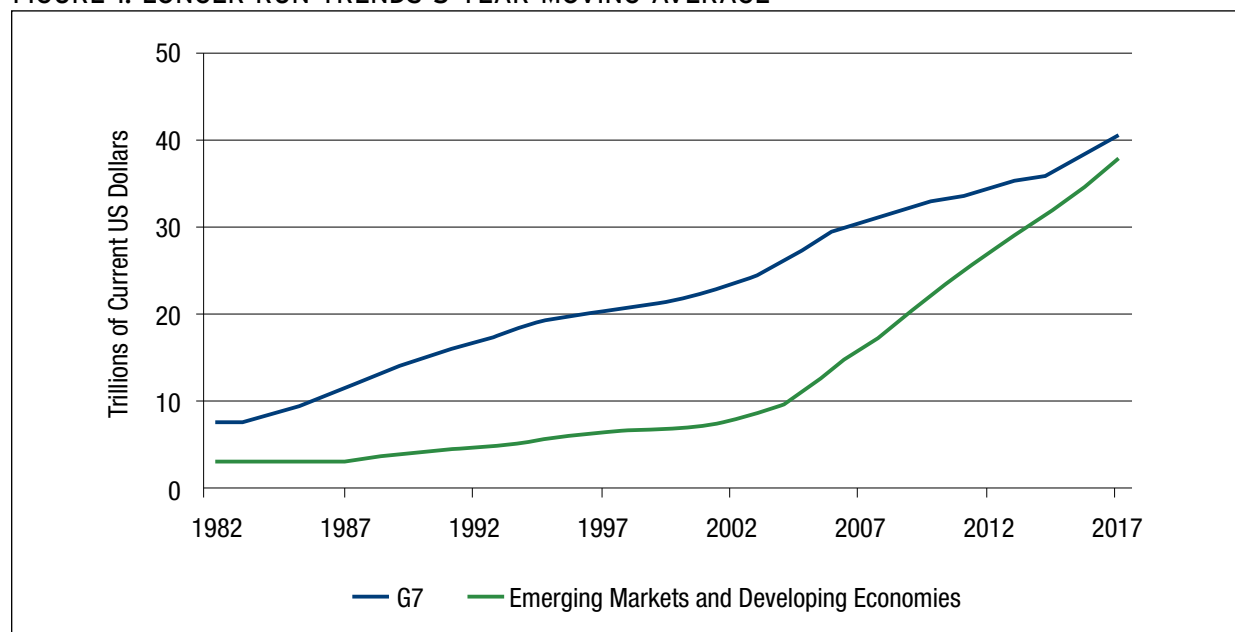


FIGURE 1. LONGER-RUN TRENDS 5-YEAR MOVING AVERAGE

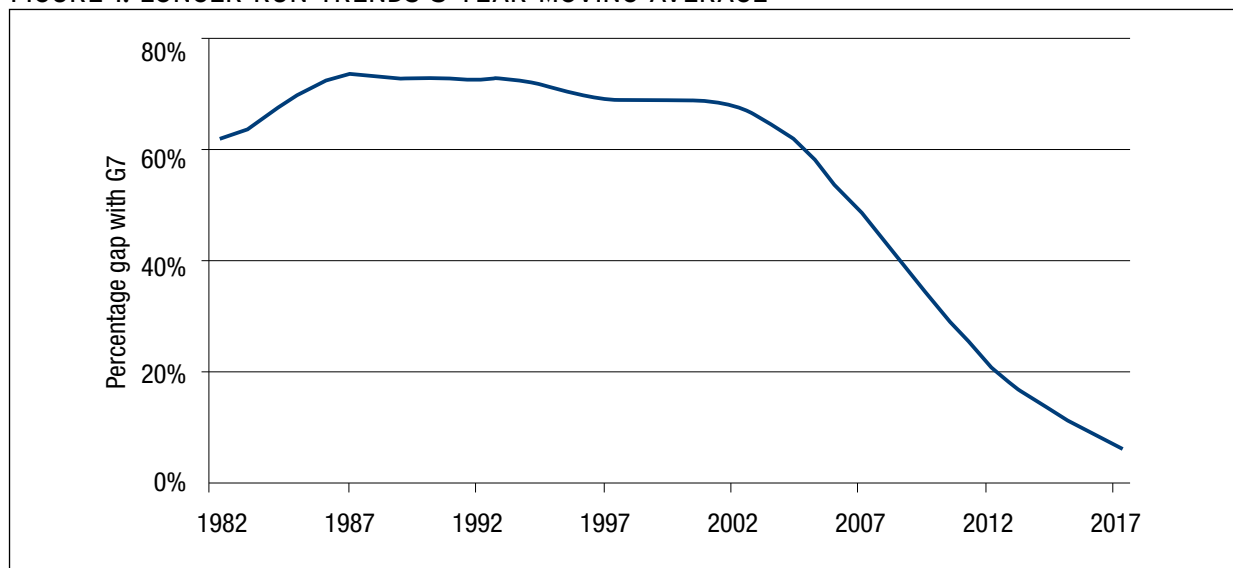
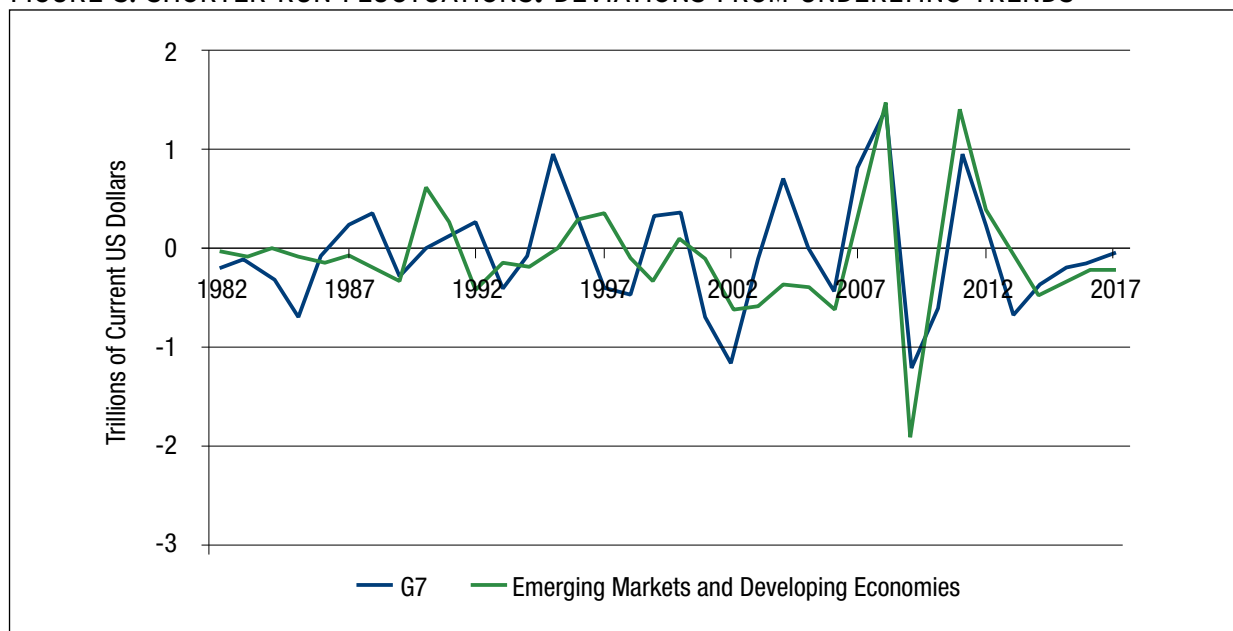


FIGURE 3. SHORTER-RUN FLUCTUATIONS. DEVIATIONS FROM UNDERLYING TRENDS



yes, the correlation has only grown over time. The contemporaneous correlation from 1980 through 1999 was actually zero (although expanding the correlations to take into account short leads and lags again makes the co-movement positive, exactly as the visual impression in Figure 3 suggests). However, since 2000 that same correlation has risen to 0.8.

It is only to be expected therefore that many observers hypothesize that the emerging economies can only slow when the advanced ones do so, and hence that convergence would not occur. But disentangling the underlying trend confirms instead the message from Table 1 and Figure 2.

Convergence has already occurred, big time.

Conclusions

Economic policymakers and economists have, appropriately, been interested in growth and convergence to understand if the poor in the world are catching up to the rich. Relatively unnoticed in this economic discussion is that a related debate has been taking place among historians of foreign policy and scholars of international relations. In that second domain convergence has implications for global power shifts and for the legitimacy of different forms of world leadership.

