



Exploring the Potential of Gender Parity to Promote Economic Growth

Sharmila Devadas and Young Eun Kim

Narrowing the gender gap is critical to sustainable and inclusive growth. This brief discusses how moving toward gender equality can improve female labor force participation, human capital, and total factor productivity, leading to higher economic growth. The analysis simulates the cross-country impact of increasing female labor force participation and education on GDP growth for the next three decades. In practice, achieving substantial gains in gender equality across generations will require sustained efforts to reset gender norms, starting with the young, and to increase women’s economic participation and voice in society in areas of influence.

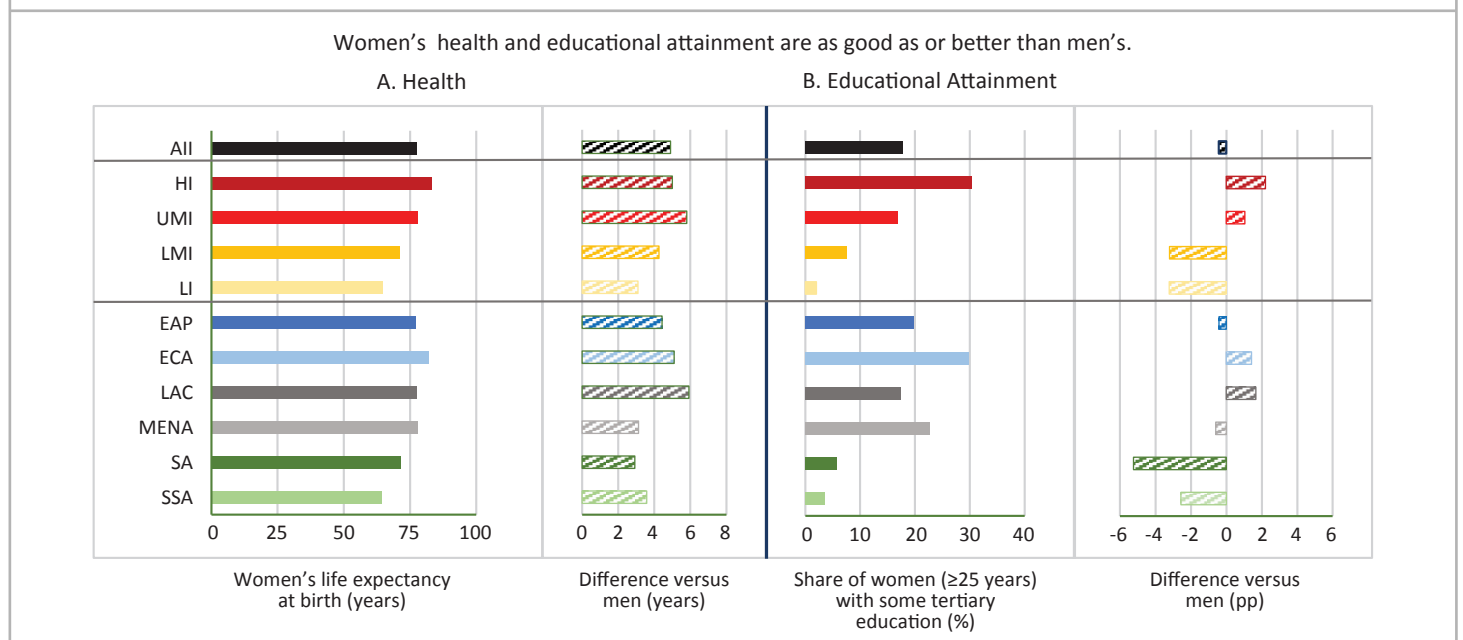
A Persistent Shortfall

Gender equality will not happen in this generation or the next. If recent trends continue, it will take more than 99 years to achieve full gender parity globally, the World Economic Forum (WEF) estimates (WEF 2019). WEF’s measure of the global gender gap shows that the biggest shortfall is found in political empowerment, followed by economic participation and opportunity. The COVID-19 pandemic has hit women around the globe especially hard (ILO 2020). The economic recessions triggered by the pandemic, especially in sectors with a high share of female employment, and lockdown measures including closings of schools and daycare centers have hurt women’s employment and wages, while increasing their domestic labor and caretaking duties at home (Madgavkar et al. 2020, The New York Times 2020). The unprecedented pandemic, however, may lead to a positive change toward gender equality (Alon et al. 2020). Flexible working arrangements are being adopted

