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Tackling Gender Inequality: Definitions, Trends, and Policy Designs

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ABSTRACT: This paper identifies five key issues that are important for the continued efforts to tackle gender inequality: (i) gender inequality needs to be distinguished from gender gaps. Not all gender gaps necessarily reflect gender inequality as some gender gaps are not driven by the lack of equal rights, responsibilities and opportunities by women and girls, and this has important implications on policy designs to address gender inequity. However, the literature has paid little attention to this issue, often using gender inequality and gender gaps interchangeably; (ii) the evolving focus of gender inequality suggests there is still a long way to go to fully address gender inequality. Particularly gender inequality is taking more subtle and implicit forms, though the social and economic benefits from addressing the remaining gender inequality is still likely to be substantial; (iii) addressing gender inequality benefits everyone, not just women. Thus, the entire society should work together, even for each individual's own interest; (iv) both general policies and targeted gender policies can help address gender inequality. However, as gender inequality becomes more subtle and implicit, targeted gender policies will likely need to play an increasing role, which also makes separating gender inequality from gender gaps all that more important; and (v) addressing gender inequality does not need to start with policies targeted at its root causes, but needs to end with eliminating the root causes. Only then, any remaining gender gaps would only reflect preference and comparative advantage between men and women. The paper concludes by discussing gaps in the literature and policy challenges going forward.

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Tackling Gender Inequality: Definitions, Trends, and Policy Designs

Prepared by Baoping Shang*

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Contents

I. Introduction

Gender gaps have been observed in a broad range of social and economic dimensions and well-documented in the literature. Here gender gaps refer to the observed differences between men and women or between boys and girls in the relevant indicators. For example:

- Gender gaps in nutritional intake have been often reported as a result of intra household allocation of resources in South Asia, with also evidence in sub-Sahara Africa (Pal, 1999; World Bank, 2006; Hadley and others, 2007; Dasgupta, 2016; Hafeez and Quintana-Domeque, 2018).

- In developing countries, while gender gaps in school enrollment have been narrowing rapidly over the recent decades, particularly for preprimary, primary and secondary education, considerable gaps still remain for tertiary education and there are large variations across countries (Demery and Gaddis, 2009; Duflo, 2012; Austen and others, 2013; Evans and others, 2021). Furthermore, significant differences exist in the field of study between male and female students, likely in nearly all countries but with most evidence from advanced economies (OECD, 2017; Cook and others, 2021).

- Empirical studies, based on subjective self-reporting of unmet healthcare needs, find that women are more likely to report healthcare access related issues (Socías and others, 2016; Daher and others, 2021).

- Access to formal financial services is generally lower for women than for men. Over time, access to financial services has increased worldwide, but significant gaps remain by gender, and both saving and borrowing services are more accessible to men than to women (Demirgüç-Kunt and others, 2015; Sahay and others, 2020).

- Differences between male and female labor force participation rates have narrowed, but the gaps remain high in most of the world, with large variations across regions and countries (Field and others, 2010; Alesina and others, 2013; Bernhardt and others, 2018; Jayachandran, 2021). Even when women participate in the labor market, they tend to be overrepresented in certain sectors, often characterized by low status and low pay (OECD, 2012; ILO, 2012). Particularly, women are strongly under-represented in corporate managerial positions and political leadership (Profeta and others, 2014; OECD, 2017). Even for the same jobs and with similar qualifications, women tend to be paid less (OECD, 2012; OECD, 2017; NSF, 2021).

- Women are subject to more violence at home, in commuting, and at work (Jayachandran, 2021). In addition, legal barriers to women's rights and opportunities remain pervasive. Women on average have only three-quarters of the legal protections given to men during their working life, ranging from bans on entering some jobs to a lack of equal pay or freedom from sexual harassment (World Bank, 2021).

Many research and policy work often equates gender gaps with gender inequality without clearly defining them. According to UN Women,

"*Equality between women and men (gender equality) refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not mean that women and men will become the same but that women's and men's rights, responsibilities and opportunities will not depend on whether they*

are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men."

This suggests that not all gender gaps necessarily reflect gender inequality, as defined above. This has important policy implications, that is, policies should focus on eliminating gender inequality, not on achieving an equal gender share or fully closing all gender gaps.

The urgency to address gender inequality stems from its substantial social and economic consequences. First and foremost, gender inequality is a matter of fairness and concerning the wellbeing of women.[1] For example, some gender inequality reflects direct harmful actions against women—such as violence, harassment, and the resulting fear—or restrictions on women's behaviors, legal or social. More generally, as gender inequality is the result of gender bias and social norms that restrict women's rights and opportunities, it leads to lower welfare for women. Furthermore, as women account for half of the population, gender inequality means potentially a substantial misallocation of human capital, including both investment in women and utilization of women talent. A growing body of literature shows that reducing gender inequality can help foster better household decision-making, improve firm/institution performance, and generate substantial macroeconomic benefits, through boosting productivity and economic growth, strengthening macroeconomic and financial stability, and lowering income inequality (Kochhar and others, 2017; Sahay and others, 2018; Čihák and Sahay, 2020; Gonzales and others, 2015b).

There is clear evidence that gender inequality narrows as countries develop and new technologies, such as labor-saving household appliances, are being developed and widely adopted (Jayachandran, 2015; Tewari and Wang, 2021). However, the interrelationships between women empowerment and economic development are probably too weak to be self-sustaining, and because of the social and economic significance of gender inequality, policy actions are needed to speed up the process (Duflo, 2012). For example, around 82 percent of 40-year-old inventors are men, and while this gender gap in innovation is shrinking gradually, at the current rate of convergence, it will take another 118 years to reach gender parity (Bell and others, 2019).

One of the United Nation's Sustainable Development Goals (SDGs) is to achieve gender equality and empower all women and girls.[2] Many efforts have been taken over the past decades, particularly after the establishment of the SDGs in 2015, to tackle gender inequality. For example, public investment in education has nearly erased the gender gaps in primary and secondary school enrollment; legislative reforms have led to reductions in discrimination; countries have enacted reforms to boost women's economic opportunities; countries have enacted laws or introduced policies to end child and early marriage, provide paternity and parental leave, reduce the gender wage gap, address violence against women including sexual harassment, and promote women in leadership (World Bank, 2021; OECD, 2014; OECD, 2017).[3]

[1] In the rest of the paper, the discussions typically center around gender inequality against women, but the same arguments can be made for gender inequality against men when applicable.

[2] The global commitment to achieving gender equality and accelerating efforts to end gender inequality is reflected in the 2030 Sustainable Development Goal 5, which includes nine targets covering discrimination and violence against women, child marriage, unpaid care and domestic work, leadership role, access to reproductive health, rights to economic resources, and technology use to promote women empowerment. In addition, achieving other SDGs could also have important implications for gender equality, for example, under Sustainable Development Goal 4 on quality education.

[3] For example, a number of countries have mandated gender diversity on corporate boards of directors, including Austria, Belgium, Finland, France, Germany, Iceland, India, Israel, Italy, Kenya, Netherlands, Norway, Pakistan, Portugal, Spain, Quebec of Canada, and California of United States. Malaysia is one recent case and mandates its publicly traded firms to have at least one-woman director on their boards from September 1, 2022.

While globally important progress has been made in some areas (e.g., enrollment in primary and secondary education), substantial gender inequality still remains in many other areas (e.g., enrollment in tertiary education, labor force participation, wages, and leadership positions). Furthermore, the COVID-19 pandemic has disproportionately affected women, further exacerbating pre-existing gender inequality, for example, as women shouldered more burden in taking care of young children when schools were closed (Albanesi and Kim, 2021; Bluedorn and others 2021; Fabrizio and others, 2021; WEF, 2021).

Thus, much work still lies ahead to achieve gender equality, with some forms of gender inequality still existing in nearly all countries and often in relation to the SDGs. As countries seek to step up their efforts to address gender inequality, many questions remain for policymakers. This includes: (i) what are the main forms of gender inequality for countries at different stages of development? (ii) what are the economic benefits from continued efforts to reduce gender inequality, are the benefits diminishing as some gender inequality is being eliminated, and who would benefit from lower gender inequality? (iii) What policies are most effective in addressing gender inequality, what are the tradeoffs of adopting different types of policies, and are some of the policies more about ticking a box rather than making a real difference? And (iv) what are the roles of different types of policies at eliminating gender inequality, given the root causes of gender inequality is often social and cultural?

