A Guide to Public Investments in the Care Economy: Estimating Care Deficits, Investment Costs and Economic Returns

Consolidated Report

UN Women - ILO Joint Programme

A Guide to Public Investments in the Care Economy:
Estimating Care Deficits, Investment Costs and Economic Returns

Contents

Acronyms

ECCE	Early Childhood Care and Education
GGGI	Global Gender Gap Index
ILO	International Labour Organization
LTC	Long-Term Care
MoWSA	Ministry of Women and Social Affairs
NEET	Not in Employment, Education or Training
SDG	Sustainable Development Goals
UN	United Nations
UNDP	United Nations Development Programme
UN Women	United Nations Entity for Gender Equality and the Empowerment of Women

Key points

▶ This publication contributes to the UN Women and ILO Joint Programme "Promoting Decent Employment for Women through Inclusive Growth Policies and Investments in the Care Economy".

▶ Five countries under the UN Women and ILO Joint Programme (Argentina, Egypt, Ethiopia, Morocco and Nepal) applied the UN Women–ILO policy tool 'A Guide to Public Investments in the Care Economy: Policy Support Tool for Estimating Care Deficits, Investment Costs and Economic Returns'.[1]

▶ The policy support tool provides a methodology to guide policymakers, UN Women and ILO personnel. The key tasks identified in the tool were:

▶ To identify the coverage gaps in care services: public healthcare, long-term care, early childhood care and education, and primary and secondary education.

▶ To estimate the costs of public investments and expenditures for eliminating these coverage gaps.

▶ To assess the various social, employment and fiscal returns to such investments in the short- and long-run.

▶ I. Introduction

Investment in the care economy has become increasingly prominent on public policy agendas in the post-COVID-19 era. The global framework for action by the UN Secretary-General, *Our Common Agenda*,[2] calls on UN Member States to invest in the care economy as a strategy to achieve two policy objectives:

- Women's economic inclusion through the alleviation of unpaid work time (to address gender inequality and accelerate progress on Sustainable Development Goal (SDG) 5)
- Decent job creation through the expansion and upscaling of formal care services (to promote productive employment and decent work for all and accelerate progress on SDG 8).

A policy support tool, prepared in the framework of the UN Women and ILO Joint Programme on "Promoting Decent Employment for Women through Inclusive Growth Policies and Investments in the Care Economy", aimed at providing guidance to policymakers on identifying the required scope of care investments and analysing the expected outcomes of such investments. The tool, "A Guide to Public Investments in the Care Economy: Policy Support Tool for Estimating Care Deficits, Investment Costs and Economic Returns",[3] provides a methodology for how to

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[1] The policy tool was created by Ipek Ilkkaracan (Istanbul Technical University) under the UN Women–ILO Joint Programme on "Promoting Decent Employment for Women through Inclusive Growth Policies and Investments in the Care Economy". The policy tool has benefited from comments by Anuradha Seth (Senior Advisor, Gender and Macroeconomics, UN Women) and Valeria Esquivel (Employment Policies and Gender Specialist, ILO). The views and suggested approaches expressed in this publication do not necessarily represent the position of the funding partners.

[2] At the United Nations General Assembly in September 2020 (under the COVID-19 pandemic), Member States ,in a pledge to strengthen global governance for present and future generations, requested that the Secretary-General report back with recommendations to respond to current and future challenges (UN75 declaration – A/RES/75/1). The recommendations of the UNSG were shared in September 2021 in his report, *Our Common Agenda*.

[3] UN Women and ILO (2021). A guide to public investments in the care economy: Policy support tool for estimating care deficits, investment costs, and economic returns.

1. Identify the coverage gaps in care services: early childhood care, primary and secondary education, public healthcare and long-term care.
2. Estimate the costs of required public investments and expenditures for eliminating the coverage gaps.
3. Generate projections on the various economic returns to such investments, i.e. employment creation, gender distribution of new employment, fiscal feasibility through tax revenue generation, economic growth and poverty reduction.

The policy tool was implemented in 2022–2023 as a pilot in the following five countries under the UN Women and ILO Joint Programme: Argentina, Egypt, Ethiopia, Morocco and Nepal. This consolidated report draws upon the findings of the five country-level policy analysis reports so as to showcase the lessons coming out of these pilot studies and to highlight the value of scaling up the application of the tool in other countries.

Following this introduction (Section I), Section II assesses the diverse country contexts in which the studies were undertaken and the profiles of the studies with respect to sectoral coverage, policy simulation parameters and the economic returns assessed. Section III compares the quantitative results on estimations of care coverage gaps, costs of required public expenditures to eliminate the gaps, and the returns to investments in terms of employment creation, gender distribution of jobs, and in some studies growth and revenue outcomes. While the early childhood care and education (ECCE) services sector is covered by all the studies, some sectors were covered only in some countries: primary and secondary education in Argentina and Nepal, educational services for children with special needs in Argentina, long-term care services for the elderly in Egypt, healthcare services in Nepal and services for vulnerable groups such as women at risk of domestic violence in Argentina. Sector-specific country contexts are reviewed. Since ECCE was covered in all cases, Sections II and III focus on ECCE services only. Section IV provides an overview of findings in relation to the other care sectors. Section V concludes with an overview of the similarities and the differences in the findings across the five countries, drawing lessons for the application of the tool in other countries and assessing policy implications with respect to the question of fiscal space for investing in care.

▶ II. Country context and study profiles

II.A Country contexts and motivation for implementation of the policy tool

The policy tool was piloted in countries with diverse locations and income levels: a Latin American upper-middle-income country (Argentina), two Middle East and North African lower-middle-income countries (Egypt and Morocco), a sub-Saharan African low-income country (Ethiopia) and a South Asian lower-middle-income country (Nepal). In four of the five countries where the policy tool was piloted under the UN Women–ILO Joint Programme, the implementation was at the country level. In Argentina, the tool was implemented at the sub-national level for two provinces.[4]

In terms of demography, two countries have relatively large populations: Ethiopia (some 120 million) and Egypt (some 95 million). They have a large share of children 0–5 years old: 18 per cent of the total population in Ethiopia and 15.5 per cent in Egypt. Nepal and Morocco follow with smaller populations (around 37 and 30 million) and lower shares of small child populations at 10 per cent and 9 per cent respectively. Beyond a large child population, Egypt's demographic structure indicates a growing elderly population (65+) from 3.8 per cent in 2012 to 5.2 per cent in 2021. Hence, long-term care (LTC) services for the elderly were included in the Egypt study. Chaco and Santa Fe, the two provinces where the tool was applied

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[4] The tool's methodology had been previously applied at the country level for Argentina. This report builds upon the province-level studies conducted within the scope of the Joint Programme. For the report on the country-level application of the policy tool in Argentina, see G. Marzonetto et al. (2023). *Public investment in care services in Argentina. Coverage of deficits, employment generation, fiscal efforts and economic impacts.* Buenos Aires : ILO. https://www.ilo.org/buenosaires/publicaciones/WCMS_888152/lang--es/index.htm

in Argentina, have populations of around 1.2 and 3.5 million respectively, corresponding to around 5 per cent of the country total (around 46 million).

The countries are also diverse also in the achievement of gender equality. In the World Economic Forum's Global Gender Gap Index (GGGI) in 2023,[5] Argentina leads as the best performer placing 36th out of a total of 146 countries for which the index is computed. Ethiopia follows at the global median in 75th place. The remaining three countries are in the bottom quartile in terms their GGGI ranking: Nepal in 116th place, Egypt 134th and Morocco 136th. Regardless, all five country reports state that persisting gender economic gaps are one of the main motivations for the application of the policy tool, since women's unpaid care work burden (and limited access to quality care services) is a major driver of the gender gaps.

As part of the background country context, three studies (Ethiopia, Morocco and Nepal) provided a detailed overview of gendered trends in the labour market, care arrangements and time use. In Ethiopia, women's labour force participation rate is 56.8 per cent vs. 72.6 per cent for men. Informal employment is higher for women (54 per cent of employed women) than men (41 per cent of employed men). The widening gender gap in informal sector employment is assessed as alarming, given the vulnerability associated with informal employment. The study noted that where women participate in formal employment, they tend to be concentrated in occupations and sectors that offer flexibility to help accommodate domestic responsibilities at the expense of income returns and that there is a 74 per cent gender wage gap among paid employees. The unemployment rate for women (11.7 per cent) is more than twice that for men (5 per cent).