in businesses, and many fathers are taking a greater responsibility for housework and childcare. Gender equality is a key agenda for many countries and multilateral development institutions, not only because it is an end in itself, but also in recognition of its centrality to reducing poverty and achieving sustainable and inclusive growth (UN 2015; World Bank 2015).

This brief explores gender disparity across income groups and regions, referring especially to indicators of human capital and economic participation and opportunity. It discusses how greater equality can improve key growth drivers according to a standard Solow-Swan type model and lead to higher economic growth. It then reports on simulations of the growth potential across countries from increasing women’s labor force participation and educational attainment, as measured using the World Bank Long-Term Growth Model (LTGM) toolkit. The brief concludes with policy recommendations to increase gender parity.

Figure 1. Female Human Capital Indicators by Income and Region



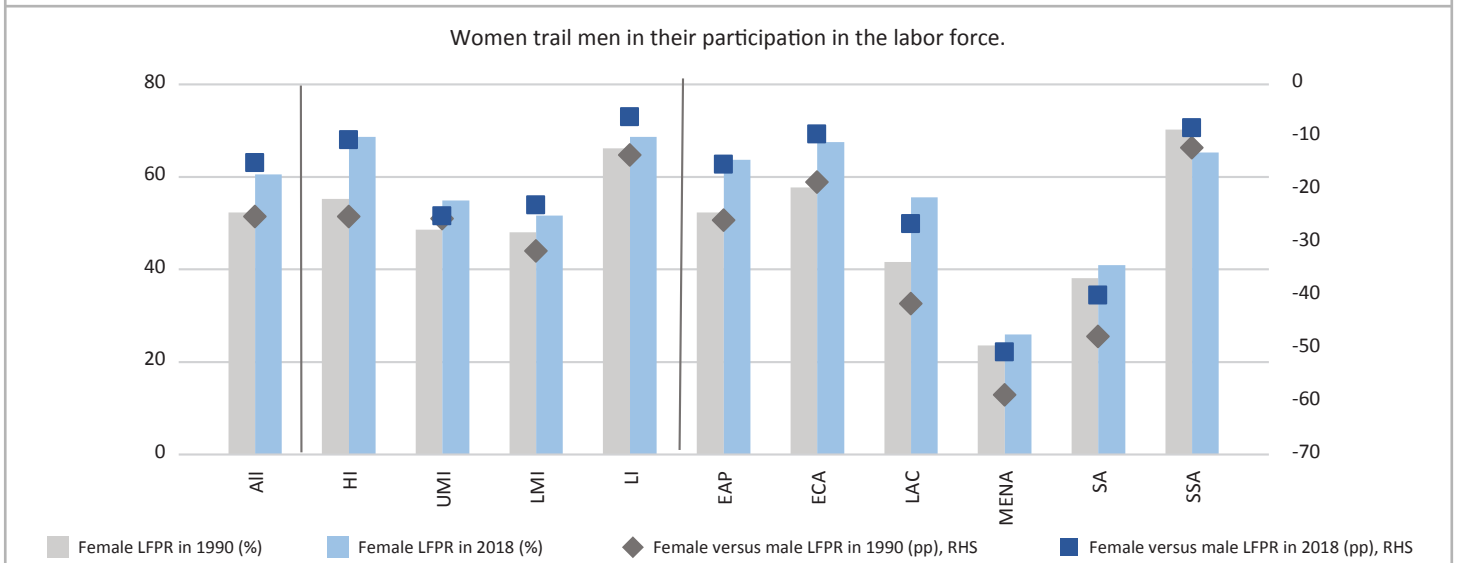
Source: Authors’ calculations based on United Nations Population Division data in World Development Indicators, ILOSTAT data, and World Bank country income group classifications.
Note: Health indicators are median values for 2017. Educational attainment indicators are median values of 2014–18 averages.
The sample comprises 136 countries. Income is categorized by high income (HI), upper-middle-income (UMI), lower-middle-income (LMI), and low-income (LI). Region is categorized by East Asia and Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), Middle East and North Africa (MENA), South Asia (SA), and Sub-Saharan Africa (SSA). Pp is percentage points.