When convergence occurs on the kind of scale that I try to document as having taken place, the current system of global governance, dominated by traditional centres of power, can only come under ever greater stress.

Many contemporary observers, however, hold the view that the advanced economies will continue to be dominant, i.e., that convergence will fail because of a combination of two reasons: First, there is a relative narrow mixture of liberal democracy and free-market economics that makes for success; the emerging world—China and East Asia in particular—fail to hew to this recipe. Second, the empirical evidence says emerging and advanced economies are tightly coupled, so if the advanced economies slow, so too must the emerging markets.

In this paper I have shown that empirical evidence suggests instead the opposite. Those economies that have been successful in the world include those in East Asia, not least China, all of whom have been willing to experiment with a rich variety of alternative political and economic systems. There might well indeed be multiple pathways to prosperity, and thus multiple models appropriate for global governance. Following an earlier insight of Derviş's, I have also suggested why tight coupling of high-frequency co-movements does not constitute evidence against convergence.

Convergence, I argue, has indeed already occurred. Only its implications—political and global—remain to be worked out.

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Endnotes

1. Kennedy (1989)
2. Cox (2012) and Hoge (2004)
3. Quah (2011) and (2014a)
4. Fukuyama 1992, p. 46
5. Fukuyama 1992, p. xiii
6. Krugman 1994, p. 78
7. Quah (2014b)
8. Derviş (2012)
9. For the exact definition of different groupings of countries, see IMF (2014).
10. Derviş (2012)

US Economic Growth is Over: The Short Run Meets the Long Run

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Distinguishing Between Secular Stagnation and Slow Long-term Growth

A set of lively debates about future U.S. economic growth has engaged me as the lonely proponent of pessimism about the future against three very talented proponents of what I have called “techno-optimism.” In their best-selling book *The Second Machine Age* (2013), Erik Brynjolfsson and Andrew McAfee have argued that the U.S. is at a “point of inflection” toward faster technological change. In two public debates with them, I have lost overwhelmingly; the techno-optimists have captured a consensus view that the future will be better than the past, and that hope is understandable because economic conditions in the U.S. have been so dismal during the six years since the beginning of the 2008-09 financial crisis.¹ Another series of debates has pitted me against my Northwestern colleague of 40 years, Joel Mokyr (2014).

This short paper reviews my case for long-run pessimism divided among two sets of explanations, the “headwinds” and the decline of innovation that distinguishes the 80 years before 1972 from the 42 years since 1970. The novelty here compared to previous expositions is the merging of the short run with the long run. The growth experience of the U.S. economy in the decade prior to 2014 combined with a widely accepted estimate of potential GDP growth out to 2024 results in estimated past and future growth almost exactly equal to the long-run growth rate that I formulated more than three years ago. The conclusion of the paper combines the long-term and short-term data on the growth performance of the U.S. economy.

No single image captures the present concern about secular stagnation and slowing long-term economic growth better than *the Economist* cover of July 19, 2014, showing a frustrated jockey dressed in the colors of the American flag frantically trying to get some movement from the gigantic but sluggish turtle that he is riding. U.S. real GDP growth has grown at a turtle-like pace of only 2.1 percent per year in the last four years, despite a rapid decline in the unemployment rate from 10 to 6 percent. Almost all of that improvement in the unemployment rate has been offset by an unprecedented decline in labor force participation, so that the ratio of employment to the working-age population has hardly improved at all since the trough of the recession, and as a result 10 million jobs have been lost forever.²

I have recently (2014a) restated the case for slow growth over the long run of the next 25 to 40 years. At the same time, Larry Summers (2014a) has signaled his alarm about a return of “secular stagnation,” a term associated with a famous 1938 paper by the Harvard economist Alvin Hansen. However, Summers and I are talking about different aspects of the current American growth dilemma. His analysis concerns the demand side, “about how we manage an economy in which the zero nominal interest rate is a chronic and systemic inhibitor of economic activity, holding our economy back below its potential.”³ In contrast my version of slow future growth refers to potential output itself.