Women's employment rate is particularly low in Morocco with a large gender gap, at 20.9 per cent for women versus 70.4 per cent for men (2021) (Ragbi et al. 2023: 23). Women's unemployment rate (13.5 per cent) is almost double that of men's (7.8 per cent). More than a quarter of young people aged 16 to 24 are classified as NEET, people who are neither in employment nor in education. Of these, more than three quarters are women. The report noted that the female NEET are dominated by homemakers, i.e. young women with family responsibilities who are engaged in unpaid care work. The Morocco study assesses that the lasting effects of the economic crisis in the aftermath of the COVID-19 pandemic is likely to amplify the pre-existing gender economic gaps (Ragbi et al. 2023: 19).

The labour force participation rate of women in Nepal at 28.7 per cent (2021), while higher than in Morocco, is low by global standards. The study noted that 40 per cent of the women not in the labour force indicated unpaid work as the reason. Women with care responsibilities are more likely to be self-employed or contributing family workers; they are concentrated in the informal sector rather than being regular formal sector employees. The Nepal study noted that the COVID-19 pandemic had unequal impacts on men and women in terms of labour, not only due to women's more fragile position in the labour market but also the unequal distribution of care work (Bhatta and Pope, 2023: 9). All of these factors motivated the implementation of the policy tool on investing in care in Nepal.

The Argentina and Egypt studies did not provide background context on gendered trends in the labour market but did underline that investing in care services expansion will improve gender equality in the labour market. The Egypt study noted that the female labour force participation rate in Egypt has been on a declining trend over time from 24.2 per cent in 2007 to 18 per cent in 2018 and to 14.6 per cent in 2021. A lack of affordable childcare is one of the main obstacles preventing women from entering the labour market (Attia, 2023: 42).

The level of access to ECCE services and ECCE quality differs across countries. Argentina demonstrated the most extensive coverage, and Egypt and Ethiopia the most limited. Pre-primary enrolment rates (age 4–5) are universal (100 per cent) in the two Argentinean provinces. The enrolment rates for age 0–3 are much lower at around 8 per cent in Chaco province and 9 per cent in Santa Fe province. In Egypt, the gross enrolment rate of children aged 0–2 in baby nurseries is 0.7 per cent, 16 per cent for regular nurseries (age 3–4) and 29 per cent for pre-primary (age 4–5). The gross enrolment rate for children aged 3–5 is 30 per cent. In Morocco, 53 per cent of children age 4 and 62 per cent of children age 5 are enrolled in pre-primary schools. The combined enrolment rate for age 4–5 is 57.8 per cent, and for age 2–3 only 3.7 per cent. There are no data for children under 2. Nepal has an enrolment rate of 62 per cent for age 3–5 and Ethiopia 37 per cent for age

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4–6, which is the pre-primary schooling age in Ethiopia. For younger children (age 0–3), the enrolment rate in Ethiopia is about 1.5 per cent. For Nepal, there are no data for access to institutional care services for children younger than 3.

Independent of overall enrolment rates, multidimensional disparities in access and quality are apparent across all country studies. The pupil/teacher ratios are often very high. In Egypt in pre-primary education in 2019–20, there were 43 children per class, marking a substantial increase from 34 per class in 2010. The deterioration of the quality indicator was here due to the limited expansion of pre-primary institutions despite the growing demand for them, driven mainly by population growth. In Nepal, for ages 3 to 5, there are 33 children per teacher. For Ethiopia, the policy target for age 4–6 is 49 children per teacher whereas the standard protocol (under review) sets the pupil/teacher ratio for pre-primary at 30. Beyond pupil/teacher ratios, the Egypt, Ethiopia and Nepal studies also note that teachers lack necessary qualifications, in particular a degree in a relevant field (pedagogy or child development). Teacher salaries are low, even in the case of Argentina, despite its remarkably expansive coverage and low pupil/teacher ratios.

Disparities between households in access to ECCE prevail by region, the rural–urban divide (mentioned in all country analyses except for Argentina) as well as household income. The Morocco study noted the pre-primary enrolment rate for children living in the top quintile of households was 82 per cent versus 22 per cent for those living in the lowest income quintile (Attia, 2023: 60). The preschool attendance rate for children from non-poor households is 52 per cent versus 18 per cent from poor households. The Egypt study noted that physical distance from preschools is a barrier for those in rural areas and that teachers in rural areas have lower qualifications.

The Morocco study noted that religious preschools have a stronger presence in rural areas. The Preschool Generalization and Development Programme involves affirmative action for children in rural and peri-urban areas. Similarly, in Egypt there is a particular focus on expanding ECCE coverage in rural and lower-income regions. The gender distribution of students is nearly equal in most countries, with a slightly higher share of boys in some. In Morocco, there are 48 per cent girls (Ragbi et al., 2023: 59).

The expansion of care services, in particular of ECCE, has found its place on the public policy agenda of all five countries in recent years. Recent government initiatives in all five countries aim to expand and scale up ECCE education. In many cases, the focus is on pre-primary students, age 4 and 5 (age 4 to 6 in the case of Ethiopia). The ECCE policy agenda by the Governments of the two MENA countries (Egypt and Morocco) is the most ambitious, supported by the Presidential level in Egypt and by the King in Morocco. The Egyptian Government under the 2030 National Development Strategy of Egypt set ambitious goals of expanding preschool coverage for children aged 0–5, in particular for less advantaged regions such as the Upper Egypt governorate. The 2019/2020 national budget of Egypt specified for the first time the amount of public spending directed at ECCE services at 0.26 per cent of the GDP (Attia, 2023: 11). There are plans to establish more nurseries and childcare centres under the Decent Life Presidential Initiative.

Morocco's New Development Model has made the development of preschool a central component of its early childhood policy, noting that this is "a strategic axis that can contribute significantly to the initiation of a true Moroccan educational renaissance". (p.53) The Preschool Generalization and Development Programme was launched in 2018 with the objective of achieving universal access of children aged 4 and 5 to pre-primary schooling by 2027–2028. The programme has been noted for its success in a short period increasing the gross pre-primary enrolment rate from 54% in 2018 to 73% in 2021; with a target of 100% by 2027–2028. The increase of 20 percentage points in the gross enrolment rate over a span of three years indicates that rapid progress is possible when there is political will and resource allocation. Beyond expansion, the programme also sets the objectives of improving quality, affirmative action for rural and peri-urban areas, and integration of pre-primary education into the primary edcuation cycle (Ragbi et al., 2023: 55). The number of educators is set to increase from 51,000 to 504,000 in this period.

All country studies noted that the administrative and supervisory mandate for ECCE is shared across different ministries and public bodies. In Egypt, Ethiopia and Nepal, the legislative framework for licensing and supervision is divided between the Ministries for Education (for kindergarten/pre-primary) and Ministries for Social Policies and Women (for nurseries/childcare centres catering to younger children, typically age 4 and/or under). Data on nurseries and care centres for small children (e.g. enrolment, teaching and other staff, costs) are lacking unlike data on pre-primary schooling which are covered by the Ministries of Education under comprehensive education statistics. The lack of comprehensive official

data on care services for smaller children is an impediment towards policy design, including the implementation of assessments under the policy tool. To compensate for the lack of data, a survey of commercial day-care centres was conducted as part of the Ethiopia study and the results were extrapolated to nationwide estimations on the basis of survey data. These data were then combined with the nationwide estimates based on administrative data from federal-level public institution–based day-care facilities. The Egypt study used administrative data collected by the Ministry for Social Solidarity, cross checking them against various secondary data sources to ensure consistency and reliability of the primary data (Attia, 2023: 9). The Morocco study used a preschool survey that was conducted by UNICEF in 2014.

The distribution of the mandate for administration and supervision of ECCE services across different ministries and public agencies poses a challenge to the effective coordination of initiatives for service expansion and scaling up, as well as for consolidated budgets. In acknowledgement of this coordination failure, the Ministry for Education and the Ministry for Social Solidarity in Egypt signed a memorandum of understanding in 2007–08 for oversight of the transition from nursery schools to kindergarten (Attia, 2023: 21). The modality of service provisioning includes combinations of public, private, community and in some cases (Morocco and Nepal) religious schools and centres. Some studies (notably from Nepal) noted the higher quality of private institutions and the higher fees. In Morocco, the administrative and supervisory mandate for ECCE services also involves the Ministry of Habous and Islamic Affairs which is in charge of traditional preschools (Koranic Kouttabs) with strong facilities in rural and disadvantaged areas. The Morocco study noted that given the different modalities of ECCE provisioning, coordination between different stakeholders to build a preschool system that meets the needs of young children is key to the success of any intervention for developing preschools (Ragbi et al., 2023: 54).