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Acknowledgements: The authors thank Norman V. Loayza, Elizaveta Perova, Achim D. Schmillen, and Nurlina Binti Shaharuddin for valuable comments and suggestions. Nancy Morrison provided excellent editorial assistance.
Correction: Numbers were incorrect in the figure 4 in the previous version. The figure is corrected in this version.
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Figure 2. Female Labor Force Participation Rate (LFPR) by Income and Region



Source: Authors' calculations based on ILOSTAT data in World Development Indicators and World Bank country income group classifications.
 Note: Female (male) participation rates are for female (male) populations ages 15–64. All values are medians. The sample comprises 136 countries, as in figure 1. See notes to figure 1 for explanation of the income and region acronyms.

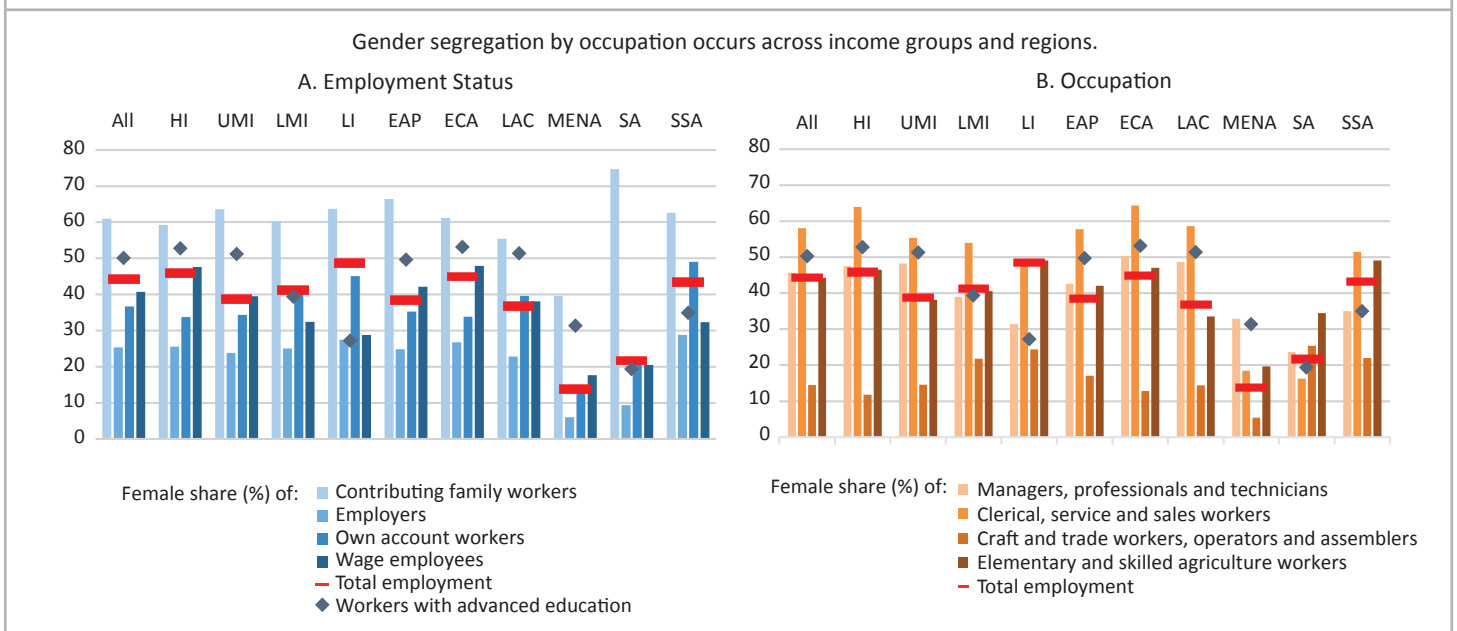
What Are the Characteristics of Gender Inequality around the World?