As the U.S. unemployment rate declines toward the normal level consistent with steady non-accelerating inflation, by definition actual output catches up to potential output. I have provided (2014b) a layman’s guide to the numbers that link the

performance of real GDP and the unemployment rate and have concluded that U.S. potential real GDP over the next few years will grow at only 1.4 to 1.6 percent per year, a much slower rate than is built into current U.S. government economic and budget projections. My analysis suggests that the gap of actual performance below potential that concerns Summers is currently quite narrow and that the slow growth he observes is more a problem of slow potential growth than a remaining gap. Summers (2014b) has now admitted that his version of secular stagnation is obsolete.

Hansen's 1938 version of secular stagnation was written prior to the invention of the concept of potential GDP and indeed of real GDP itself.⁴ Because there was no comprehensive measure of real economic activity, there was no notion of aggregate productivity or its growth rate. When we look at today's statistical rendering of the American economy in the late 1930s, we see that Hansen was writing about an economy with healthy potential GDP growth but a large gap of roughly 20 percent separating the levels of actual and potential GDP.⁵

Some have dismissed Hansen's concerns by pointing to the rapid growth in productivity that was occurring as he wrote during what Alex Field (2003) has called the 20th century's "most technologically progressive decade." Some optimistic writers have pointed to the upsurge in productivity growth that occurred in the 1930s and 1940s as offering the possibility that history might repeat itself and lead to faster productivity growth over the next two decades than even the productivity heyday of 1996-2004.⁶

The reality of 2014 is far grimmer than faced Hansen's America of 1938, because America was about to receive a succession of lucky breaks that utterly transformed the late 1930s gloom into postwar prosperity. Hitler's invasion of Poland created a doubling of export orders in the winter of 1939-40. After the fall of France, the U. S. government pushed the ignition switch on the Arsenal of Democracy, and before Pearl Harbor the share of total government spending in GDP had doubled.

Real GDP grew at an annual rate of 12.8 percent between 1939:Q4 and 1941:Q4. By 1944, real GDP had doubled from the level of 1939. Most amazingly, the economy did not slide back into Depression conditions when this huge dose of fiscal stimulus was removed; labor productivity was actually higher in 1950 than in 1944.

The Demise of Growth Originates in Headwinds, Not Technology

My forecast of growth over the 25 to 40 years is measured from 2007, not from now. The sources of slow growth do not involve technological change, which I assume will continue at a rate similar to that of the last four decades. Instead, the source of the growth slowdown is a set of four headwinds, already blowing their gale-force to slow economic progress to that of the turtle; the four are demographics, education, inequality, and government debt. These will reduce the growth rate of real GDP per capita from the 2.0 percent per year that prevailed during 1891-2007 to 0.9 percent per year from 2007 to 2032. Growth in the real disposable income of the bottom 99 percent of the income distribution is projected at an even lower 0.2 percent per year.

While many authors acknowledge the demographic headwind, its long-term quantitative impact on economic growth remains open to debate. By definition, growth in output per capita equals growth in labor productivity plus growth in hours per capita. The slowdown in productivity growth that began 40 years ago was partly offset between 1972 and 1996 by an increase in the labor force participation rate of 0.4 percent per year, as females and baby-boom teenagers entered the labor force. In contrast during 2004-2014 the participation rate has declined at an annual rate of 0.5 percent, and over the shorter 2007-2014 interval at an annual rate of 0.8 percent.

This transition from a 0.4 percent *increase* to a 0.8 percent *decline* accounts for a 1.2 percent reduction in the growth of per capita real GDP for any

given growth rate of labor productivity. Recent research (Hall, 2014) has shown that about half of the 2007-14 decline in participation is due to the aging of the population as the baby-boom generation retires. The other half is due to declining participation within age groups. Aaronson *et al.* (2014) have concluded that *all* of the 2007-2014 decline in the participation rate has been due to secular factors and none to cyclical factors.

The second headwind is education. Throughout most of the 20th century rising high school completion rates permanently changed the productive capacity of American workers, but this transition was over by 1970. Further increases in high school completion rates have been offset by dropping out, especially of minority students, as the U.S. slides to number 16 rank for secondary school completion in an international league table among developed countries. Similarly, the U.S. has a low ranking in college completion rates and there are new problems—over \$1 trillion in student debt combined with the inability of 40 percent of college graduates to find jobs requiring a college education, spawning a new generation of indebted baristas and taxi drivers.

The third headwind is income inequality that continues to grow inexorably as salaries for CEOs and celebrities march ever upward, augmented by the creation of trillions of dollars in stock market wealth. Below the 90th percentile corporations are working overtime to reduce wages, reduce benefits, convert defined benefit pension plans to defined contribution, and to use Obamacare as an excuse to convert full-time jobs to part-time status.