The literature on the economic impacts of gender inequality and the policies to address gender inequality has been growing rapidly over the recent decades. In addition, many countries have adopted policies to tackle gender inequality for many years, and there is a lot to learn from their experiences. This paper intends to draw on the vast literature—which tends to focus on specific aspects of gender inequality and policies—and the diverse country experiences to provide a holistic view of gender inequality and shed light on some of the key policy questions that can help countries approach gender issues in a more systematic manner. More specifically, the paper identifies five key lessons:

- *Gender inequality versus gender gaps*. Gender inequality differs from gender gaps in important ways, and this has important policy implications. However, the literature often equates gender inequality with gender gaps and use them interchangeably. This paper defines gender gaps as the observed differences between men and women or between boys and girls in the various social and economic indicators, and gender inequality refers to the part of gender gaps that are driven by gender bias and unequal gender rights and opportunities. The rest of the gaps are driven by preference/comparative advantage between men and women. Therefore, policies should be targeted at reducing gender inequality, which does not necessarily mean to fully close all gender gaps.

- *The evolving focus of gender inequality*. Gender inequality extends to nearly every dimension of social and economic activities. The policy focus often varies by country, depending on their circumstances and level of development. There appears to be a shift toward more subtle and implicit forms of gender inequality, as gender reforms deepen, for example, from school enrollment to quality of education and field of study and from labor force participation to distribution of employment across sectors and pay. However, this does not mean that the social and economic impacts of the remaining gender inequality are smaller. In fact, the literature has shown that they could have substantial economic consequences. Furthermore, for countries that are still at the early stage of addressing gender inequality, this suggests that they should learn from the experiences of other countries, and it may be more effective and efficient to tackle different forms of gender inequality simultaneously. For example, countries could consider policy measures to simultaneously address gender inequality in tertiary enrollment and field

of study, rather than tackling gender imbalances in field of study only after gender inequality in enrollment is eliminated.

- *The benefits of reducing gender inequality go beyond women*. Gender equality may be seen by some as a zero-sum game, from an economic point of view. Less unpaid work at home and higher labor force participation by women would mean more unpaid work at home and lower labor force participation for men. Better representation at leadership positions by women would mean less for men. It is, however, important to recognize that better gender equality benefits not just women, but it enlarges the economic pie and benefits everyone, through several potential channels: (i) women tend to make better decisions regarding children; (ii) gender-mixed teams are more productive; and (iii) lower gender inequality can bring important macroeconomic benefits to everyone, with stronger economic growth and financial stability, more jobs, and less income inequality.

- *Policies and their designs matter*. Large variations in gender gaps among countries with a similar level of development and in the same region suggest that policy interventions and their designs can make a difference, and this is further illustrated with an econometric analysis of gender laws and regulations and selected gender gaps. In addition, the literature provides strong evidence that a broad range of policy reforms can help reduce gender inequality and ultimately improve social and economic outcomes. However, not all policy interventions work under all circumstances, and policy tradeoffs are often involved. The paper compares general policies and targeted gender policies and discusses some considerations in their designs and implementation.

- *Policy actions do not have to start with those targeted at the root causes*. While gender inequality shows many symptoms, the root causes are typically traced to gender bias and social norms. Ideally, reforms should be directly targeted at the root causes. However, this appears difficult with limited policy options (e.g., educational programs, information campaign, and legal reforms to ensure women's rights and opportunities), and it takes time to change people's views and beliefs. Instead, policies have focused on reducing gender inequality in different areas such as education, labor market, and financial access. Not only do these policies have immediate impacts on gender inequality, but they could also help change social norms. While policies may not need to start with the root causes of gender inequality, fully eliminating gender inequality requires eventually addressing the root causes.

The rest of the paper is organized as follows. Section II to VI in turn take on the five key lessons discussed above. Section VII concludes with a discussion on the gaps in the literature and on some considerations in addressing gender inequality going forward.

II. Gender gaps and gender inequality: definitions and drivers

Gender gaps are defined here as the observed differences between men and women or between boys and girls in the various social and economic indicators. Gender gaps can be considered to consist of two

components, one that is caused by unequal rights, responsibilities, and opportunities for women and girls[4] and the other that is driven by women's preference[5] or comparative advantage between men and women.[6] The former is what is defined in this paper as gender inequality, and the latter is the result of efficient allocation of human capital. For example, for school enrollment in primary and secondary education, it would be expected that most, if not all, of the gender gaps reflect gender inequality. For tertiary education in advanced economies, female enrollment rate is about 25 percent higher than that of male (Figure 1). This gap, however, would not be expected to reflect gender inequality, that is, boys are facing less rights and opportunities. Instead, this likely reflects preference and choices (e.g., girls have comparative advantage in brain-based sectors and the returns to education are higher in such sectors (Pitt and others, 2012)). On the other hand, males represent a very small share of employment in registered nurses, some of which may indeed reflect social norms that hinder male's entry into this profession.[7]

Distinguishing between gender gaps and gender inequality has important policy implications. For the part of gender gaps that reflect preference/comparative advantage between men and women, there would be no need for policy intervention as there is no welfare loss from such gaps. For example, in many advanced economies where female tertiary enrollment rate is higher than that of male, there appears no need for policy interventions to further increase male tertiary enrollment rate to close the gap. On the other hand, there is a clear need to address gender inequality as it hurts women's wellbeing, leads to distortions, and reduces overall social welfare. In many developing economies where female tertiary enrollment rate is lower than that of male due to gender bias, if it is left unaddressed, there would be an underutilization of women's talent. Recognizing the difficulties often in separating gender inequality from gender gaps, Section V discusses some implications on policy designs.

Better understanding the drivers of gender inequality and gender gaps helps formulate effective policies. Both the theoretical and empirical literature offers evidence on the main drivers of gender gaps and gender inequality, particularly in the context of economic development:

- Comparative advantage improves for women as countries develop. Women have a comparative advantage in mentally intensive tasks while men in physical intensive tasks; the process of development entails a growing capital stock and thus reduces the female-male wage gap, which in turn causes female labor force participation to increase (Galor and Weil, 1996).[8] As brain-based sectors

[4] This includes both taste-based and statistical discrimination; taste-based discrimination refers to less favorable attitudes and prejudice towards women, while statistical discrimination refers to the use of perception or statistics on women as a group in decision-making when information on a specific woman is lacking; for example, firms may make employment and pay decisions, based on average leave days taken and average job turnover rates for women and men; studies have found that statistical discrimination plays an important role in gender gaps, such as in wages and employment (List, 2004; Xiao, 2020; Cordoba and others, 2021).

[5] It should be noted that preference here refers to choices made in the absence of gender inequality. This is important as gender inequality and the associated social norms often operate through affecting the willingness of men and women in making certain choices.

[6] For example, the comparative advantage of women often refers to the innate advantage of women in brain versus brawn jobs in the literature.

[7] According to the Bureau of Labor Statistics, around 13 percent of registered nurses in the United States are male in 2021.

[8] The empirical observation of U-shaped female labor force participation over the course of economic development reflects other factors that also influence the decision of women entering the labor market (Jayachandran, 2021). This includes the less need for a second income earner in a household, women's comparative advantage in rearing children, the need to balance employment with household responsibilities, and social/cultural norms on "suitable" jobs for women, for example, between manufacturing jobs and service sector jobs.

grow, if the returns to education are higher in brain-based than in brawn-based occupations, girls' schooling could overtake that of boys (Pitt and others, 2012). Gender differences in labor productivity as a driver of gender gaps are also supported by empirical evidence (Qian, 2008; Alesina and others, 2013; Carranza; 2014). This strand of literature highlights the mechanism through which gender gaps narrow as countries develop, by largely reducing the part of gender gaps that reflect preference / comparative advantage between men and women.