Human capital is enhanced by a healthy and educated population. Globally, women appear to be healthier than men. Across income groups and regions, women’s life expectancy at birth exceeds that of men (figure 1A). Women’s educational attainment is as high as men overall, but varies more than health across income groups and regions (figure 1B). Women are more likely to receive at least some tertiary education as compared to men in high-income and upper-middle-income countries, and less in lower-middle-income and low-income countries. At the regional level, the share of women with at least some tertiary education as compared to men is higher in

Europe and Latin America; similar in East Asia and Middle East; and lower in South Asia and Sub-Saharan Africa.

Despite human capital outcomes that are as good as or better than men’s, women trail behind in labor force participation—although participation rates have increased over time and the gender gap has narrowed (figure 2). Generally, female participation rates follow a U-shaped pattern, falling as countries transition from agricultural to industrial economies and then rising in more modern economies as education levels rise, fertility rates fall, and gender norms evolve (Goldin 1995, 2006). Regionally, female labor participation rates are especially low in countries in the Middle East and North Africa (MENA) compared to countries with similar income levels in

Figure 3. The Quality of Female Employment by Income and Region



Source: Authors' calculations based on ILOSTAT data and World Bank income group classification.
 Note: Self-employment comprises employers, own account workers and contributing family workers. All values are medians of 2014–2018 averages. The sample comprises 119 countries, a subset of the countries featured in Figures 1 and 2. See notes to Figure 1 for explanation of the income and region acronyms.

other regions (figure 2). This is partly attributable to women marrying younger and exiting the labor force upon marriage, as well as a relatively smaller expansion in the services and manufacturing sectors that are more likely to employ women (Verme 2015).

Women who participate in the labor force are overrepresented as unpaid workers mostly working in family businesses (contributing family workers) and underrepresented as employers. This pattern is observed across income groups, despite the high share of female workers with advanced education in high-income and upper-middle-income groups (figure 3A). As a country transitions to a higher income level, the share of self-employed women without hired employees (own-account workers) decreases and the share in total wage employment increases (figure 3A). In low-income countries where women with advanced education make up a smaller share of the workforce, women's share of wage employees is nearly half that of vulnerable employment such as family workers and own-account workers. By contrast, the female share of wage employees is almost the same as the share of vulnerable employment in middle-income countries, and 1.3 times higher in high-income countries.

Gender segregation by occupation exists across all income groups and regions. Women are overrepresented in clerical, sales, and service roles—traditionally thought of as women's work—and underrepresented in similarly medium-skilled craft and trade work, plant and machinery operation, and assembly (figure 3B). In terms of high-skilled jobs (managers, professionals, and technicians), the proportion held by women is almost the same as their level of educational attainment, as reflected by their share of workers with advanced education. Various studies in different regions and income levels show that occupational sorting contributes to the gender wage gap more than differences in education levels, including for 11 African countries (Fafchamps, Soderborn, and Benhassine 2008), Vietnam (Chowdhury et al. 2018), and the United States (Blau and Kahn 2017).

How Does Reducing Gender Inequality Improve Economic Growth?

Based on the Solow-Swan growth model, the determinants of economic growth comprise effective labor, physical capital, and total factor productivity (TFP). The growth in effective labor is driven by human capital per worker and the number of workers (the working-age population that participates in the labor force). Population growth is a drag on per capita GDP growth because it dilutes resources—unless the number of working-age men and women grows faster than dependents (young children and the elderly). The effect of investment in physical capital on economic growth diminishes quickly as physical capital accumulates—unless the accumulation is accompanied by other reforms to boost effective labor and TFP. TFP is the residual after considering the direct effects of effective labor and physical capital. TFP is driven by how effectively and efficiently those two inputs are used to produce total output. Among these three determinants, gender inequality is particularly related to effective labor and TFP as follows.