The motivations for implementation of the tool is framed against these different country backgrounds, yet two main policy objectives stand out as expected. First is the objective of narrowing the large gender economic gaps and the accompanying need for care services expansion as a means of alleviating constraints on women's labour supply. The second objective is the need for expanding and upscaling care services for various care-dependent groups as determined by the different country contexts (see Table 1 in the next section). The Argentina study, for example, states upfront that gender gaps in care arrangements and economic outcomes is one of its motivations. The province-level applications focus on expansion of niche services for specific groups, such as children and teenagers with disabilities or women at risk of domestic violence. Hence, the expansion of care services in these underdeveloped subsectors also constitutes an important motivation. The Egypt study, in contrast, attributes motivation for the study to the need for expanding and upscaling care services for small children and elderly in response to demographic trends. At the same time, the study emphasizes that such an expansion will serve towards improving women's engagement in the labour market.

The policy tool proposed another important motivation as the creation of employment through investing in care. Accordingly, the tool called for the contextualization of country-level applications within a macroeconomic policy framework with a focus on fiscal policy and jobs generation (UN Women and ILO, 2021: 13–14). While the studies did not provide overviews of the macroeconomic context, they did place the costing assessment within overall fiscal expenditures and note decent jobs creation as part of their motivation.

The Argentina study described three motivations for the implementation of the tool:

- Gender disparities in unpaid work ("the unjust social organization of care") and the consequent economic subordination of women.
- The right to care: "to receive, provide and to choose care arrangements".
- The macroeconomic spillover effects of investing in care in terms of employment creation, income generation, boosting aggregate demand and increasing tax revenues (Mendez-Santolaria and Rodriguez Enriquez, 2023b: 3).

The Morocco study stated that job creation through investing in care is a macroeconomic strategy to address women's low employment levels and the further deteriorating effects of the pandemic:

> Improved access to ECCE services would alleviate time constraints for women with young children. Also, the development of these services would lead to the creation of new jobs, particularly for women … promoting gender equality on the demand side of the labour market." (Ragbi et al., 2023: 49)

Similarly, the Nepal study identified care investments as a tool to address the central policy objectives of employment creation, poverty reduction and gender equality:

> Demand-led growth through care investments promotes an enabling environment in which quality employment opportunities can be accessed (Bhatta and Pope, 2023: 12).

The Egypt study highlighted that identification of employment creation outcomes through care services expansion would strengthen the Ministry for Social Solidarity's demands for more resource allocation. In discussion of the results, the study also emphasized that job creation favours demand for women's labour, hence helping to narrow the gender employment gap in Egypt. The context is that Egypt has one of lowest female employment rates globally, as discussed above.

II.B. Study profiles

All the studies are at the country level, except for Argentina which has two province-level studies (Chaco and Santa Fe). The policy tool can be applied at the province-level since many care services are managed by local governments.[6] The methodology provided in the policy tool offers different options for the sectoral coverage of care services, policy targets and the types of economic returns to be estimated (UN Women and ILO, 2021). The profiles of the studies, as discussed next, reflect the discussion of country contexts in the previous subsection.

Table 1 shows the choice of care services subsectors by the different studies. As described previously, the ECCE services sector is covered by all the studies. Primary and secondary education is covered by the studies on Argentina and Nepal, healthcare is covered in Chaco (Argentina) and Nepal, while long-term care is covered in Argentina (in both provinces) and Egypt.

The Argentina study stands out with respect to the specific education, healthcare and long-term care services covered. The education services covered involve children aged 6 to 8 in primary schooling, currently on a half-day basis, extended to full-day and special education services for children aged 6 to 18 not integrated into mainstream programmes. The Chaco province-level study also covers, under education, alternative co-education spaces for the transitional care of children without parental care (ECAs) and comprehensive protection units (UPIs) which are interdisciplinary teams for taking action against the infringement of the rights of children and adolescents (Mendez-Santolaria and Rodriguez Enriquez, 2023a: 8). The health services covered in this study consist of mental health services and social services to victims of gender violence (Mendez-Santolaria and Rodriguez Enriquez, 2023a: 18). The long-term care services covered in the Santa Fe and Chaco province-level studies consist of services to the elderly (65+) with basic dependency due to old age, plus services to people with disabilities and severe dependency (Mendez-Santolaria and Rodriguez Enriquez, 2023b: 12).

In estimating the economic returns to care investments, all the studies assessed the expected employment creation outcomes and the gender distribution. As according to the methodology provided in the policy tool, employment creation is estimated both in terms of direct employment creation in the sector where the investment is targeted, as well as indirect employment in other sectors through backward linkages (purchases from the care services sector from other sectors) and induced effects (expenditures of earnings generated for other sectors). The estimation of indirect employment requires input–output analysis. The Argentina studies provide estimates only of direct employment creation as input–output data are not available at the province level.

The Ethiopia and Nepal studies also undertook an estimation of GDP growth outcomes using different methodologies. The Egypt and Morocco studies undertook an assessment of fiscal sustainability through tax revenue generation.

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[6] See footnote 4 for application of the policy tool at the country level for Argentina.

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▶ **Table 1: Profiles of country studies**

Country	Care services sectors covered				Economic returns estimated	
	ECCE	Education	Healthcare	LTC	Jobs creation	Other economic outcomes
Argentina						
Chaco	X	X	X	X	X	--
Santa Fe	X	X		X	X	--
Ethiopia	X				X	GDP growth
Egypt	X			X	X	Fiscal returns
Morocco	X				X	Fiscal returns
Nepal	X	X	X		X	GDP growth

Note: For the types of education, healthcare and long-term care services covered by the Chaco and Santa Fe province-level studies, see the previous discussion.

The studies typically conducted simulations of care investments under different scenarios as shown in Table 2. The simulation scenarios corresponded to different policy targets with respect to care services in terms of quantitative and qualitative indicators, such as target coverage rates (e.g. ECCE enrolment rate), the ratios of care receivers to care providers and the salaries of care workers.

The Argentina study employed three scenarios: minimum, medium and maximum. In the Chaco province study, the target ECCE coverage rate for the 0–3 age group increased progressively from the prevailing 9 per cent enrolment rate to 50 per cent for age 3 (while remaining the same for age 0–2) and to 50 per cent for age 0–3. In the Santa Fe province study, the enrolment rate for 0–3 increased from the prevailing 8 per cent to 10 per cent, 25 per cent and 50 per cent (in all cases prioritizing universal coverage at age 3). The coverage rate for age 4–5 is already universal. However, quality indicators were progressively improved in terms of ratio of children per teacher and salary levels as shown in Table 2. Sante Fe pay improvements are foreseen where, under the minimum target, the average salary equals the average pay of registered women workers in the private sector; under the median target, the average pay of all women and men workers; and under the maximum scenario, the average salary of male workers in the sector – closing the gender wage gap. Both studies also factor in a standard of 6.3 m^2 physical infrastructure per student.

The Egypt study also conducted three simulations, called conservative, midway and high-road scenarios. The target ECCE coverage rate for the 0–2 age group increases progressively from the prevailing enrolment rate of 0.7 per cent, to 15, 30 and finally 50 per cent. The target ECCE coverage rate for the 3–5 age group increases progressively from the prevailing enrolment rate of 30 per cent to 45 and 60 per cent, and finally to universal coverage (100 per cent). The Egypt study also foresaw a progressive improvement of pupil/teacher ratios and teacher salaries across the three simulation scenarios. The ratios of children to support staff were kept at 13:1 and salary for non-professional support staff is to be EGP 36,000/year across all scenarios. Professional staff salaries were improved from EGP 58,000 (equivalent to GDP per capita in 2021 prices) under the minimum scenario and to EGP 261,000 (equivalent to 4.5 times GDP per capita in 2021 prices) under the maximum scenario. The Egypt study also compared the outcomes of investing in care to that of a hypothetical investment in the construction sector which, as the report noted, is "booming in Egypt" (Attia, 2023: 134).