The fourth headwind is the predicted upward creep in the ratio of Federal government debt to GDP. The official CBO data greatly understate the gravity of the problem, because the CBO estimate of future potential GDP growth is out of touch with reality. Because potential real GDP growth is already much slower than the CBO estimates (Gordon, 2014b), future tax revenue will grow more slowly, boosting the debt in the numerator of the debt/GDP ratio, while the denominator will grow

more slowly, thus further increasing the ratio. If current policies remain the same, debt/GDP ratio will reach 87 percent by 2024 in contrast to about 70 percent today, and this does not take into account the apparently intractable pension burdens in some of the largest state and local governments.

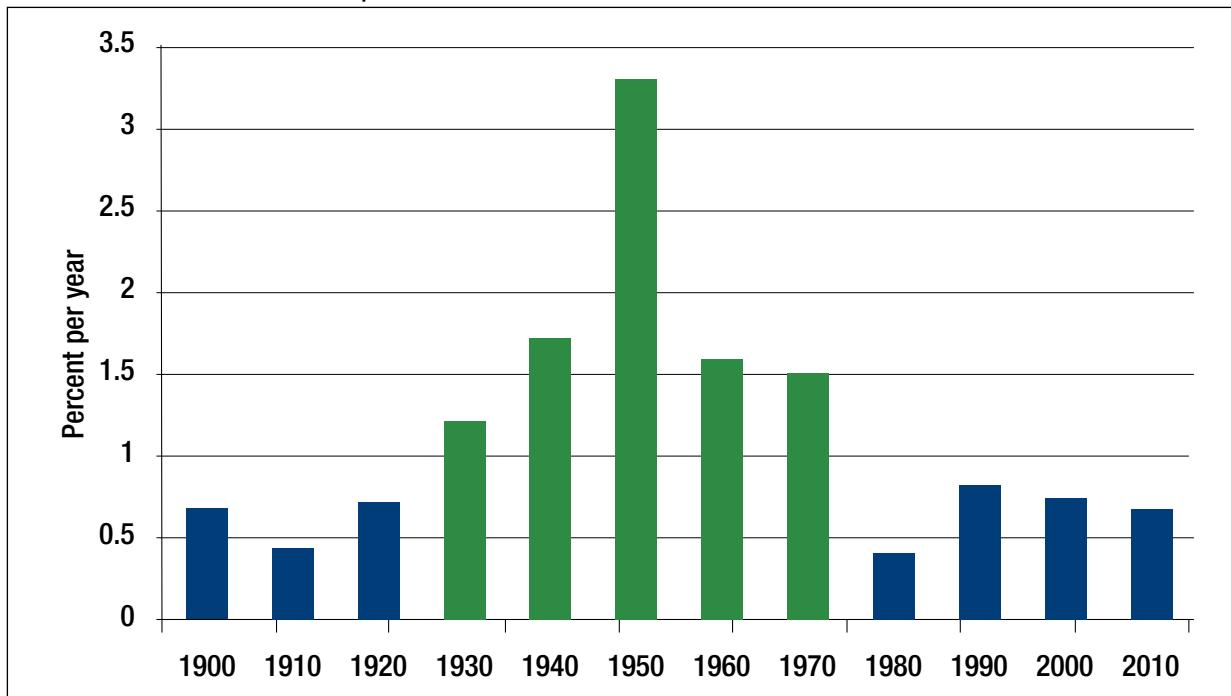
For the disposable (after tax) incomes of the bottom 99 percent, it is hard to find any room for growth at all. Indeed official measures of median wage and household income have been stagnant for several decades. While these measures may understate income growth, my exercise in taking the historical record of growth of real GDP per capita and then subjecting it to “an exercise in subtraction” avoids the problem that some of the median wage and household income data exclude elements that are included in the data on GDP and personal disposable income.