Women and Effective Labor

Reforms undertaken now to increase the human capital of girls—through reduced stunting and longer and better-quality schooling for more girls—will not have an immediate effect on growth, but will yield results gradually over time as young women join the workforce. Meanwhile, for a given level of human capital, a rise in female labor force participation that starts now will lead to higher economic growth immediately and over the long term. The gap between female and male labor force participation rates is associated with average long-term per capita income losses of about 9 percent in Organisation for Economic Co-operation and Development (OECD) countries and up to 30 percent in MENA countries, Cuberes and Teignier (2016) find, using an occupational choice model.

In countries whose population is aging, an increase in female labor force participation can help partially offset the decline in labor supply caused by a shrinking share of the working-age population. For instance, an increase in Japan's labor force due to female, elderly, and immigrant entrants has contributed to the country's economic expansion in recent years, Ip (2019) finds. In a simulation for East Asian countries, Özden and Testaverde (2014) show that an increase in female participation would mitigate the decline in the total labor force, followed by an increase in labor participation of migrants and the elderly. Countries in the early stages of demographic transition, meanwhile, can reap the benefits of their demographic dividend period (where the share of the working-age population expands more than that of dependents) by facilitating adult women's participation in the labor force now and increasing the human capital of girls to maximize the size of the effective labor force in the future.

With more women working, some have argued that fertility rates can drop to less than desirable levels. But it is hard to generalize a causal effect across countries, subpopulations, and time periods (see Kim 2016, for instance, regarding the causal effect of women's education on fertility). Matysiak and Vignoli (2008) show that there is a negative but weakening impact of female employment on childbearing over time, and a negative but strengthening influence of young children on women's employment for the majority of Western industrialized economies. Importantly, they find that these effects vary across country contexts, depending on the opportunity costs in a given country, which revolve around institutional support, labor market conditions, and gender norms. In fact, at the cross-country level among advanced economies, there has been a shift from negative to positive correlation between fertility and female labor force participation in the last three to four decades, pointing to the importance of these between-country differences. In the United States, while in the 1990s highly educated women had fewer children than women with a lower education, this is no longer true. The relationship between fertility and women's education is U-shaped, as highly educated women now have more children, substituting a significant part of their parenting with childcare. Much of this new pattern is explained by the change in the relative costs of childcare—becoming more affordable for women with college or advanced degrees (Hazan and Zoabi 2015).

Women and Productivity

Total factor productivity is determined by five interrelated components—education, innovation, market efficiency, infrastructure, and institutions—Kim and Loayza (2019) show. Providing good-quality schooling to girls and thereby narrowing the gender gap in education, especially in low-income and lower-middle-income countries, would lead to a faster growth of TFP when better educated young women join the labor market. The more educated the labor force is, the more capable it is of adapting and implementing technology from the frontier, as well as of innovating and creating new knowledge (Barro 2001; Hanushek and Woessmann 2015; Khazanah Research Institute 2018; Kim, Loayza, and Meza-Cuadra 2016.) Lower gender inequality can also enhance market efficiency with the more effective allocation of working women, for instance, in wage employment in the non-agriculture sector and as entrepreneurs (employers/self-employed persons). Gender gaps in entrepreneurship cause an average long-term loss in per capita income of 6 percent in OECD countries, and between 5 and 10 percent across regions, Cuberes and Teigner (2016) find. Ostry et al. (2018) find that women and men are complements in the production process. Within the gains to GDP they estimate is realized by closing the gender gap for countries with larger-than-median gaps, about four-fifths of the increase comes from adding women to the workforce, with the remainder due to the effect of gender diversity on productivity.