The Morocco study used two scenarios called the coverage and expansion scenarios. Under the coverage scenario, the ECCE enrolment rate increases from the current 53 per cent for age 4 and 62 per cent for age 5 to become universal in line with the national policy targets set under the Preschool Generalization and Development Programme. There is no coverage of age 0–3. The pupil/teacher ratios and teacher salaries are kept the same at current levels. Under the so-called

expansion scenario, Ethe CCE enrolment rate for age 2–3 is targeted at 50 per cent and for age 4–5 at 100 per cent. The expansion scenario also improves the quality indicators of pupil/teacher ratios and teacher salaries. The Morocco target for the child/carer ratio is 10 children per teacher plus a teacher assistant for age 2–3 and 20 children per teacher plus a teacher assistant for age 4–5.

The Ethiopia study also simulates two scenarios, though the only difference between the two is in regard to the target pre-primary enrolment rate. Under the first scenario, the ECCE enrolment rate increases from the current 1.5 per cent for age 0–3 to 50 per cent, and from 36.7 per cent for age 4–6 to 74 per cent, a target set by the national policy framework. Both quality indicators of pupil/teacher ratio and salary levels are improved. The target pupil/teacher ratio of 30:1 for age 4–6, while an improvement on the current ratio (39:1), is still high. Ethiopia's enrolment rate target of 50 per cent for ages 0–3 is based on ILO 2018 and the policy tool, and the enrolment rate target of 74 per cent for age 4–6 is determined on the basis of the national policy target in Education Sector Development Programme (ESDP) IV. The child/carer ratio of 5:1, comes from the Ministry of Women and Social Affairs legislative framework (taking the maximum for the entire age cohort 0-4). The ratio of 30:1 for age 4–6 is from ESDP VI, the Ministry of Education standard for pre-primary. The current child/carer ratio of 3:1 for 0–3 is lower than the target 5:1 because the public employer–based day-care facilities, which constitute the majority of day-care facilities (given the assumption of adherence to the provision in the national development plan) are not currently operating at full capacity. Under the more extensive second scenario, pre-primary school (age 4–6) becomes universal, while all other parameters are kept the same.

The Nepal study simulates only one scenario with respect to the current status quo. The ECCE enrolment rate increases from the current 0 per cent for age 0–2 to 50 per cent; and from the current 62 per cent for age 3–5 to 100 per cent. This is the ideal scenario proposed in the policy tool based on the best practice countries for age 0–2 and the SDG framework for age 3–5. The simulation foresees an improvement in the pupil/teacher ratio for both age groups but the teacher salaries are kept at the same levels.

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▶ **Table 2: Simulation scenarios and policy targets for ECCE**

Country (# of scenarios)	Coverage targets: enrolment rate by age group				Quality targets: child per teacher by age group, average teacher salary			
	Current	Target *per scenario*			Current	Target *per scenario*		
		Min	Med	Max		Min	Med	Max
Argentina (3) **Chaco**	9% 0–3; 100% 4–5	0–2 same; 100% for age 3; 100% for 4–5	50% for 0–3; 100% for 4–5	50% 0–2; 100% 3–5	13:1; 14:1 ARS 38,000	11:1; 13:1 ARS 39,000	7:1; 9:1 ARS 39,000	6:1; 8:1 ARS 39,000
Santa Fe	8% 0–3; 100% 4–5	10% 0–3; 100% 4–5	25%; 0–3; 100% 4–5	50% 0–2; 100% 3–5	15:1; 16:1 ARS 41,000	11:1; 13:1 ARS 51,000	7:1; 9:1 ARS 65,000	6:1; 8:1 ARS 66,000
Ethiopia (2)	1.5% 0–3; 36.7% 4–6	50% 0–3; 74% 4–6	N/A	50% 0–3; 100% 4–6	3:1 age 0–3; 39:1 age 4–6. Pre-primary ETB 126,780; annual teaching staff ETB 34,920; ETB for day care based on survey.	5:1 age 0–3; 30:1 age 4–6; Salary levels kept the same	N/A	5:1 age 0–3; 30:1 age 4–6; Salary levels kept the same for day care equal to average salary from survey; for pre-primary equal to salary at a model school in Addis Ababa
Egypt (3)	0.7% age 0–2; 30% age 3–5	15%; 45%	30%; 60%	50% 0–2; 100% 3–5	15:1; 20:1 0.6*GDP per capita	10:1, 20:1 GDP per capita	10:1; 20:1 3*GDP per capita	10:1; 15:1 4.5*GDP per capita
Morocco (2)	No data on 0–3; 53% for age 4; 62% for age 5	100% 4–5	N/A	50% 2–3 100% 4–5	No data on 0–3; 20:1 age 4–5. No info on current salary.	Same as prevailing	N/A	5:1 age 2–3; 10:1 age 4–5. Salary set at salary of tertiary graduates
Nepal (1)	0% age 0–2; 62% age 3–5	N/A	N/A	50% 0–2; 100% 3–5	No data on 0–2; 33:1 age 3–5 Annual salary RS 231,000 for ECCE teachers	N/A	N/A	10:1 age 0–2; 15:1 age 3–5 salary kept the same

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▶ III. Quantitative findings: a comparative assessment of investing in ECCE services

As the ECCE services sector was covered by all five country studies and the policy targets for the high-road (maximum) scenario were similar, the quantitative findings with respect to the following quantitative assessments are comparable:

- ECCE services coverage gap
- Costs of required expenditures to close the coverage gap, which includes staff salaries (teaching staff + non-teaching staff) and overhead costs (not physical infrastructure costs which are once-off expenditures)
- Employment creation outcome (total jobs generation consisting of direct and indirect employment created as a result of expenditures for ECCE services expansion to eliminate the coverage gaps towards high-road policy targets)
- Other economics outcomes: The Egypt and Morocco studies explore fiscal returns while the Ethiopia and Nepal studies estimate GDP growth impact.

Table 3 compiles these findings from the different studies under the various simulation scenarios described in the previous section (and Table 2). Table 4 provides a summary of the various components of the simulation related to the high-road (maximum) scenario for each country. Note that the policy targets for coverage (enrolment) rates by age group for each country are quite similar despite small divergences in the age categories of young nursery versus older pre-primary schooling (Table 4, column 4). Since the Argentina study does not present its findings disaggregated by different service categories, i.e. separately for ECCE services, the results presented in Tables 3 and 4 include the coverage gaps, costs and employment generation impact for education overall, which will be discussed in the next section. In the case of Morocco, results are only presented with respect to the coverage scenario. The expansion (best-case) scenario is not included due to unresolved technical issues in the simulation. The rest of this section undertakes a discussion of comparative findings for the three remaining countries: Egypt, Ethiopia and Nepal.

ECCE services coverage gap

The elimination of the ECCE services coverage gap and the move towards the practically universal enrolment rates set by the high-road (maximum) scenarios requires a dramatic increase in the number of ECCE places, particularly for young children (Table 3). Egypt requires an increase by 72 times, from the current enrolment of about 50,000 children to 3.6 million, to achieve a 50 per cent enrolment rate of children aged 0–2. In Ethiopia, achieving a 50 per cent nursery enrolment rate requires an increase of ECCE places for children aged 0-4 by 33 times, from the current 162,000 places to the required 5.3 million. For Nepal, which does not have any data on nursery enrolment, a 50 per cent enrolment rate for children aged 0–2 requires the creation of 686,000 new ECCE places.

For the universalization of pre-primary education and care, the number of additional places required is also substantial. Yet given the higher enrolment rates in each country at this level, the magnitude of the increase is relatively more modest compared to that for younger children. Ethiopia and Egypt require about a doubling of the existing pre-primary school places, from 2.9 million to 5.1 million in Ethiopia for children age 4–6 and from 2.2 million to 5.2 million in Egypt for children age 3–5. In Nepal, achieving universal coverage in pre-primary education requires a 63 per cent increase over the current levels (625,000 new places more than the current 1 million enrolled) for children aged 3–5.

In terms of the total number of additional ECCE places required under the high-road scenario as a share of the country population, the highest is observed for Egypt at 9.3 per cent, followed by Ethiopia (8.7 per cent) and Nepal (4.4 per cent).

Costs of required expenditures to close the coverage gap

The costing assessment includes recurring annual expenditures for staff salaries (teaching staff + non-teaching support staff) plus overhead costs. Physical infrastructure costs which are once-off expenditures are not included in the policy tool. The Argentina study also includes a costing for physical infrastructure (see Table 3 note). Under the best-case scenario (maximum), the costing is estimated as high as 4.5 per cent of the GDP in Egypt. Ethiopia follows with the second highest costing at 2.8 per cent of the GDP. Nepal has the lowest cost assessment at 0.6 per cent of the GDP.