Nobody Debates the Headwinds, Instead They Debate Technological Progress

My forecast of slow future growth after 2007 does not rely on any slowing of future technological change. My “exercise in subtraction” deducts 1.2 percent from the realized 1891-2007 per capita output growth rate of 2.0 percent for the combined impact of the four headwinds. Then I deduct an additional 0.6 percent for the fact that productivity change slowed markedly from the 80 years before 1972 to the 40-plus years since 1972. *In my numbers there is no forecast of a future technological slowdown—productivity growth adjusted for educational stagnation is predicted to be just as fast during 2007-2032 as during 1972-2007.*

Critics of my growth forecasts have largely ignored the fact that I am not suggesting that the pace of innovation will slow in the future compared to the achievements of 1972-2014. What the *Economist* cover called today’s “loss of oomph” in the U.S. economy occurred after 1972, that is, after the first century of implementing the rainbow of benefits from the inventions of the Second Industrial

FIGURE 1. ANNUAL GROWTH RATE OF TOTAL FACTOR PRODUCTIVITY FOR TEN YEARS PRECEDING YEARS SHOWN, YEARS ENDING IN 1900 TO 2012.



Revolution. In the early postwar years the spread of air conditioning, commercial air travel, and the interstate highway system represented the final implementation of technologies invented in the 1870s. After 1972 the slowdown was visible in the data and has continued to the present.

For decades macroeconomists struggled to understand the post-1970 productivity growth slowdown. But in fact our entire generation has been asking the wrong question. Instead of wondering why there was a productivity growth slowdown after 1972, we should have asked, “Can we explain the productivity miracle that occurred in the U.S. economy between 1920 and 1970?” While I join most analysts in preferring to compare productivity growth data between years when unemployment and utilization were “normal,” nevertheless it is interesting to look at the raw data for each of the 12 decades since 1890, as in Figure 1. Any techno-optimist must look at this history with dismay. The future is not going to be better than the past, because the economy during 1920-70 achieved growth in Total Factor Productivity (TFP) of a different order of magnitude in these “green” decades

than during the “blue” decades before 1920 and since 1970.⁷ If we compute the area of the green triangles and blue triangles, we conclude that roughly three-quarters of observed TFP growth since 1890 occurred in the half-century between 1920 and 1970. The sum of the blue areas (1890-1920 and 1870-2012) contributes only one-quarter of cumulative TFP growth since 1890.

As noted in the introduction, my findings have been disputed by the techno-optimists, namely Brynjolfsson, McAfee, and Mokyr. The techno-optimists focus entirely on their dreams of unprecedented future breakthroughs in technology that center on the benefits of artificial intelligence, big data, small robots, medical miracles, and driverless cars and trucks. They ignore the headwinds and thereby have nothing to say about the core of my case that future disposable income growth for the bottom 99 percent will be slower than in the past, a slowdown that already began years ago when the headwinds began to gain momentum.

These techno-optimist forecasts are useful only along one dimension. They give us hope that

innovation might proceed at the same pace in the next few decades as in the last four. Yet they are utterly unconvincing that the pace of technological change will be *faster* over the next 25 years than over the last 40. Consider what they are up against that happened within the last 40 years since 1972: the mainframe era that eliminated routine clerical jobs of endlessly retyping contracts, bills, and legal briefs; the invention of the personal computer that allowed many professionals to write their papers without the aid of a secretary; the invention of game-changing technologies in the retail sector including the ATM machine, bar code scanning, self checkout, and airline automated check-in kiosks; Amazon and e-commerce; Wiki and the availability of free information everywhere; the obsolescence of the hard-copy library catalog, the auto parts catalog, the print dictionary and encyclopedia.

The pessimism in my forecasts of future economic growth is based on the headwinds, not a faltering of technology. I am dubious that the nirvana of artificial intelligence, big data, robots, driverless cars, etc. will match the achievements enumerated above of the last 40 years. By basing my productivity forecast on a continuation of the 1972-2014 pace of innovation, I am deliberately suppressing my skepticism.

The techno-optimists differ in the nature of their concerns. Brynjolfsson and McAfee (2013) are admirable in their social concern that their abundant robots and big data will eliminate millions of jobs. Mokyr is not interested in jobs or headwinds. He predicts hypothetical future breakthroughs without any contact with the historical data, a remarkable position for an economic historian. He does not appear to care about the drama shown in Figure 1 above of the TFP speedup during the 1920-70 period and its subsequent relentless slowdown.