Simulation of the Economic Loss from Gender Gaps in Effective Labor

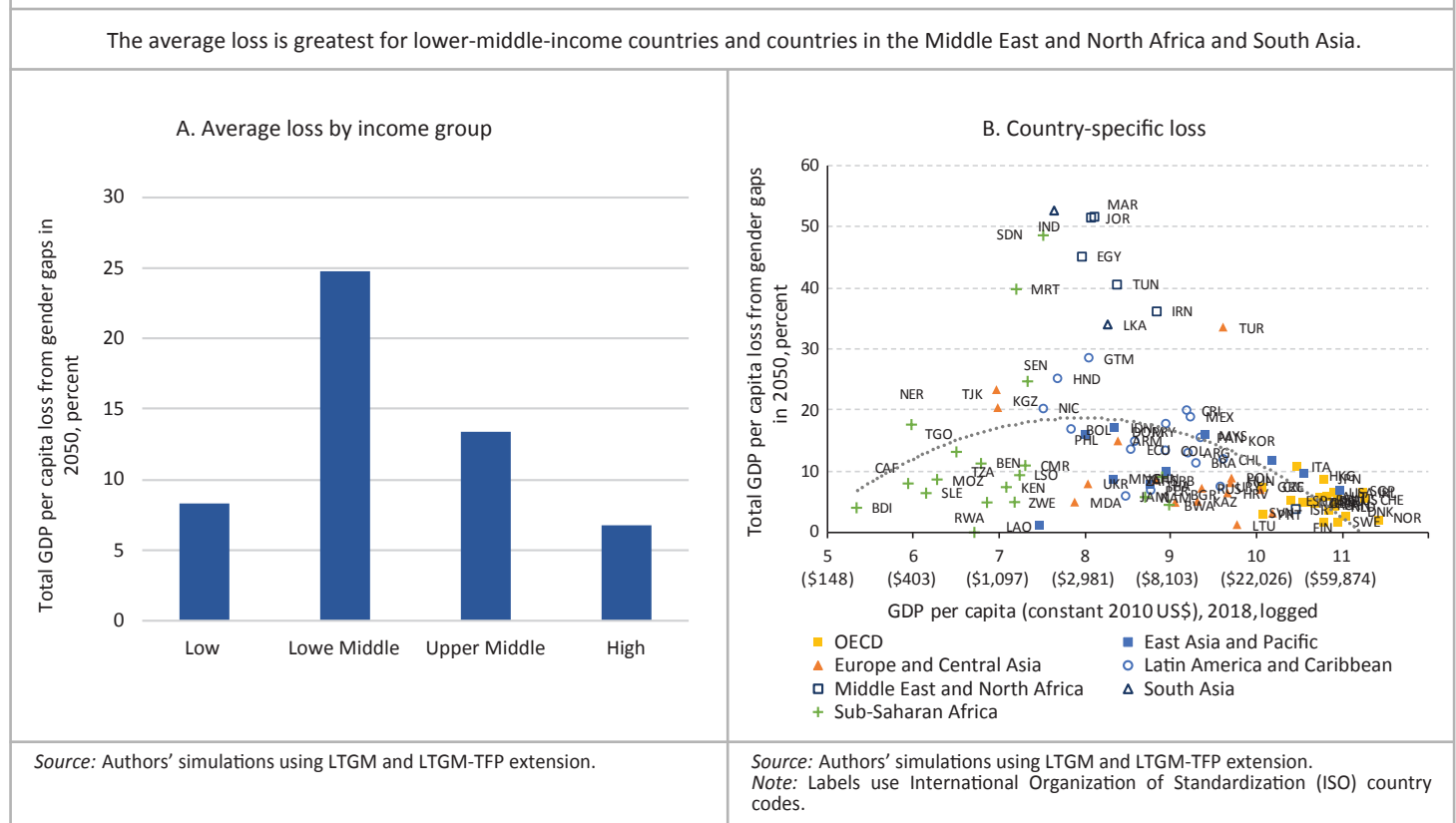
This study zeroes in on the main components of effective labor—education and labor force participation—given that

these are the key areas of gender disparity, as discussed above. These two components are related. The allocation of employment is also partly tied to women’s educational attainment. The simulations estimated the loss of GDP per capita from gender gaps in labor force participation and education for the next three decades (the 2020–50 period). The LTGM toolkit (Loayza and Pennings 2018), which is built on the Solow-Swan growth model, as well as the LTGM-TFP extension were used.