For describing the variation across countries in costing, Table 4 shows the important factors that play a role in the size of the required expenditures as a share of the GDP: target enrolment rates (similar for all four countries under the high-road scenario, Table 4, column 4) and the consequent size of the total coverage gap as a share of population, the target child/teacher ratios, the target level of teaching staff salaries as a share of GDP per capita, and the per child overhead cost as a share of GDP per capita. Egypt with the highest costing (4.5 per cent of the GDP) has a high coverage gap to population ratio at 8 per cent, though slightly lower than in Ethiopia (8.7 per cent). The fact that Egypt's costing is substantially higher than that of Ethiopia despite its relatively lower care coverage gap can be explained in part by the higher quality targets under its best-case scenario. The target teaching staff salaries for Egypt are 4.5 times the GDP per capita versus 2.3 times the GDP per capita in the Ethiopia best-case scenario. Egypt's target child/teaching staff ratio for age 0–2 is set at 10:1 compared to 5:1 for Ethiopia, implying lower costs for Egypt. However, for age 3–5, its target pupil/teacher ratio is set at 15.1 versus 30:1 in Ethiopia (age group 4–6), implying higher costs.

Nepal's child/teaching staff ratios are similar to that of Egypt at 10:1 for age 0–2 and 15:1 for age 3–5, yet its coverage gap to population ratio at 4.4 per cent of the population is about half the size of Egypt and Ethiopia. Unlike Egypt and Ethiopia, the Nepal simulation keeps teaching staff salaries at the current level (1.4 times GDP per capita). In Nepal, the combination of a lower ECCE coverage gap and lower target teacher salaries translates to a lower magnitude of required public expenditure.

The extent to which the differences in the parameters of costing displayed in Table 4 can account for the substantial variation in the estimate of required expenditures needs close scrutiny. There are also other parameters that play a role in cost assessments such as the child/non-teaching staff ratio, non-teaching staff salaries and per child overhead expenditures. Given the limited exposition of data on costing parameters in the country reports, there is limited scope for making direct comparisons.

Employment creation

Total jobs generation consists of direct, indirect and induced employment created as a result of expenditures for ECCE services expansion to eliminate the coverage gaps towards high-road policy targets (UN Women and ILO, 2021: 27). Direct jobs are those created in the ECCE sector. They consist of teaching and non-teaching support jobs. These are calculated on the basis of the size of the coverage gap (i.e. number of additional childcare places to be created to reach the enrolment targets) and the target pupil/teacher ratios (plus assumptions about the child/non-teaching staff ratio). Indirect jobs are the jobs created in other sectors from which the ECCE services sector purchases inputs. Induced employment is jobs created economy-wide through increased household expenditures of newly employed workers. The indirect and induced job effects are estimated through input–output analysis. The policy tool provides the option of excluding induced employment in estimations as it can lead to overestimation effects.

Investing in ECCE services towards meeting the targets of the high-road scenario promises to result in substantial job creation. Under the best case scenario in Ethiopia, employment creation is estimated at 6 million new jobs with almost two thirds (63.8 per cent) going to women (Table 3, last column). In Egypt, the universalization of access to ECCE services is estimated to generate 2.1 million new jobs with 79 per cent of them occupied by women. Job creation in Nepal is reported in the hundred-thousands in line with its lower population. New employment generation is estimated at 249,000 in Nepal with 45 per cent of the jobs going to women. The share of non-ECCE (indirect) jobs are quite similar in Egypt and Nepal,

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21 and 29 per cent of total new employment, respectively. Ethiopia is an outlier with 62 per cent of total new employment being non-ECCE jobs.[7]

New job creation promises to increase total employment by as much as 14.6 per cent in Ethiopia, 8.1 per cent in Egypt and 2.4 per cent in Nepal. The majority of this corresponds to decent job creation in the ECCE sector as the simulation scenarios control for formal jobs, decent pay levels and improved care receiver/care provider ratios. This new job creation has the added outcome of narrowing the gender employment gap since in all cases the majority of the new jobs (particularly direct ECCE jobs) are expected to employ women (with the exception of Nepal where the gender distribution of jobs is found to be almost equal between women and men). The Egypt study estimates that under the high-road scenario, the gender employment gap is to be reduced from the current 70 per cent to 65 per cent through the job creation effect (Attia, 2023: 61). The study noted that this is a lower bound estimate of the improvement effect on the gender employment gap, as it only includes the demand-side impact. Expansion of ECCE services is also likely to facilitate the alleviation of time constraints on women's labour supply and hence improve women's employment through supply-side effects (Attia, 2023: 62).

▶ **Table 3: ECCE services: assessment of care deficits, costs and employment generation**

	Coverage gap *Number of additional children by age group*				Costs *in local currency* *% of GDP*				Employment creation Direct + indirect = ***Total*** *number of jobs* *(% female; % indirect)*			
	Status Quo	**Min**	**Med**	**Max**	**Status Quo**	**Min**	**Med**	**Max**	**Status Quo**	**Min**	**Med**	**Max**
Argentina												
Chaco	13,743	35,337	92,646	147,897	0.22%	0.76%	3.61%	6.66%	1,348	3,908	17,840	30,211
Santa Fe	23,453	48,641	129,635	305,839	0.07%	0.71%	1.7%	3.23%	2,365	8,056	32,324	70,074
Ethiopia	162,342 0–3; 2.9 million 4–6	5.3 million 0–3; 3 million 4–6		5.3 million 0–3; 5.1 million 4–6		ETB 73 billion 2.1**%**		ETB 95 billion 2.8**%**	***282,806***	**2.1 million + 2.8 million = 4.9 million**		**2.3 million + 3.7 million = 6 *million* 63.8% 62%**
Egypt	50,400 0–2; 2.2 million 3–5	1.04 million 0–2; 1.12 million 3–5	2.13 million 0–2; 2.25 million 3–5	3.59 million 0–2; 5.24 million 3–5		EGP 17 billion **0.3%**	EGP 97 billion **1.5%**	EGP 283 billion **4.5%**	294,000	353,000 + 106,000 = **459,000**	811,000 + 244,000 = **1.05 million**	1.6 million + 486,000 = ***2.11 million*** **79% 21%**
Morocco	42,734 2–3; 755,045 4–5	550,331 4–5		N/A	MAD 17.1 billion **1.28%**	MAD 1.6 billion **0.12%**		N/A		37,000 + 15,000 = ***52,000***		N/A
Nepal	None 0–2; 1 million 3–5			686,000 0–2; 625,000 3–5				NPR 28.7 billion **0.6%**	30,450 (8 teachers only)			176,000 + 73,000 = 249,000 **45% 29 %**

Note: For Chaco and Sante Fe provinces, the number of children show ECCE services *as well as* all types of education services coverage included in the scenario as discussed in Section II. The study does not provide ECCE findings separately. Fiscal costs similarly include all education services to be expanded and are expressed as a share of Gross Regional Product (GRP) at the province level. The study also estimates physical infrastructure costs, which are one-off expenditures for building the extra necessary space. The physical infrastructure costs in the case of Santa Fe are 0.52 per cent GRP under the minimum scenario, 1.41 per cent under medium and 3.37 per cent under the maximum scenario (Mendez-Santolaria and Rodriguez Enriquez, 2023b: 11).

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[7] The difference may be due to Ethiopia including induced job creation, while other studies include only indirect employment numbers through backward linkages. The Egyptian study is the only one that specified that the estimation excluded indirect employment.