Mokyr's sole comment about the headwinds (2014, p. 14) is that the unprecedented decline in the labor force participation rate is partly offset by an increase in leisure. However we have long known that leisure time during the work week experi-

enced by the unemployed or by those who would prefer to work has far less value than leisure time on weekends and during vacations. Labor force participation has been declining in large part because many people are forced to retire without adequate finances and others give up looking for jobs after a desperate and endless search. Mokyr punctuates his dismissal of declining hours per capita with a remarkable quote: "But it may well be that a leisurely life is the best 'monopoly profit.'" He forgets his history—from the standpoint of the increasing marginal disutility of work, the real welfare-enhancing transition involving leisure occurred in the first half of the 20th century when the 60-hour manufacturing workweek of 1900 fell to 40 hours per week by 1950.⁸

The optimists, both Brynjolfsson-McAfee and Mokyr, share a common reaction to any display of historical productivity data such as contained in Figure 1. They claim that GDP is fundamentally flawed because it does not include the fact that information is now free due to the growth in Internet sources such as Google and Wikipedia. A complementary statement is that numerous items have disappeared from GDP because they are already provided for free with a smartphone—not only the print dictionary or encyclopedia, but the music-playing capability that makes the separate iPod obsolete, the photo capability that makes my camera obsolete, the restaurant locator that makes the print Zagat guide obsolete, the growth in companies like Uber and Lyft that may make the urban taxicab obsolete, and many more.

Two responses are appropriate about the unmeasured GDP made possible by the smartphone. The most obvious is that TFP growth sagged decades before the popularization of smartphones and the Internet. The most important event of the digital age was the marriage of personal computers and communications in the mid to late 1990s in the form of the Internet, web browsing, and email. Many of the sources of consumer surplus and free information were established more than a decade ago, including Amazon in 1994, Google in 1998, as well as Wikipedia and iTunes in 2001. While progress has

continued in the past decade with smartphones, gmail, Google Maps, and other applications, these innovations are second-order inventions compared to the great marriage of computers and communication of the late 1990s, and the slow growth of TFP reflects that.

The much more important response is that GDP has *always* been understated. Henry Ford reduced the price of his Model T from \$900 in 1910 to \$265 in 1923 while improving its quality. Yet autos were not included in the CPI until 1935. Think of what GDP misses: the value of the transition from gas lights that produced dim light, pollution, and were a fire hazard, to much brighter electric lights turned on by the flick of a switch; the elevator that bypassed flights of stairs; the electric subway that could travel at 40 mph compared to the 5 mph of the horse-drawn streetcar; the replacement of the urban horse by the motor vehicle that emitted no manure; the end of disgusting jobs of human beings required to remove the manure; the networking of the home between 1870 and 1940 by five new types of connections (electricity, telephone, gas, water, and sewer); the invention of mass marketing through the department store and mail order catalogue; and the development of the American South made possible by the invention of air conditioning.

Perhaps the most important omission from real GDP was the conquest of infant mortality, which by one estimate added more unmeasured value to GDP in the 20th century, particularly its first half, than all measured consumption (Nordhaus, 2003). The list goes on. The invention of air conditioning and commercial air travel may have created more consumer surplus for more people than the provision of free information over the Internet.

While Mokyr is not concerned about the destruction of jobs implied by his hypothetical technological revolution, Brynjolfsson and McAfee are overly worried because they are too optimistic about the future reach of robots into the vast American service sector. Retail supermarkets are in stasis—the one-time benefit of the bar code scanner 30

years ago has not changed the need for a human checkout clerk, and supermarket shelves are still restocked by humans, not robots. The higher education sector has vastly inflated its costs by adding layers of administration without changing the nature of instruction. One wonders why the U.S. needs 97,000 bank branches, but the 1977 invention of the ATM machine has apparently not eliminated them.

The Future of Growth in the United States

The end of U.S. economic growth has already happened. There is an uncanny similarity between the long-run growth rates that I have long predicted for 2007-32 and the actual outcome 2003-13.

TABLE 1. LONG-RUN FORECAST VS. SHORT-TERM OUTCOME, GROWTH RATES PER ANNUM (PERCENT)

	2003-2013	2007-2032
Real GDP	1.72	1.65
Population Growth	0.84	0.75
Real GDP per Capita	0.88	0.90

Ever since my initial speech on the topic “Is U.S. Economic Growth Over?” I have estimated future growth of per capita real GDP to be 0.9, and then I subtract 0.5 percentage points for rising inequality and a final 0.2 points for the inevitable need to raise future tax revenues or to cut back entitlement spending. Surprisingly, the U.S. economy over the past decade “delivered” exactly what I have been forecasting for the future.⁹ The 0.5 percentage point subtraction for inequality comes from the standard data source on equality compiled by Emmanuel Saez and Thomas Piketty. Their data show that in the two decades 1993-2013 the average growth rate of real income for the bottom 99 percent of the income distribution was 0.8 percent per year, 0.5 percent less than the 1.3 percent growth rate of the entire distribution (the growth rate was about 3.8 percent per year in the top 1 percent).