- Economic development is associated with better physical infrastructure and more advanced technology, making home production more efficient and less labor intensive. Because women perform the lion's share of household chores, advances in home production technologies mainly free up women's time and lead to an increase in female labor force participation (Greenwood and others, 2005; Dinkelman, 2011; Tewari and Wang, 2021). As women performing much home production likely reflects both preference/comparative advantage between men and women and gender bias/social norms, better physical infrastructure and more advanced technology help reduce both components of gender gaps.[9]

- Gender bias and cultural barriers to women's rights and opportunities are major drivers of gender gaps (Jayachandran, 2015; Jayachandran, 2021; Alesina and others, 2013; Bernhardt and others, 2018). For example, Fernandez and Fogli (2009) show that whether a female second-generation immigrant in the United States works is strongly influenced by the female employment and fertility norms in her ancestral homeland. One form of barriers is the lack of basic legal rights, preventing women from joining the formal labor market or becoming entrepreneurs in many countries. Women are sometimes legally restricted from heading a household, pursuing a profession, or owning or inheriting assets. Such legal restrictions significantly hamper female labor force participation and pose a drag on female entrepreneurship (World Bank, 2015). Limiting gender bias and cultural barriers helps close gender gaps through reducing gender inequality.

Figure 1 illustrates conceptually the interrelationship between gender gaps, gender inequality, their drivers, and policy interventions to address them:

- The root causes of gender inequality are gender bias and social norms that restrict women's rights and opportunities, which, together with preference/comparative advantage between men and women, are the root drivers of gender gaps.

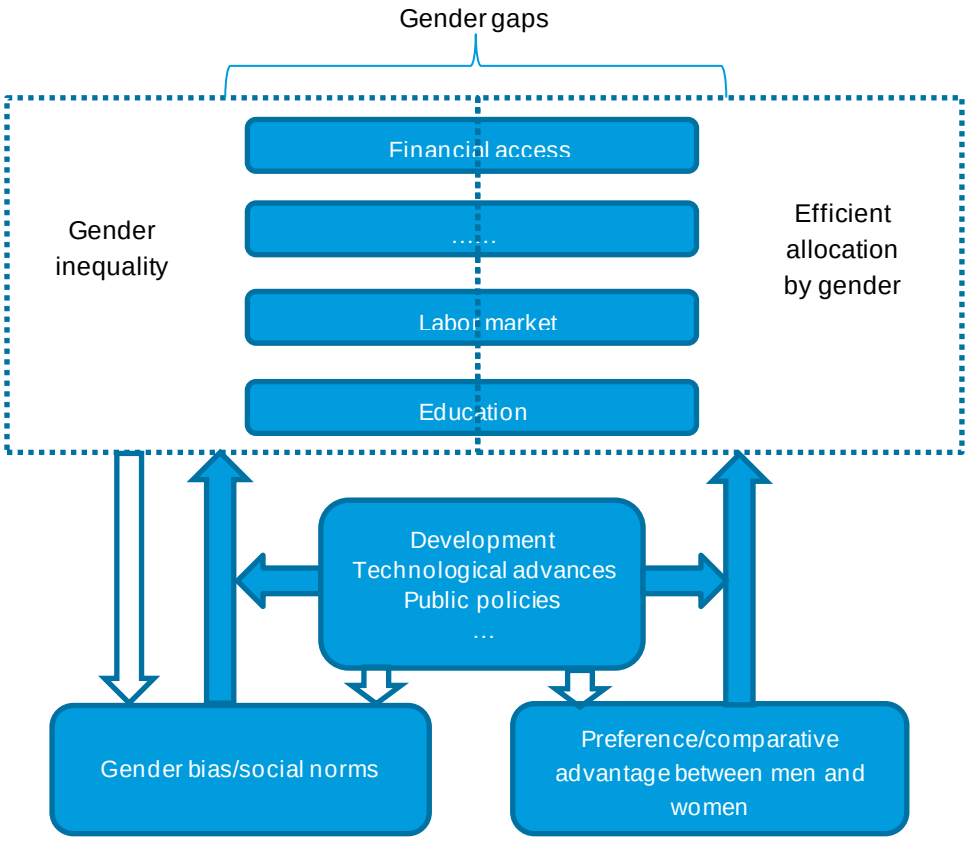
- Gender bias/social norms and preference/comparative advantage between men and women interact with other factors (e.g., development, technological advances, and public policies) in determining gender gaps and gender inequality in different areas such as education, labor market and financial access. In other words, the root causes of gender inequality are gender bias and social norms; gender inequality in different areas are just symptoms of the root causes. This means that while some policies can help reduce gender inequality in some of these areas, fully addressing gender inequality would require the elimination of the root causes, gender bias/social norms.

- As discussed above, development, technological advances, and public policies can affect gender bias/social norms and preference/comparative advantage between men and women.

[9] While there is little empirical evidence on to what extent unpaid work is driven by preference and social norms, it is generally recognized that both play a role (Alonso and others, 2019).

- Furthermore, interventions to lower gender inequality in different areas could also in turn alter gender bias/social norms. For example, as women become more educated and more women participate in the labor market, attitude toward women's education and work may start to shift (see section VI for additional discussions).

Figure 1. Gender inequality, gender gaps and their causes



Source: author's formulation.

III. The evolving focus of gender inequality: still a long way to go

Progress on gender equality has continually been made and differs substantially by country, particularly in relation to their stage of development. Consequently, the focus of gender inequality also varies by country and continue to evolve as some gender gaps are closed while others emerge and attract the attention of the public and policymakers. In general, the focus of gender inequality is shifting from gender gaps that are more explicit and visible to the public and policymakers to those that are more subtle and implicit. Given that gender inequality exists in broad areas, this section focuses on education, labor market, financial access, and legal barriers, as examples.

A. Education

The focus of gender inequality in education appears to be shifting from access to education (e.g., school enrollment) to quality of education and field of study.

For emerging and developing economies as a group, the gender gaps in access to preprimary, primary and secondary education are being closed, though some countries are still lagging behind; however, there are still gaps for tertiary education (Appendix Figure 1a-1d). As a result, many emerging and developing economies are still trying to achieve gender equality in access to education, particularly for tertiary education (Demery and Gaddis, 2009; Duflo, 2012; Austen and others, 2013; Evans and others, 2021).

Advanced economies, instead, have been focusing on gender equality in quality of education, including gender distribution by field of study, as they have largely achieved gender equality in access to preprimary, primary and secondary education decades ago and to tertiary education since mid-2000s. For example, across the OECD, boys outperformed girls in mathematics by an average of eight points in 2015—equivalent to around one-fifth of a year of schooling—and by 5 points in 2018; on the other hand, girls significantly outperform boys in reading in all countries and economies that participated in PISA 2018 (OECD, 2017; OECD, 2019).

One area that has received increasing attention is the large differences in field of study between boys and girls, with girls particularly underrepresented in the fields of science and engineering and overrepresented in social science related fields (Appendix Figure 2). The distributions are remarkably similar between more developed economies and the rest of the world, indicating that this is an issue common for all economies (Appendix Figure 2a shows the global distribution and Appendix Figure 2b shows the distribution for OECD countries during a similar period). For example, college-educated women in the United States have sorted into majors that systematically lower their potential wages relative to men; to what extent women choose a major in anticipation of future family demands, based on individual preferences, under the burden of restrictive social norms, or for any other reason remains an unanswered question (Sloane and others, 2021).

Women appear to be particularly under-represented in science, technology, engineering, and math (STEM). In the United State, in 1970, only 9 percent of all doctorates in the science and engineering fields, including social sciences, were awarded to women; by 2018, that share was nearly 47 percent. A closer look indicates that a large part of this is driven by high shares of women in psychology and social sciences. Despite the progress, persistent barriers to women pursuing degrees in STEM fields abound (Cook and others, 2021).

B. Labor market

When it comes to the labor market, while efforts are continued to reduce gender inequality in labor force participation, narrow the gender wage gap, and boost the representation of women in political leadership, increasing attention is given to the large gaps in the sectoral distribution of female and male employment, women's role in innovation, and women's share in corporate management positions.