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▶ **Table 4: High-road scenario: size of coverage gap/population, quality indicators and costs**

	Population	ECCE coverage gap as % of population	GDP per capita (2021 USD)*	Wage as % of GDP per capita	Target enrolment rates by age group	Pupil/ teacher ratios	Child/ support staff ratios	Overhead per child as % of GDP per capita	Costs as % of GDP	New jobs –% of total current employment
Argentina	46,234,830		9,960							
Chaco	1,227,736	12.5	Approx. 25% to 30% of national GDP per capita	N/A	50% 0-2; 100% 3-5	6:1 8:1	N/A	N/A	6.7%	N/A
Santa Fe	3,589,999	8.0	Approx. 25% to 30% of national GDP per capita	N/A	50% 0-2; 100% 3-5	6:1 8:1	N/A	N/A	3.2%	N/A
Ethiopia	120,300,000	8.7	940	2.3 times for teachers and 1.6 times for support staff in pre-primary; 63% for all staff in day care	50% 0-3; 100% 4-6	5:1 30:1	6:1 daycare; 22:1 pre-primary	1.7% for daycare, 11.7% for pre-primary	2.8	14.6
Egypt	95,000,000	8.0	3,699	4.5 times for teachers and prof. support staff; 0.6 times for other support staff	50% 0-2; 100% 3-5	10:1 15:1	13:1	19%	4.5	8.1
Morocco	37,080,000	2.9	3,620	N/A	50% 2-3; 100% 4-5	5:1 10:1	14:1	N/A.	N/A	N/A
Nepal	30,030,000	4.4	1,230	1.4 times GDP per capita**	50% 0-2; 100% 3-5	10:1 15:1	N/A	0.26%	1.0	2.4

Notes:

* GDP per capita from World Development Indicators in 2021 USD.

** Nepal's ECCE target salary for teaching staff is less than half that for primary teachers (Bhatta and Pope, 2023: 52).

Other economic returns

Tax revenue generation and fiscal returns

In addition to employment creation, the Egypt simulation also explored fiscal returns through increased tax revenue from new employment creation and earnings generation. The direct and indirect employment impacts of the ECCE sector would lead to an increase in payrolls, which would in turn raise government revenues via social security contributions and income tax revenue. The income tax revenue would also be complemented by consumption taxes (primarily the value-added tax) through increased household spending.

The Egypt study estimated that under the high road scenario, an ECCE services expansion costing EGP 283 billion (4.5 per cent of the GDP) has the potential to generate tax revenues in the following categories (Attia, 2023: 62–63):

- 99.9 billion (35 per cent) via income tax
- 17 billion (6 per cent) via consumption tax
- 140 billion (49 per cent of the cost of expansion) via social security contributions of employees and employers (at 11 per cent and 18.75 per cent of the payroll).

Total revenue generation would be EGP 257.7 billion and 91 per cent of the total costs. On the basis of income and consumption taxes alone, the self-finance ratio of the initial outlay of expenditures of EGP 283 billion is around 40 per cent (EGP 99 billion + 17 billion = EGP 116 billion).

GDP growth impact

The Ethiopia and Nepal studies estimate the GDP growth impact of ECCE expansion using different methods. The Ethiopia study applies the Gender Employment Gap Index (GEGI) for an indication of the potential gain in GDP (or GDP per capita) growth from eliminating the gender employment gap. (Gebreselassie, 2023: 11).[8] Based on the results of the assessment, investment in eliminating the ECCE gap would increase total female employment by 3,325,816 jobs (i.e. 67 per cent of the total new jobs in Scenario 1) and 3,882,609 jobs (i.e. 64 per cent of the total new jobs in Scenario 2). The increase in female employment is also accompanied by an increase in male employment (33 per cent and 36 per cent of the total new jobs created in Scenarios 1 and 2 respectively) but with a slower increase than female employment.

Assuming the same male and female working age population, under the high-road scenario of ECCE expansion, a higher rate of increase in female employment implies a reduction in the existing gender employment gap from its current level of 22.1 percentage points (given the employment-to-population ratios of 78.5 per cent for males and 56.4 per cent for females) to 16.2 percentage points. Previous studies estimate that on average, the long-run GDP per capita would be nearly 15 percentage points higher if the existing gender gap of 22 percentage points in employment in Ethiopia were eliminated. Narrowing the gender employment gap by 5.9 percentage points via ECCE expansion is estimated to yield a proportionate GDP per capita growth effect of about 4 per cent (Gebreselassie, 2023: 29).

The Nepal study estimates the GDP growth outcome of increasing ECCE expenditures using the Nepal Social Accounting Matrix (SAM) model and injecting the required expenditures into SAM to stimulate output (Bhatta and Pope, 2023: 6). It is estimated that expenditures of NPR 29 billion (0.6 per cent of the GDP) will increase the GDP by 1.2 per cent over its base value. A breakdown of the additional output by direct and indirect effects shows the dominance of the indirect effects, accounting for 51 per cent of the additional output generated over the direct effects (Bhatta and Pope, 2023: 10). An analysis of the cost–benefit ratio of investments in education find high levels of feasibility, a cost–benefit ratio of 1.73. The study underlines that these findings highlight the strong multiplier effects of economic returns on education investments

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[8] The index is defined in terms of employment-to-population ratio for a population of (nearly) equal male and female working age populations. The method assumes that in the long run capital growth remains at a steady state (constant) as per the Solow growth model. Hence, with constant long-run capital growth, any long-run GDP growth is attributed to the growth in labour (employment). The basic model generally implies that the higher the gender employment gap in an economy, the higher the potential to increase the GDP by closing the gap.

and supports "the hypothesis that such investments produce tangible economic returns and are thus a vital policy tool for creating demand-led growth" (Bhatta and Pope, 2023: 11).

Sectoral coverage of education services beyond ECCE

The studies on Argentina and Nepal considered the coverage gaps and costs of education sector services other than ECCE and assessed their related economic returns. The Nepal assessment is in line with the policy tool, exploring coverage gaps within basic (age 6–15) and secondary (age 16–19) education. The former has an enrolment rate of 93 per cent and the latter 75 per cent. The study estimates a services coverage gap of almost 1 million students at these two levels of education to be filled in order to reach a 100 per cent enrolment rate, translating to a gap of approximately 52,000 teachers. The total cost is assessed at NPR 30.04 billion (at around 0.64 per cent of the GDP, similar to that of ECCE costing).

The province-level studies for Chaco and Santa Fe explore new frontiers in education coverage. While mainstream primary education (the first three grades of primary school) has 100 per cent enrolment rates, schooling for the majority of children at this level is a half-day (four hours). The studies explored the coverage gap and costs in terms of extension of the school day to a full-day.

The studies also explored the gaps in special education services for children at the primary and secondary levels, with temporary or permanent disabilities. This is justified as there is a national legal framework which includes provisions on the principle of inclusive education. Current access is 64 per cent of children aged 6–18 with a disability; with 2 students per teacher at a pay level of ARS 33,000 a year for 21 hours per week. The coverage target under the maximum scenario is set at universal coverage (100 per cent) with 1 student per teacher and doubling the pay at 40 hours per week (Bhatta and Pope, 2023: 11).

Finally, the studies also explored the coverage gaps, costs and returns of so-called alternative co-education spaces (ECAs) and comprehensive protection units (UPIs). ECAs provide transitional residence and personalized care for children and adolescents with no parental care. The provisioning includes shelter, food and personal care as well as psychological and physical/dental care "to ensure their full and healthy development". Current coverage is assessed at 5.5 per cent of children under age 18 with no parental care with 0.6 children per care worker and a pay of ARS 9,500 at 33 hours per week. The UPIs are interdisciplinary teams responsible for action against violations of the rights of children and adolescents; 87 per cent of reports received on the hotline are covered with 32 children per care worker, at a similar pay level as for working at the ECAs. The high-road scenario sets coverage rates at 100 per cent, with 5 people per care worker in ECAs and 32 cases per year covered by each care worker in UPIs.

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▶ IV. Healthcare and long-term care services sectors

IV.A. Healthcare services sector

The assessment of healthcare services by the Nepal study includes short-term healthcare services provided by professional medical staff through hospitals, clinics and medical practices as described by the policy tool. The coverage gaps, costing and employment creation outcomes are examined under two scenarios: one where the policy targets are set by national healthcare strategic plans and the other where international healthcare targets are followed, as defined by the policy tool based on World Health Organization guidelines and the SDGs (UN Women and ILO, 2021: 20–22, 25–26). The Nepal study assesses that the gap in healthcare workers under the national scenario with 534,000 healthcare workers measured against a target of 4.45 healthcare workers per thousand population. The current coverage is 2.62 healthcare workers per thousand population. The gap under the international SDGs scenario is, therefore, more than double: 127,600 additional healthcare personnel are required to meet the SDG-based targets of 4.45 doctors, midwives and nurses (DMN) per thousand population, and 0.549 health workers of other cadres (HWOC) per DMN (UN Women and ILO, 2021: 21). Out of 127,600 additional healthcare personnel, 81,000 reflect the gap in DMN and 46,000 the gap in HWOC.