Two scenarios were compared to assess the economic loss from the gender gaps. One is the baseline in which the current gender gaps in years of schooling (2020) and labor force participation rate (2019) remain the same for the entire period. In another scenario, there is no gender gap in the two parameters for the same period. Other input parameters in the LTGM were assumed to remain at the current level (2019). For the direct impact of gender gaps on GDP per capita, the LTGM was used. For the indirect impact through TFP, the study used the LTGM-TFP, in which the TFP growth rate is a function of the TFP determinant index and the initial TFP level. To estimate the change in the TFP determinant index from removing gender gaps, the study ran a cross-sectional regression across 91 developing and developed countries, in which the TFP determinant index was regressed on the gender gap in labor force participation and human capital index (based on years of schooling).

Figure 4 shows that the economic loss as the proportional difference between the simulated GDP per capita for 2050 under the two scenarios. Panel A shows that the average loss in GDP per capita due to gender gaps is the biggest for lower-middle-income countries, followed by upper-middle-income,

Figure 4. The Loss in GDP per Capita from Gender Gaps in Education and Labor Force Participation, 2020–2050



low-income, and high-income countries. Panel B shows that the Middle East and North Africa (MENA) and South Asia (SA), the two regions with the largest gender gaps in labor force participation (figure 2), are expected to have the largest economic losses, ranging from 34 percent to 53 percent of the potential GDP per capita, which could have been achieved if there had been no gender gaps in education and labor force participation.

Policy Recommendations to Address Gender Inequality

As the discussion and simulations in this brief suggest, there can be substantial gains to economic growth from reducing gender inequality, particularly in labor force participation. The World Bank's 2011 *World Development Report* on gender equality and development highlights four broad priority areas for policymakers in tackling gender inequality: (1) reducing gaps in human capital endowments; (2) improving women's economic opportunities; (3) shrinking gender differences in voice; and (4) limiting the perpetuation of gender inequality across generations (World Bank 2011).

The first priority area—reducing gaps in human capital endowments—involves improving the institutions that deliver public services for health and education, especially to those disadvantaged by poverty or other forms of exclusion. The second priority area—improving women's economic opportunities—involves recognizing that women tend to occupy different economic spaces than men, in terms of jobs and sectors, partly because of different care and housework responsibilities as well as varying access to markets and

institutions (World Bank 2011). For instance, women in Malaysia cite housework, including child and elder care, as the main reason they do not participate in the labor force, and when they do work, they still “work” more than men, taking on relatively more hours of care work (World Bank 2019; Khazanah Research Institute 2019). Women's time can be released by expanding the availability, quality, and affordability of child and elder care, especially for the urban poor (World Bank 2019). For this, it is crucial to place a higher value on care work, which is vital for any society to function and thrive. The International Labour Organization (ILO), for instance, has put forth policy recommendations to “recognize, reduce, redistribute unpaid care work; reward paid care work by promoting more and decent work for care workers; and guarantee care workers' representation” (ILO 2018). Improving economic opportunities for women also involves removing legal barriers, especially discriminatory laws, for example, regarding land and ownership rights and in employment. Women still have only three-fourths the legal rights of men, according to the 2020 edition of the World Bank's annual survey on *Women, Business and the Law* (World Bank 2020). The third priority area—shrinking gender differences in voice—requires increasing women's voice in society, for example, in political representation, judiciary, corporations, and professional associations. The fourth priority area—limiting the perpetuation of gender inequality across generations—involves addressing gender norms and attitudes in education (including empowering adolescences) and among the wider population (World Bank 2011, 2019). Taken together, all these policies will help ensure that a country's society as a whole realizes its full potential through the uplifting of women.

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