The differences between male and female labor force participation rates remain high, although the gaps have been narrowing over the past decades (Appendix Figure 3a). The gaps are smaller and also closing more rapidly in advanced economies. The gender gaps in emerging economies, in fact, have widened over the past two decade, and this is almost entirely driven by the declining female labor force participation in China and India. In China, the likely underlying factors include structural changes in the Chinese economy where

households can afford to have only one wage earner, reduction in state childcare support, and rising gender-biased hiring practices; in India, the decline may reflect the declining employment in agriculture, safety concerns and the lack of transportation infrastructure for women to join the urban labor force , and the U-shaped relationship between education and labor force participation as education level improves for women (Li, 2019; Zhang and Huang, 2020; Gupta and Bhamoriya, 2020; Hare, 2016). Excluding China and India, the gender gaps in labor force participation rates in emerging economies are still larger than those in developing economies, which partially reflects the large gaps in emerging MENAP countries. Low labor force participation, particularly for women, has been a major policy concern for many advanced economies and some emerging economies, as they face an aging population. As women in these economies tend to be well educated, it would be a considerable waste if they do not fully engage in economic activities.

There are also large gaps in the sectoral distribution of female and male employment, likely reflecting the differences in field of study. In advanced economies, women are less likely to work in the agriculture and industry sectors and more likely to work in the service sector; but there is a shift in the trend around 2018 from the service sector to the industry sector. Emerging and developing economies share broadly similarly trends over the past decade or so: relatively larger shares of women work in the agriculture sector; and women are moving rapidly from the agriculture and industry sectors to the service sector (Appendix Figure 3b-3d). In OECD countries, female employment in the service sector accounts for 80 percent of employed women, compared with 60 percent for men. Within this sector, women fill a disproportionately high share of occupations in health and community services, followed by education (OECD, 2012). ILO (2012) finds that women are overrepresented in sectors characterized by low status and low pay.

Gender gaps in occupations within the science and engineering (S&E) field have been a particular concern. In the United States, by 2019 women made up 29 percent of the S&E workers, but female scientists and engineers are more likely to work in non-S&E occupations than in S&E occupations (Cook and others, 2021). In 2019, 70 percent of psychologists were women, but just 14 percent of engineers and 29 percent of the workforce in computer and mathematical sciences were women. Women often start their careers working in the innovation economy, but then leave for various reasons, including the need to provide childcare, the lack of family-leave policies, and poor workplace climate (Cook and others, 2021).

Increasing attention is also paid to women's role in innovation, widely viewed as a central driver of productivity and economic growth. Gender inequality persists at every state of innovation, from education and training, to the practice of invention, and to the commercialization of those inventions (Cook, 2019; Cook and others, 2021). Women hold only 5.5 percent of commercialized patents and represent just 10 percent of US patent inventors and only 15 percent of inventors in the life sciences. This in part reflects women's underrepresentation in jobs involving development and design (Hunt and others, 2013). In addition, discriminatory practice leads to inequality in patenting outcomes, even without discriminatory laws. Patent applications by women inventors were found to be more likely to be rejected than those of men, and those rejections were less likely to be appealed by the applicant teams. Conditional on being granted, patent applications by women inventors had a smaller fraction of their claims allowed, on average, than did applications by men. Further, those claims allowed had more words added during prosecution, thus reducing their scope and value. The granted patents of women inventors also received fewer citations than those of men and were less likely to be maintained by their assignees (Cook and Kongcharoen, 2010; Jensen and others, 2018).

What has received particular attention is the underrepresentation of women in politics and corporate management positions. Representation of women in politics has improved substantially across all economies,

with the proportion of seats held by women in national parliaments about doubled over the past two decades, likely due to the high public visibility; the gender gap, however, remains large (Appendix Figure 4a). For senior and middle management positions, there has been, however, little progress over the past two decades (Appendix Figure 4b). It appears that the success in political leadership has not been trickled down to the corporate world, highlighting the challenges to make changes in less visible areas. Across the 27 EU countries, only 25 percent of business owners with employees are women, and the low share of women had only marginally grown over 2000-2010 in EU27, Canada and United States (OECD, 2014). A number of countries have enacted legislation requiring a set quota of female representation on corporate boards, the effectiveness and efficacy of such policy, however, has been intensely debated (Kuzmina and Melentyeva, 2021; Greene and others, 2020; Lleras-Muney and others, 2019; Levi and others, 2014; Gregory-Smith and others, 2014; Strøm and others, 2014).

The gender wage gap has declined in most countries where data are available over the past two decades. Significant gap, however, still persist, averaging around 11 percent, and the gap varies substantially across countries (Appendix Figure 5). While a large part of the gender gap in earnings can be explained by women working fewer hours in the labor market than men, women's work force interruptions, gender differences in occupations and industries, a significant part of the gender pay gap remain unexplained, suggesting that factors such as discrimination and gender differences in psychological attributes and noncognitive skills are also important contributors to the gender pay gap (OECD, 2017; Blau and Kahn, 2017). For example, using a personnel dataset from a large Chinese company, Chen and others (2021a) find that the gender wage gap is small in the early stages of careers and becomes increasingly evident when female employees get married and have children. Whereas the short-term peak around childbirth can be explained by women' reduced working hours, the long-term trend is caused by women's concentration in lower-level jobs.

C. Financial access and legal barriers

More attention is gradually drawing to access to credit by female entrepreneurs, as to financial access by females as individuals.

- On account ownership at a financial institution/with a mobile-money-service provider, advanced economies have largely closed the gender gap; emerging economies have been making steady progress, with the gap narrowing from 23 percent in 2011 to 7 percent in 2021; little progress, however, has been seen in low-income developing countries over the last decades, with the gap staying at around 27 percent (Appendix Figure 6a).

- The evidence on whether fintech can help close gender gaps in financial access, particularly in developing and emerging economies, still appears limited. Sahay and others (2020) find that gender gaps are lower on average in digital financial inclusion than in traditional financial inclusion, but there are significant variations across and within geographical regions. Chen and others (2021b) find a large fintech gender gap: while 29 percent of men use fintech products and services, only 21 percent of women do. Various factors contribute to the gender gap in fintech, including financial and digital literacy and socio-culture factors, suggesting that fintech by itself may only have limited impacts in reducing gender inequality in financial access, and policies to address more fundamental drivers of gender inequality are essential (Khera and others, 2022; Chen and others, 2021b).

- On entrepreneurship financing, a significant gender gap still exists, even in advanced economies. Women are less likely than men to report that they can access the financing needed to start a business in all countries except for Mexico and the United States, with an average gap of eight percentage points in OECD countries (Appendix Figure 6c).

On legal barriers to gender equality, substantial progress has been made in all country groups, but effective implementation of the enacted laws and regulations remain a challenge in some countries. According to the Women, Business and Law Index, advanced economies have removed almost all the legal barriers to gender equality; significant gaps, however, still exist in emerging and developing economies (Appendix Figure 6b).[10] The impact of adopting gender equality legislation, however, would be limited if they are not fully implemented and enforced. For example, there is evidence from Ghana that reforms to inheritance laws led to few positive changes in terms of women's inheritance (Gedzi, 2012); a positive legal change in Pakistan has not allowed women to claim their entitled inheritances because of factors such as lack of education, patriarchal behaviors, and forced marriages (Ahmad and others, 2016). Furthermore, cultural and economic factors may pose challenges to women exerting their rights, as in the case of reforming gendered land ownership laws in Kenya, Rwanda, and Uganda (Djurfeldt, 2020).

D. Policy considerations

The literature suggests that there is still a long way to go to achieve gender equality for most economies:

- Gender inequality remains large. While advanced economies have largely closed gender gaps in access to education and individual access to financial services, and removed legal barriers to gender equality, gender gaps in leadership positions, labor force participation, and pay remain sizable. Furthermore, more subtle gender gaps still persistent, such as in quality of education including field of study, sectoral distribution of employment, entrepreneurship financing, and innovation.[11] Emerging and developing economies faces additional challenges to achieve equality in access to tertiary education, individual access to financial services, and legal rights.

- Closing the remaining gender inequality will likely be more challenging, as countries move to address gender inequality that is more implicit and subtle. This is because such inequality may be less visible to the public and thus may face less social pressures; with the difficulties in distinguishing

[10] The index measures laws and regulations that affect women's economic opportunities, based on eight indicators structured around women's interactions with the law as they move through their careers: mobility, workplace, pay, marriage, parenthood, entrepreneurship, assets, and pension. Although it is critical to ensuring women's economic inclusion, implementation of laws is not currently measured. Instead, Women, Business and the Law identifies legal differences between men and women as one step toward a better understanding of where women's economic rights may be restricted in practice (World Bank, 2021).