The national scenario is costed at 1.84 per cent of the GDP versus 4.38 per cent of the GDP for the international SDGs scenario. The contribution of increased expenditures to GDP growth is estimated at 8.3 per cent for the national scenario and 3.5 per cent for the international SDGs scenario. Employment creation is expected to be 1.106 million new jobs for the former scenario versus 466,000 new jobs for the latter. The gender distribution of jobs has a slight bias towards men with 55 per cent of the jobs going to male employment (Bhatta and Pope, 2023: 14–15) unlike the female bias of job creation through education sector expenditures.

The Chaco province study in Argentina explored two unconventional subsectors of healthcare in terms of coverage gaps, costs and economic returns: people suffering from mental health problems and drug abuse and people at risk of gender-based violence (Mendez-Santolaria and Rodriguez Enriquez, 2023a: 16–21). One of the challenges of exploring these unconventional areas of healthcare has to do with access to data and hence the ability to assess gaps and costs in an accurate manner. The study utilizes some innovative methods for overcoming these data challenges. For example, in assessing the coverage gaps in mental health care, rather than depending on directly observed hospitalization cases as an indicator of demand and need, the study used the average number of professionals working in mental health and drug abuse per 100,000 inhabitants. Data on hospitalization would likely result in an underestimation of the target population.

In terms of care of people experiencing gender-based violence, service provision was considered both for in-person and telephone-based care services. The coverage target for mental health and drug abuse care services was set at 14.7 mental health workers per 100,000 inhabitants (up from the current 13.6 workers per 100,000 inhabitants). The average pay of mental health workers was improved substantially (from ARS 26,000 to ARS 385,000) while the number of work hours per week was reduced (from 38 to 24 hrs).

The coverage target rate for victims of gender-based violence was set at 100 per cent of violence cases being reported and when reported address by in-person or online support services. This is a substantial improvement over the status quo in Chaco province where only 16 per cent of violence cases end up being reported and, of these, 75 per cent are covered by services. The high-road scenario aims to set both ratios at 100 per cent. As quality indicators, the number of cases handled annually per care worker was set at 70 cases per year handled by hotline workers and 54 handled by in-person service workers. These are improvements from the 88 cases handled annually by hotline workers and 68 cases by in-person service workers. The maximum scenario also foresees a substantial improvement in pay as described previously.

The costs of improving these two subsectors of healthcare along these policy targets are estimated at 0.87 per cent of Chaco province's GRP, where 0.14 per cent is recurring annual costs of salaries and overhead, and 0.73 per cent is physical

infrastructure costs (mostly for the construction of shelters for victims of gender-based violence). Job creation is estimated at 711 new direct jobs.

IV.B. Long-term care services sector

Long-term care (LTC) refers to the provision of a wide range of services to support people who are limited in their ability to function independently on a daily basis over an extended period of time, due to mental and/or physical disability (UN Women and ILO, 2021: 23). LTC includes some medical care as well as non-medical care for the provision of support for day-to-day living activities. LTC services are covered by the Argentina study in both Chaco and Santa Fe provinces and by the Egypt study.

The Egypt study covers LTC services only for the elderly (65+) following the methodology in the policy tool. The policy targets here assume (UN Women and ILO, 2021: 24):

- 12.4 per cent of the 65+ population is in need of access to LTC services (full coverage implies service provisioning to 12.4 per cent of the 65+ population)
- The ratio of LTC provider to population is set at 4.2 full-time equivalent formal LTC workers per 100 persons aged 65+ (hence, a ratio for LTC receiver/LTC worker of 3:1).

The scenarios include status quo and high-road projections to 2030 and 2050 considering the growing share of the elderly population in Egypt. The high-road 2030 scenario estimates the need for coverage of 874,000 elderly people by LTC services. This corresponds to the need for 621,000 additional LTC workers. The costs are assessed at 0.8 per cent of the GDP and also include the improvement of salaries of LTC workers (Attia, 2023:116).[9]

The Argentina study defined two population groups as requiring LTC services:

- People with disabilities and severe dependency aged between 6 and 64 (PCD).
- Elderly people aged 65 or over with basic dependency (PAM).

The assessment of coverage gaps and costs under the various scenarios are undertaken for PCD and PAM across different institutional settings:

- In-home care for PAM with basic dependency and PCD with severe dependency
- Out-patient care to PCD with severe dependency
- Residential care to PAM with basic dependency.

The coverage rates and quality indicators for the different types of LTC receivers in different institutional settings were established in the study. The coverage rates improve across the minimum, median and maximum scenarios to become universal. The LTC receiver to provider ratios improve to 1:1 for in-home care, 2:1 for outpatient care and 8:1 for residential care. The pay of LTC workers is improved substantially to match the average pay in the private sector and eliminating the gap between in-home and institutional LTC workers. In addition, the studies saw the gradual improvement of physical infrastructure.

The cost of closing the LTC coverage gap in Chaco province is assessed at 5.05 per cent of the GRP where 3.16 per cent is recurring costs in pay and overhead and 1.89 per cent is physical infrastructure construction or improvement. Direct job creation is estimated at 27,000 new LTC workers for approximately 26,000 new LTC beneficiaries.

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[9] The costing of additional LTC beneficiaries to be covered is 0.8 per cent of which 0.35 per cent is estimated as the cost of additional LTC workers.

The cost of closing the LTC coverage gap in Santa Fe province is assessed at 6.25 per cent of the GRP where 5.48 per cent is recurring costs in pay and overhead and 0.77 per cent is for physical infrastructure. Direct job creation is estimated at 75,000 new LTC workers for approximately 90,000 new LTC beneficiaries.

▶ V. Conclusions

The pilot implementation of the policy tool in five countries with diverse geographical, economic and social contexts was completed with success, culminating in analytical comprehensive reports on five countries. This confirms the applicability of the tool across a variety of settings. However, the methodology and guidelines of the tool could be further refined, particularly with respect to analysis of data and exposition of findings in a standardized format. Such a standardization would improve the comparability of findings from different countries.

The country reports provide a comprehensive overview of the state of the various care sectors in terms of both supply and demand through the compilation and analysis of quantitative and qualitative data from diverse resources. Thorough assessments have been undertaken of the coverage gaps in specific subsectors of care services in line with national priorities. The magnitude of required public expenditures to eliminate the gaps have been estimated. Economic returns on the labour demand side have been analysed, if such public investments in expansion and upgrading of care services are to take place.

In most cases, the simulations were undertaken under different scenarios, with progressive increases on a diverse set of policy targets on coverage rates, care receiver-to-provider ratios, staff salaries and work conditions. The maximum or high-road scenarios across all country reports aim at universal access to services, which then result in substantial gaps in coverage. In the case of universal access to ECCE services, for example, the gaps are estimated as high as 8.7 per cent of the total population in Ethiopia and 8 per cent of the total population in Egypt. While Nepal's ECCE services coverage gap against the goal of universal access is assessed at 4.4 per cent of the total population, when the primary and secondary education levels are included, the figure increases to 7.6 per cent. For Argentina, the Chaco and Santa Fe province-level studies find coverage gaps to be as high as 12 per cent and 8.5 per cent of population respectively when care services for children with special needs are also included.

Beyond universalization of access, the high-road scenarios in two of the country reports (Argentina and Egypt) also include ambitious yet well-justified, high-quality standards for decent employment conditions for care workers. The costs of achieving the high-road scenario are substantial where both universalization of access and comprehensive upgrading of quality are observed. For the case of universal high-quality ECCE services, the costing is as high as 4.5 per cent of GDP for Egypt. Relatively lower costs (as in the case of Ethiopia or Nepal at 2.8 per cent and 1 per cent of GDP) come with a trade-off of maintaining lower-quality targets while expanding services. In the case of Chaco and Santa Fe provinces, where the assessment of coverage gaps in education services includes not only universal ECCE and basic education but also universalization and upgrading of services for children with special needs, the required public expenditures are 6.7 per cent and 3.2 per cent of GRP respectively.

The magnitude of these costs in diverse settings underlines the importance of addressing the question of fiscal space and exploring potential sources of funding. Nevertheless, a number of observations emerging from the country analyses provide important insights into discussions of fiscal space.