Now is the time to start trying to understand why the future pace of potential real GDP appears to be so slow, and whether anything can be done about the headwinds, particularly demography, inequality, and debt, that drag down income growth for the bottom 99 percent so far below the slowing rate of overall growth. The techno-optimists are whistling in the dark, ignoring the rise and fall of TFP growth over the past 120 years. The techno-optimists ignore the headwinds, which seems ostrich-like in their refusal to face reality.

The Economist of July 19, 2014 got it right. America is riding on a slow-moving turtle. There is little that politicians can do about it. My standard list of policy recommendations includes raising the retirement age in line with life expectancy, drastically raising the quotas for legal immigration, legalizing drugs and emptying the prisons of non-violent offenders, and learning from Canada how to finance higher education. The U.S. would be a much better place with a medical system as a right of citizenship, a value-added tax to pay for it, a massive tax reform to eliminate the omnipresent loopholes, and an increase in the tax rate on dividends and capital gains back to the 1993-97 Clinton levels.

But hypothetical legislation, however politically improbable, has its limits. The headwinds that are slowing the pace of America's future economic growth have been decades in the making, entrenched in many aspects of our society. The reduction of inequality and the eradication of roadblocks in our educational system defy the cure-all of any legislation signed at the stroke of a pen. Innovation, even at the pace of 1972-2014, cannot overcome the ongoing momentum of the headwinds. Future generations of Americans who by then will have become accustomed to turtle-like growth may marvel in retrospect that there was so much growth in the 200 years before 2007, especially in the core half-century between 1920 and 1970 when America created the modern age.

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Endnotes

1. Erik and I each gave TED talks on February 26, 2013, followed by a debate between us. Erik, the techno-optimist, won 99 percent of the votes prior to the debate and 98 percent after the debate. In a slightly less lop-sided debate with Andy conducted by the Economist on its blog, I lost by a more respectable 71 to 29.
2. Aaronson et al. (2014).
3. Summers (2014b).
4. The term "secular stagnation" was introduced not in Hansen's Presidential Address but rather four years earlier in Hansen (1934, p. 19).
5. Current NIPA data for nominal GDP register \$104.6 billion in 1929, \$57.2 in 1933, and \$87.4 in 1938. Gordon-Krenn (2010) estimate the GDP gap for 1938:Q4 to be 23.1 percent, implying that nominal potential GDP was \$113 billion in 1938. Potential GDP grew between 1928 and 1941 at 3.1 percent per year, and labor productivity grew at 2.7 percent per year, more than double the rate achieved in 2004-14.
6. Syverson (2013, Chart 1) cleverly displays the level of labor productivity with two horizontal axes, one extending from 1890 to 1940 and the other aligned 80 years later to extend from 1970 to 2020. This 80-year displacement implies a parallel between 1932 and 2012 and overtly suggests that productivity growth will speed up radically after 2012 as it did after 1932. He ignores the fact that much of the upsurge of productivity growth after 1932 was cyclical and related to the doubling of real GDP between 1939 and 1944.
7. Total Factor Productivity (TFP) is defined as a weighted average of the ratio of output to labor input and the ratio of output to capital input, where both types of input are adjusted for quality changes. The TFP data displayed in Figure 1 are derived from scratch in Chapter 10 of my forthcoming book (2015). They combine labor and GDP data from the BEA, BLS, and Kendrick (1961), but they are also revised to change the concept of capital input to allow for variable retirement ages and to include certain types of government-financed capital input.
8. Mokyr's claim that valuable leisure time partly or entirely offsets the lost income of the unemployed (and of those out of the labor force who would prefer to work) is sharply contradicted by a recent survey of the emotional well-being of the unemployed during the recent recession and slow recovery. See Krueger and Mueller (2011).
9. My first speech on the topic "Is U.S. Economic Growth Over?" was given at Sciences Po in Paris on September 12, 2011.

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