[11] While the paper focuses on education, labor market, financial access and legal barriers, similar patterns are also observed in other areas. For example, in advanced economies, while there are little gender differences in health insurance and the ability to seek healthcare, a growing body of evidence suggests that female patients—relative to male patients—receive less healthcare for similar medical conditions and are more likely to be told by providers that their symptoms are emotionally driven rather than arising from a physical impairment; recent evidence also shows that there are large gender gaps in receiving benefits from social insurance programs that rely on medical evaluations (Cabral and Dillender, 2021a). For example, Low and Pistaferri (2019) show that female applicants for Social Security Disability Insurance are 20 percentage points more likely to be rejected than similar male applicants. The gender imbalance in the physician workforce can explain a large part of the gap (Cabral and Dillender, 2021b).

preference/comparative advantage between men and women from gender bias/cultural barriers for such inequality, effective and efficient policies may be lacking; and addressing such inequality may require changing people's mindset, which tends to be more difficult.

- The social and economic impact of further reducing gender inequality is likely substantial. The more implicit and subtle nature of gender inequality does not necessarily mean less social and economic benefits from removing such forms of inequality. For example, in the case of United States, 94 percent of doctors and lawyers were white men in 1960; by 2010, the fraction was just 62 percent; similar changes in other high-skilled occupations have occurred throughout the U.S. economy during the last 50 years; given that the innate talent for these professions is unlikely to have changed differently across groups, the change in the occupational distribution since 1960 suggests that a substantial pool of innately talented women and black men in 1960 were not pursuing their comparative advantage; it is estimated that between 20 and 40 percent of growth in aggregate market output per person during the period can be explained by the improved allocation of talent (Hsieh and others, 2019). In a study of PhDs, GDP per capita could be 0.6 to 4.4 percent higher if women and African Americans were able to participate more fully in the innovation economy (Cook and Yang, 2018).

One potential lesson, particular for emerging and developing economies, is that in addressing gender inequality, it may be more effective and efficient for policy designs to consider the whole spectrum of gender inequality, including both the highly visible ones and the more implicit and subtle ones. For example, in closing the gender gap in access to tertiary education, countries should also be mindful about the gender differences in field of study and actively help remove any barriers that may hinder the ability of female students in pursuing STEM fields. Another example would be to pay full attention to both the adoption and the implementation of gender equality laws.

IV. The benefits of reducing gender inequality go beyond women

The literature has documented broad social and economic benefits from lowering gender inequality, including the increasing emphasis on its macroeconomic effects (Kolovich and others, 2020). Reducing gender inequality affects not only women, but everyone.

First and foremost, women benefit from lower gender inequality. This includes, for example, better career development, higher pay, and less violence, less discrimination and more equal rights, through improvements in human capital development, job opportunities including in leadership positions and as entrepreneurs, access to finance, and legal and regulatory environment.

Second, children benefit from lower gender inequality and women's empowerment. Women's choices appear to emphasize child welfare more than those of men, and children seem to be better off when their mothers control relatively more of their family's resources. For example, Miller (2008) presents evidence on how suffrage rights for American women helped children to benefit from the scientific breakthroughs of the bacteriological revolution, with child mortality declining by 8–15 percent (or 20,000 annual child deaths nationwide), through large increases in local public health spending. Leight and Liu (2020) document that more-educated mothers appear to compensate for differences between their children, investing more in children who exhibit greater noncognitive deficits, while no such effect is found for men. Pitt and others (2003) find that women's access to

credit has a large and statistically significant impact on two of three measures of the child health, but no such effect is found for men.

Third, reducing gender inequality could potentially help increase the productivity of teams and improve the performance of firms and other institutions. This is primarily through the diversity channel, in the sense that mixed-gender teams are more productive and creative and tend to make better decisions (Rock and Grant, 2016; Ozgen, 2021). Cook and Kongcharoen (2010) find that all-male and all-female patent teams commercialize their patents less than mixed-gender patent teams, with a similar finding from Østergaard and others (2011). Herring (2009) finds that gender diversity is associated with increased sales revenue, more customers, and greater relative profits. A number of studies find that gender quotas at corporate board are associated with improvements in firm performances, though there is still no consensus in the literature (Strøm and others, 2014; Levi and others, 2014; Kuzmina and Melentyeva, 2021; Owen and Temesvary, 2018; Green and others, 2020).[12]

Fourth, lower gender inequality can bring important macroeconomic benefits to everyone, with stronger economic growth and financial stability, more jobs, and less income inequality (Kochhar and others, 2017; Sahay and others, 2015; Sahay and others, 2018; Cihak and Sahay, 2020).

- Better matching female talent to human capital development and employment, including as corporate and political leaders and entrepreneurs, can substantially boost economic growth and strengthen economic and financial stability. For example, higher female labor force participation can substantially boost economic growth (Kochhar and others, 2017; Kolovich and others, 2020). As discussed earlier, between 20 to 40 percent of growth in aggregate market output per person between 1960 and 2010 in the United States can be explained by improved allocation of talent (Hsieh and others, 2019). Innovation is widely viewed as a central driver of productivity growth and output, and gender inequality hinders innovation at every state of the process, particularly as a growing literature is showing better outcomes of more diverse and mixed-gender teams (Rock and Grant 2016; Cook, 2019; Cook and others, 2021). The literature also finds positive association between financial inclusion and economic growth, and reducing gender inequality in financial access, including through fintech, can thus help increase economic growth, particularly in countries with low levels of financial inclusion (Sahay and others, 2015; Sahay and others, 2020). There is also evidence that female leadership, including as financial regulators, is associated with financial and political stability (Sahay and others, 2018; Caprioli, 2005).

- Reducing gender inequality could also help lower income inequality and, in turn, improve social stability and economic growth (Gonzales and others, 2015b). Gender wage gaps directly contribute to income inequality. Conversely, policies to address gender inequality benefit females in low-income households the most, also reducing income inequality. For example, reducing gender gaps in school enrollment means that girls from poor households are more likely to receive education, thereby increasing their lifetime earnings potential (Demery and Gaddis, 2009). In addition, financial inclusion of women is found to have a strong link to lower income inequality; this is because, while financial inclusion benefits everybody, the gains for women are quantitatively larger (Aslan and others, 2017; Čihák and Sahay, 2020).

[12] The literature of broad diversity (e.g., gender, race, and age) on firm productivity and team performance also yields mixed effects (see OECD (2020) for a review).

V. Policies and their designs matter: general versus targeted policies

There is strong evidence from the literature that government policies and their designs matter for gender gaps and gender inequality. The key question, however, is how government policies can be designed to achieve gender equality while minimizing their efficiency cost (or maximizing the efficiency benefit).

A. The role of policies in closing gender gaps

A broad range of government policies and programs can affect gender gaps, such as public investment to improve access to education and healthcare, childcare subsides, paid parental leave, eliminating tax penalties for secondary earners, and laws and regulations to ensure women's rights and opportunities (Rim, 2021; Ruhm, 1998; Dustmann and Schönberg, 2012; Heath and Jayachandran, 2018; Evans and Yuan, 2022; Bick and Fuchs-Schündeln, 2017; Olivetti and Petrongolo, 2017; Gonzales and others, 2015a; Hyland and others, 2020). For example, Rim (2021) finds that banning gender discrimination in admissions was successful in reducing gender disparity in graduate education. Sometimes, the policy interventions involve tradeoffs between different gender gaps. For example, Ruhm (1998) finds that parental leave is associated with increases in women's employment, but with reductions in their relative wages at extended durations. Lalive and others (2014) find that, for parental leave, a system that combines cash benefits with job protection dominates other designs in generating time for care immediately after birth while maintaining mothers' medium-term labor market attachment.

In addition to the large variations in gender gaps by level of development as shown in Section III, gender gaps also vary substantially among countries at a similar level of development and in the same region, for several selected gender gap measures (Appendix Figure 7). Assuming countries in the same region have similar gender social norms, this suggests that government policies potentially play an important role in explaining cross-country variations in gender gaps.