First, **there is significant potential for jobs generation through the expansion of care services, given the level of labour-intensity of this sector plus the backward linkages to other sectors and impact on indirect employment creation**. All studies show that the outlay of these expenditures contributes not only to providing quality care to groups in need, but also to job generation of a major magnitude. The expected increase in employment through the universalization of ECCE services only is as high as 14.6 per cent of total employment in Ethiopia and 8.1 per cent in Egypt.

In Egypt, adding employment generation from universalization of access to long-term care services by the elderly, brings the increase in employment to almost 11 per cent. For Nepal, education and healthcare investments under the high-road scenario have the potential to together increase total employment by 12 per cent (2.4 per cent for education and 9.6 per cent for healthcare). In a comparative analysis, the Egypt study shows that a public expenditure of equal magnitude on physical infrastructure construction (which the study points out has been booming over the past decade) would create only one quarter of the jobs created via care spending. The study finds that job creation through expansion of care favours demand for female labour over male labour. Nevertheless, the number of jobs created for men under care services expansion versus a construction boom are almost equal, simply because the former creates many more jobs overall. Hence, jobs creation is an important economic return to care investments, which provide an important economic rationale for increased resource allocation.

Second, following the first point, **substantial jobs generation means substantial earnings generation, with implications for tax revenues and the self-financing potential of care investments**. The best-case scenario for Egypt proposed that the outlay of care expenditures over the short-run is fiscally sustainable through the raising of tax revenues. As already discussed, the findings point to the significant revenue-raising potential of care expenditure through employment creation and earnings generation. The Egypt study, comparing expected fiscal returns from investing in care to a hypothetical scenario of public spending in construction projects, concludes:

> The relatively lower net costs (of investing in care) mean that a higher percentage of the gross spending in care is recouped in revenue from income tax and social security contributions compared to construction. This comparative 'fiscal advantage' of care over construction means that equalizing net spending gives investing in care a further advantage in employment creation over investing in construction. As indicated, equalizing net spending in this way substantially raises the ratio of total FTE jobs created. Spending the same net amount on care as on construction would yield close to twice as many jobs in total. (Attia 2023:142–143).

Third, **employment demand emerging from care investments favours women's labour, hence also contributing to the narrowing of the gender gaps in employment and earnings**. Although the policy tool focuses only on narrowing of gender gaps through labour demand side effects, care services expansion also triggers gender equality outcomes through the alleviation of time constraints on women's labour supply. All the country studies point to expected gender equality outcomes as a major motivation of care investments. The Egypt study, for example, reports that under the high-road scenario, ECCE services spending has the potential to decrease the gender employment gap by as much as 5 percentage points through massive job creation for women. The study noted:

> the effects reported here on women's employment rate and the gender employment gap constitute lower bound estimations, since they are based only on the short-run demand side effects of an ECCE expansion. However, ECCE expansion would also result in positive effects on women's labour supply by reducing the burden of unpaid work. Hence the increase in women's employment rate (and total employment rate) as well as the narrowing of the gender gap under ECCE expansion would be much larger. (Attia 2023: 62)

It is also worth noting an important point emerging from the studies. The creation of fiscal space is closely linked to political will. In looking at the country context overviews, it is striking how if the care agenda finds high-level administrative support (e.g. at the Presidential level in Egypt, and by H.M. the King in Morocco), resource allocation follows, and there is substantial improvement in expanding access and upgrading services in a short period of time.

The final point with respect to the question of fiscal space emerging from the country assessments pertains to the question of **the time frame for implementation of the universal high-quality care scenario.** While achieving the high-road scenario requires allocation of substantial resources, the reports also simulate lower-cost, shorter-run scenarios. In doing do, they lay out **a clear road map for expanding and upgrading the care service sectors over a medium-term time plan towards the ultimate goal of universal access plus high service and employment standards**.

The diversity of care services subsectors covered in the five countries is informative. It is noted, however, that the ECCE services sector is the starting point in all the reports, underlining the mutual and strong interest in investing in care services for young children despite the diverse country contexts. Depending on the level of development of the care services subsectors, the policy targets and types of services covered differ widely. Yet, as the Argentina study shows, even in relatively advanced settings, there is always room for improvement. For example, for the case of basic education, while enrolment rates are already at 100 per cent in Chaco and Santa Fe, the study undertook an assessment of the extension of school hours from a half-day to a full day as well as improvement of pupil/teacher ratios and teacher salaries.

Moreover, the Argentina province-level studies introduced a number of innovations with the potential to inspire new ways to apply the policy tool, for example:

- Exploring the need for a diversity of care services beyond the conventional framework of ECCE, basic education, healthcare and long-term care for the elderly to consider under-provisioned services subsectors such as:
    o Care and education services for children and adolescents with special needs (including disabilities, learning challenges, temporary lack of parental supervision and risk of rights violation).
    o Support services for people at risk of gender-based violence.
    o Mental healthcare services.
    o Healthcare services for support to people suffering from drug abuse.
    o Long-term care services for people with severe disability.
- The expansion of quality and decent work criteria should also include work hours and workload, in particular for workers with intense care jobs such as domestic violence shelter and hotline workers.
- Applying the policy tool at the local level, particularly in cases where care provisioning is the mandate of local governments.

Based on the lessons emerging from the pilot application of the policy tool on investing in care, the recommendations for future implementation are as follows:

- Improve and update the policy tool to standardize collection and reporting of data and findings and application of analytical methods to facilitate better comparison across countries.
- Expand assessments of care services sectors to cover under-provisioned areas as in the Argentina study, such as for children and youth with special needs, women at risk of violence and healthcare services for those with mental health issues.
- Include assessment of tax revenue returns and contextualization in the framework of fiscal space in all studies.
- Follow up and report on the policy impact of all applications of the tool.

▶ **Consolidated Report**
A Guide to Public Investments in the Care Economy:
Estimating Care Deficits, Investment Costs and Economic Returns

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▶ VI. References

Policy tool

UN Women and ILO. 2021. A Guide to Public Investments in the Care Economy: Policy Support Tool for Estimating Care Deficits, Investment Costs and Economic Returns. I. Ilkkaracan. New York: UN Women.

Argentina

Province-level studies

N. Mendez Santolaria and C. Rodriguez Enriquez. 2023a. Costing Care Services and Estimating Employment Creation: The Case of Chaco Province. UN Women–ILO Joint Programme. Buenos Aires: UN Women and ILO.

N. Mendez Santolaria and C. Rodriguez Enriquez. 2023b. Costing Care Services and Estimating Employment Creation: The Case of Santa Fe Province. UN Women–ILO Joint Programme, Buenos Aires: UN Women and ILO.

Country-level study

G. Marzonetto, N. Méndez Santolaria, M.L. Ojeda, M. Pérez Neira, M.P. Ramos, C. Rodríguez Enríquez, C.A. Romero. 2023. Public investment in care services in Argentina. Coverage of deficits, employment generation, fiscal efforts and economic impacts. Buenos Aires: ILO Country Office Argentina. https://www.ilo.org/buenosaires/publicaciones/WCMS_888152/lang--es/index.htm

Ethiopia

K. Gebreselassie. 2023. Applying the Policy Tool "A Guide to Public Investments in the Care Economy: Policy Support Tool for Estimating Care Deficits, Investment Costs and Economic Returns" to the case of ECCE in Ethiopia. Addis Ababa: UN Women.

Egypt

S. Attia. 2023. Public Investments in Social Care Services in Egypt: Estimating Gaps, Investment Costs and Economic Returns in Early Childhood Care and Education (ECCE) and Elderly Long-Term Care (ELTC) Sectors. Cairo: UN Women and Egypt's Ministry for Social Solidarity (MoSS).

Morocco

A. Ragbi, Z. Bouba, T. Abbad, L. Rhoufrani and M.O. Noussairi. 2023. Promoting decent employment for women through investments in the care economy: What about the potential of preschool? Rabat: Ministry of Economy and Finance, Directorate of Studies and Financial Forecasting, and UN Women.

Nepal

A. Bhatta and A. Pope. 2023. Public Investment in Care Services in Nepal: An Estimation of Care Deficit and Investment Costs in the Education and Health Sectors. UN Women–ILO Joint Programme. Kathmandu: UN Women, ILO and IIDS.

A. Bhatta, B. Haque Khondker and A. Pope. 2023. Public Investments in Nepal's Care Economy: An Estimation of Care Deficit, Investment Costs and Economic Returns in the Education and Health Sectors. Policy Brief. Kathmandu: Government of Nepal National Planning Commission, ILO and UN Women.