As an illustration, here we estimate the effects of laws and regulations that ensure equal opportunities for women (measured by Women, Business and the Law Index) on five gender gaps (these gaps are selected as they are key measures of women's economic opportunities, tend to present in many countries, and are widely reported).[13] The estimates are based on a fixed effects specification with a time trend and lagged key independent variable. The model uses per capita GDP in purchasing power parity (PPP) terms to control for level of development, country fixed effects to control for time-invariant factors (e.g., social norms), and a time trend to control for global trends.[14] The results suggest that gender laws and regulations are associated with lower gender gaps in some areas (e.g., account ownership at a financial institution /with a mobile-money-service provider and proportion of seats held by women in national parliaments). The estimates on gender gaps in labor force participation, female share of senor and middle management, and pay are not statistically significant (Appendix Table 1). One likely explanation is that the introduction of gender equality laws and

[13] The study sample covers all countries between 1990 and 2019, when data are available.

[14] Please see Appendix Table 1 for alternative specifications. Without including a time trend, the estimates are larger, more statistically significant, and have the expected signs for all five gender gaps, including labor force participation. Gonzales and others (2015a) and Hyland and others (2020; 2021) do not include a time trend and show similar results. The results from a random effects specification often lie somewhere in between.

regulations helps raise awareness and can lead to changes that face relatively less barriers (e.g., financial access) or are highly visible by the public (parliament seats). More fundamental changes, however, may take time (e.g., labor force participation, senior and middle management, and pay).

B. General versus targeted policies

The effects of government policies on gender inequality and economic efficiency would depend on their specific designs and country-specific social and economic structures and conditions, and thus should be assessed on a policy-by-policy basis. There are, however, also commonalities among government policies, and it would be useful to understand their advantages and disadvantages. For example, gender-sensitive government policies can be broadly classified into two groups: general policies that apply to all genders indiscriminately but affect one gender more than the other and targeted policies at a specific gender.

By definition, nearly all macro policies—including fiscal policies, monetary policies, and exchange rate policies as well as macro-financial and macro-structural policies—belong to general policies, as they are primarily intended to boost economic growth and employment and achieve macro and financial stability. This, however, does not necessarily mean that macro policies are gender neutral. In fact, many of these policies have implications on gender gaps and gender inequality, because they affect different segments of the economy differently, and the distributions of female and male population also differ across these segments of the economy. For example, on fiscal policies, family-based income taxation implicitly raises the marginal tax rate for the income of secondary earners—who tend to be women—and contributes to the gender inequality in labor force participation (Bick and Fuchs-Schündeln, 2017); while public education and health spending on average may still favor boys, the benefits from additional spending tend to be captured more by poor girls, as they are more likely to be still lacking access to education and healthcare (Demery and Gaddis, 2009). On financial sector policies, while financial inclusion benefits everyone, the gains for women are quantitatively larger (Čihák and Sahay, 2020). Monetary, exchange rate policies and macro structural policies have also been found to have gender implications.[15]

Micro policies refer to government programs that target specific entities such as firms and households, and thus gender-sensitive micro policies can be either general or targeted policies. This includes a variety of programs such as (un)conditional cash transfers, hygiene promotion and water treatment, educational programs on gender equality for students, legal reforms to enhance women's rights, conditional cash transfers for dropped out girls, reservation of subway cars exclusively for women, and gender quotas on corporate boards or political seats. Many of these programs have been shown to improve outcomes for women or girls (Hahn and others, 2018; Harari, 2019; Beaman and others, 2012).

In general, targeted gender policies conceptually are less efficient as they exclude males who may be better suited for the opportunities. However, with the presentence of gender inequality (e.g., gender bias and social norms that hinder women's rights and opportunities), general programs can also be inefficient in the sense that preference may be given to less qualified males. Because gender gaps can be driven by gender inequality or preference/comparative advantage between men and women or most likely both, and empirically it is difficult to

[15] See, for example, Bergman and others (2022) on the gender employment implication of the Federal Reserve's recent move from a strict to an average inflation targeting framework; Erten and Metzger (2019) on currency undervaluation and female labor force participation; and Kim and Williams (2021) on the effects of the minimum wage on women's intrahousehold bargaining power.

separate the two effects, the key challenge for targeted gender policies is how to set the policy targets, as fully closing gender gaps may not be appropriate. Below are a few considerations:

- It is not even clear that targeted gender policies are more effective in closing gender gaps. For example, from 267 educational interventions in 54 low- and middle-income countries, general interventions deliver average gains for girls that are comparable to girl-targeted interventions in improving access and learning (Evans and Yuan, 2022). However, the most effective programs may not be the most cost-effective. Due to the lack of cost data, the cost-effectiveness of the programs could not be assessed.

- There is evidence that some gender targeted policies may have unintended consequences or lead to inefficiencies. For example, the findings from a program that reserves subway cars exclusively for women in Mexico City suggest that while the program seems to be successful at reducing sexual harassment toward women, it also increases aggression incidents among men (Aguilar and others, 2021). While the policy of setting gender quotas on corporate boards is still intensely debated, some studies find that the policy is associated with negative returns, and the negative effect is less severe for firms with a greater supply of female candidates, and for those that can more easily replace male directors or attract female directors (Green and others, 2020). This appears to indicate that this policy may indeed lead to less qualified women being selected in some circumstances. Furthermore, there is also evidence that the policy has very little discernible impact on women in business beyond its direct effect on the women who made it into boardrooms (Bertrand and others, 2019). This suggests that the policy may be more of ticking a box exercise. Afridi and others (2017) find short-term costs of gender-affirmative action policies for political leadership positions, but that once initial disadvantages recede, women leaders are neither more nor less effective local politicians than men.[16] While this does not mean that these policies should not be pursued, it does raise the need for careful designing such programs, particularly as its long-run or economy-wide impact may be difficult to identify in the studies.[17]

- For some policies, there is less ambiguity on their efficiency implications. For example, legal reforms to provide equal rights to women, by definition, is addressing gender inequality directly. This may be one potential reason for the rapid progress in removing legal gender barriers. Another example is educational programs on gender inequality, it is in fact more effective to be targeted to both genders, as reducing gender inequality requires the active participation by men as well (Dhar and others, 2022). In some instances, preference/comparative advantage between men and women are expected to play a limited role, such as access to basic education (e.g., preprimary, primary and secondary) and healthcare. In such cases, fully closing the gender gaps would unlikely introduce any major distortions.

- General policies tend to introduce less gender-specific distortions, although they can only address gender inequality, often in a more gradual manner. For example, conditional cash transfer programs can help improve school attendance of both boys and girls and benefit girls more than boys because more girls lack access to education in the absence of the programs. However, on the margin, boys are likely still less qualified than girls, even if the programs have helped narrow the gap. With this in mind,

[16] Beaman and other (2012), however, find that quota policies for female leadership helps improve adolescent girls' career aspirations and educational attainment.

[17] For example, the studies typically do not consider the impact of gender quotas on reducing gender bias in the broad society.

general policies may be particularly useful in circumstances where it is difficult to assess to what extent that the gender gaps are due to gender inequality. One potential area is formal labor force participation for which it is unclear how much of the lower labor force participation for women is due to gender inequality and how much is due to preference. In such a case, targeted policies such as wage subsidies for women may not be advisable, while general policies such as childcare subsidies may be more appropriate.[18]

- In areas where only targeted gender policies may be effective (e.g., in situations where men and women compete with each other), it would make sense to be conservative, by setting the gender quotas low initially and gradually increase them as more evidence becomes available. For example, only targeted gender policies are likely effective in promoting female leadership (e.g., gender quotas on corporate boards), as the number of leadership positions is fixed, and more female leaders mean fewer male leaders. This appears to be the case in some countries that have adopted policies to set gender quotas on corporate boards, through it is unclear if the design is indeed driven by such a consideration. For example, Malaysia's publicly traded firms must have at least one-woman director on their boards from September 1, 2022; and California requires public companies headquartered in California to have at least one female director by the end of 2019 and at least two (three) female directors on five (six or more) member boards by the end of 2021.

VI. Policy actions do not have to start with those targeted at the root causes

As discussed in Section II, the root causes of gender inequality are gender bias/social norms that restrict women's rights and opportunities. Only until the root causes are eliminated, gender equality can be fully achieved; some gender gaps may still remain but are driven by preference/comparative advantage between men and women. Before that, it is unlikely that gender inequality in different areas such as education, labor market, and financial access can be fully removed. With the difficulties in separating gender inequality from efficient allocation, general policies may have difficulties in fully eliminating gender inequality, while targeted gender policies run the risk of either not fully addressing gender inequality or introducing additional gender distortions. With these constraints, how should policies be designed? Should policies only focus on those that are directly targeted at gender inequality (e.g., removing legal barriers) and its root causes (e.g., educational programs and information campaigns)?

This paper argues that addressing gender inequality does not have to solely rely on policies that are targeted at gender inequality and its root causes, and other general and targeted policies can still play a key role in addressing gender inequality, for several reasons:

[18] One example of targeted policies at gender inequality in employment is a payroll tax cut for female hires, introduced in 2012 in Italy to spur female employment and to stimulate business activity by reducing labor costs. The preferential tax rate is only available in occupations with large gender employment gap and has requirement for length in unemployment, which varies by age, whether in economically disadvantaged areas, and occupation. In addition, the preferential payroll tax scheme is valid for up to 12 months for temporary jobs and 18 months for permanent jobs. Firms can use the payroll tax cut only if overall employment would not decrease with respect to past employment. The complex eligibility criteria highlight the challenges in designing targeted gender policies while limiting their efficiency cost. Rubolino (2022) finds that payroll tax cut generates long-lasting growth in female employment with little effect on net wages and without crowding out male employment. However, the efficiency implication of the reform is not fully analyzed, as it is unclear what would have happened had the tax cut not been gender targeted,

First, while social norms evolve as countries develop (e.g., higher income, better education, and technological advances), this is often slow, almost by definition. There is evidence that some interventions can help change social norms. This includes educational programs on gender inequality and exposure to (female) role models. For example, an intervention in India that engaged adolescent girls and boys in classroom discussions about gender equality for two years, aiming to reduce their support for societal norms that restrict women's and girls' opportunities, is shown to have persistent effects and leads to shifts in behavior, more so for boys than girls (Dhar and others, 2022). The findings from Bell and others (2019) suggest that if girls were as exposed to female inventors as boys are to male inventors in their childhood commuting zones, the current gender gap in innovation would shrink by half.[19] The scope for policies directly targeting gender inequality (e.g., removing legal barriers) also appears limited.

Second, policies to reduce gender inequality in different areas such as education and labor market can be effective, with substantial immediate benefits for women and for the entire society, as discussed throughout the paper and particularly in Section IV. Examples include general policies and targeted gender policies to improve access to education (e.g., public investment in education and conditional cash transfers for girls) and boost labor force participation (e.g., childcare subsidies and eliminating tax penalties for secondary earners).

Third, policies to address gender inequality in different areas can also indirectly influence gender bias and social norms, the root causes of gender inequality. For example, policies that help narrow the gender inequality in education in turn also help shape gender attitude, as it increases women's income and bargaining power at home (Le and Nguyen, 2021). Gender quotas in political leadership can help influence adolescent girls' career aspirations and educational attainment—reflecting primarily a role model effect of female leadership—and reduce gender discrimination in the long-term (Beaman and others, 2012; Pande and Ford, 2012). A program to enhance financial inclusion of women—under which rural Indian women received bank accounts, training in account use, and direct deposit of public sector wages into their own (versus husbands') accounts—incentivizes women to work and helps liberalize women's own work-related norms and shift perceptions of community norms (Field and others, 2021).

While addressing gender inequality does not have to start with and solely focus on policies that are targeted at the root causes of gender inequality, it would need to end there, as fully eliminating gender inequality would require addressing the root causes of gender inequality, and policies aiming at reducing gender inequality in different areas can only go so far. Only then, while some gender gaps may still exist, the allocation of human capital would be fully efficient, reflecting preference/comparative advantages between men and women.

VII. Discussions

This paper identifies five key issues that are particularly important for the continued efforts to tackle gender inequality:

- It is critical to clearly define gender inequality and distinguish it from gender gaps. This has important implications on the policy designs to address gender inequity. However, the literature has paid little

[19] See also Cook and others (2021) and Becker and others (2016), which show that targeted mentoring programs can have significant and long-lasting effects on inclusion in STEM careers, where income, race, and gender gaps in acquiring education have been due to a lack of mentoring and exposure to science and innovation careers rather than differences in ability.

attention to this issue, often using gender inequality and gender gaps interchangeably. This paper defines gender gaps as the observed differences between men and women or between boys and girls in the various social and economic indicators, and gender inequality refers to the part that is driven by gender bias and unequal gender rights and opportunities. However, empirically estimating the corresponding gender inequality for each gender gap remains a challenge and requires more efforts on data collection and methodological developments.

- The focus of gender inequality has been evolving over time. As some gender gaps are closed, other gender gaps are emerging (not necessarily new, but attracting the attentions of the public and policymakers). This suggests that there is still a long way to go to fully addressing gender inequality. Particularly, gender inequality is getting more subtle and implicit, though the social and economic benefits from addressing the remain gender inequality is still likely to be substantial. This highlights the need to apply a gender lens to a broad range of policies and practices to understand their potential implications on gender inequality. Such efforts help develop a comprehensive strategy, instead of a piece-meal approach with which only some gender inequality is addressed at a time.

- Addressing gender inequality benefits everyone, not just women. Thus, the entire society should work together, even for each individual's own interest. Lower gender inequality not only benefits women, but also benefits children—as women trend to emphasize child welfare more than men—and the entire economy through the positive productivity externality from more balanced gender roles, and improved economic growth, financial stability, and income inequality. In addition to further strengthening the empirical evidence in these areas, there is an urgent need for the findings to be incorporated into policy designs and decision-making.

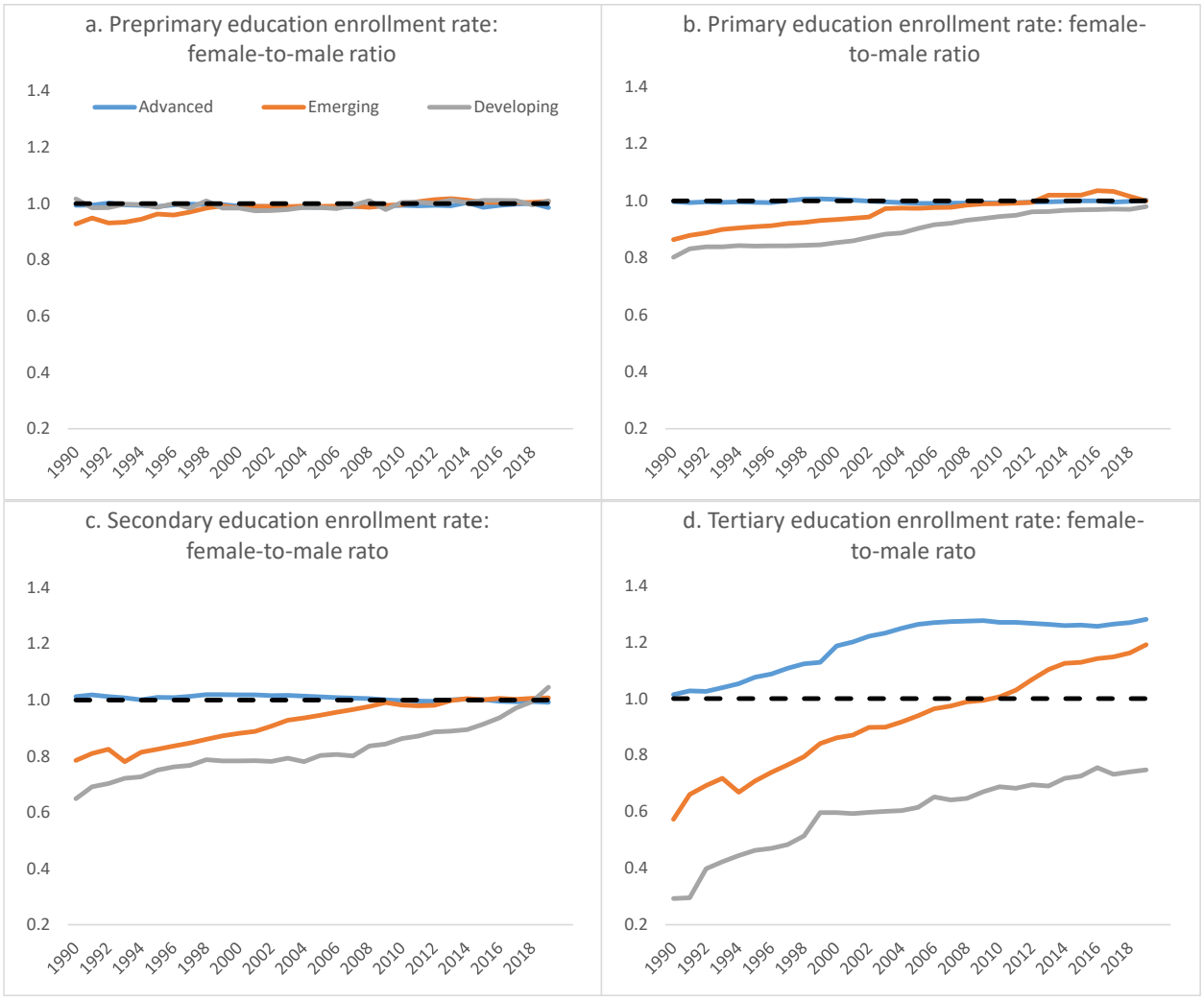
- Policies and their designs can help accelerate the decline of gender inequality from economic development and technological advances. Both general policies and targeted gender policies can play a role, and the pros and cons of such policies should be carefully assessed. As gender inequality becomes more subtle and implicit (e.g., in field of study, the distribution of employment across sectors, and mid-level management positions), general policies will typically not work, unlike for school enrollments and labor force participation. Thus, targeted gender policies will need to play a bigger role. More analytical work is needed on what programs work and under what conditions. Also, this means that analytical work geared at separating gender inequality from gender gaps is all that more important.

- While fully addressing gender inequality requires the elimination of the root causes of gender inequality (e.g., gender bias and social norms), this does not mean that policies are not targeted at the root causes of gender inequality do not have a role. In fact, they can still be effective, as they can generate immediate social and economic benefits and indirectly affect gender bias and social norms. Policies directly targeted at the root causes of gender inequality would be generally preferred but appear limited, and research to expand the policy toolkit would be particularly useful.

One general issue in the efforts to address gender inequality is the lack of gender disaggregated data. Great progress has been made. For example, The IMF's Financial Access Survey (FAS) is a unique source of annual supply-side data on access to and use of basic financial services by gender. The World Development Indicators (WDI) from the World Bank now present many statistics by male and female separately. Missing data, however, are still widespread, particularly in low-income countries. Therefore, continued efforts are still needed to further expand data availability in terms of both coverage and quality.

Another important issue the paper only marginally touches upon is the challenge of turning policy designs into practices. The analysis of Women, Business, and the Law index on several gender gaps suggests that it is not automatic that laws and regulations to promote gender equality will lead to immediate improvements in gender outcomes. Implementation remains a challenge for many countries, particularly developing economies with limited administrative capacity. For example, as reported in Evans and Yuan (2022), many similar policy interventions have substantially different impacts across countries. Conditional cash transfer in South Africa is the best intervention among the 267 educational interventions in 54 low- and middle-income countries, while conditional cash transfer in the Philippines is one of the ten worst interventions. Thus, the importance of effective implementation cannot be overstated.

Appendix Figure 1. Gender Gaps in Education

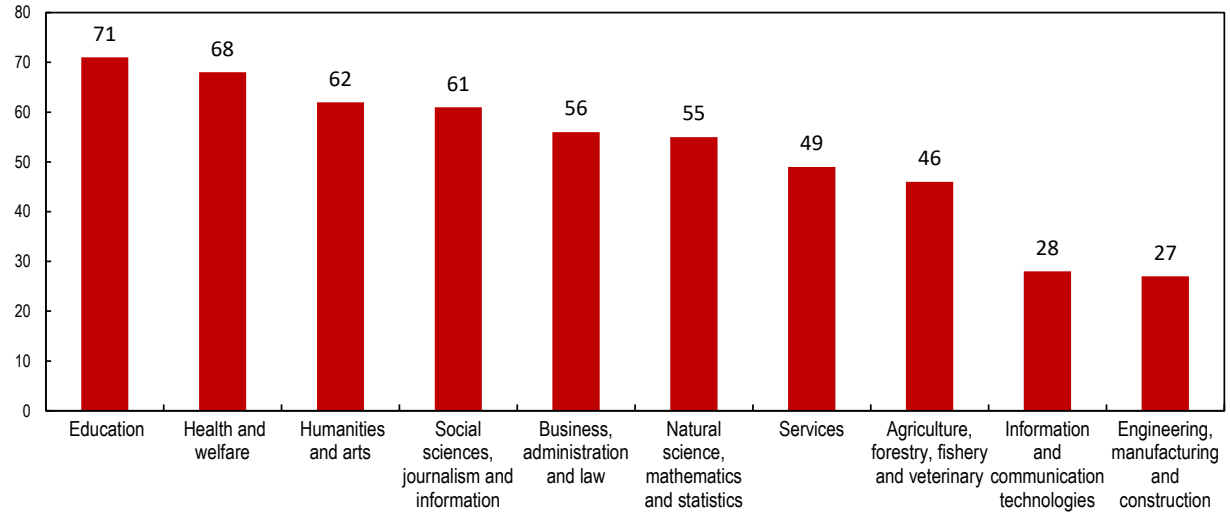


Source: World Development Indicators, World Bank; and author's calculation.

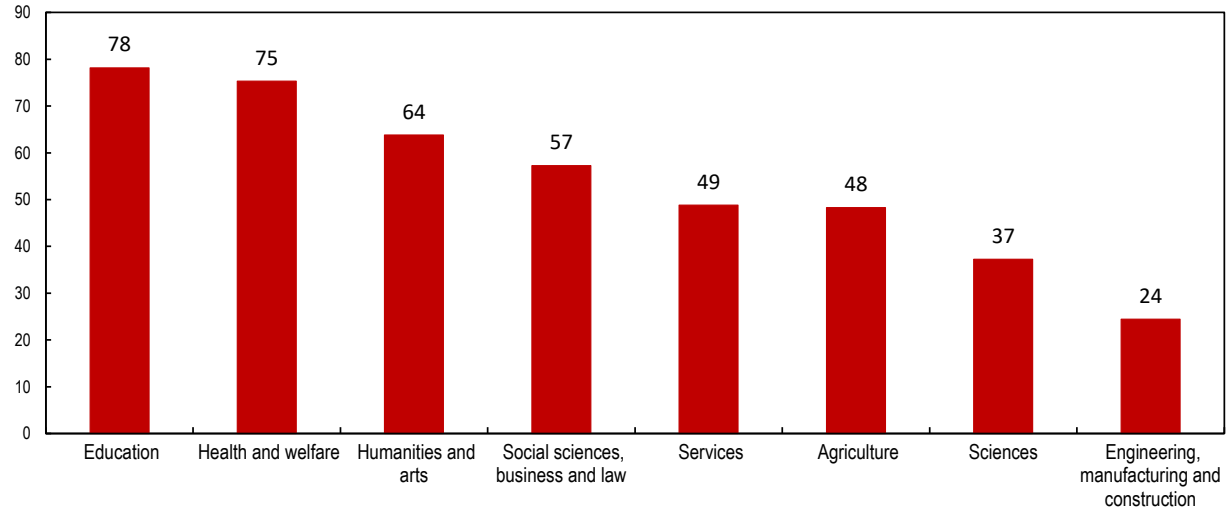
Note: The female-to-male enrollment ratios are based on gross enrollment. The dash lines represents a female-male ratio of one. The country grouping is consistent with that of the October 2021 Fiscal Monitor (Table A). The country averages are based on unbalanced samples and weighted by population size.

Appendix Figure 2. Gender Gaps in Field of Study

a. Percent of female students enrolled in higher education, by field of study, global average

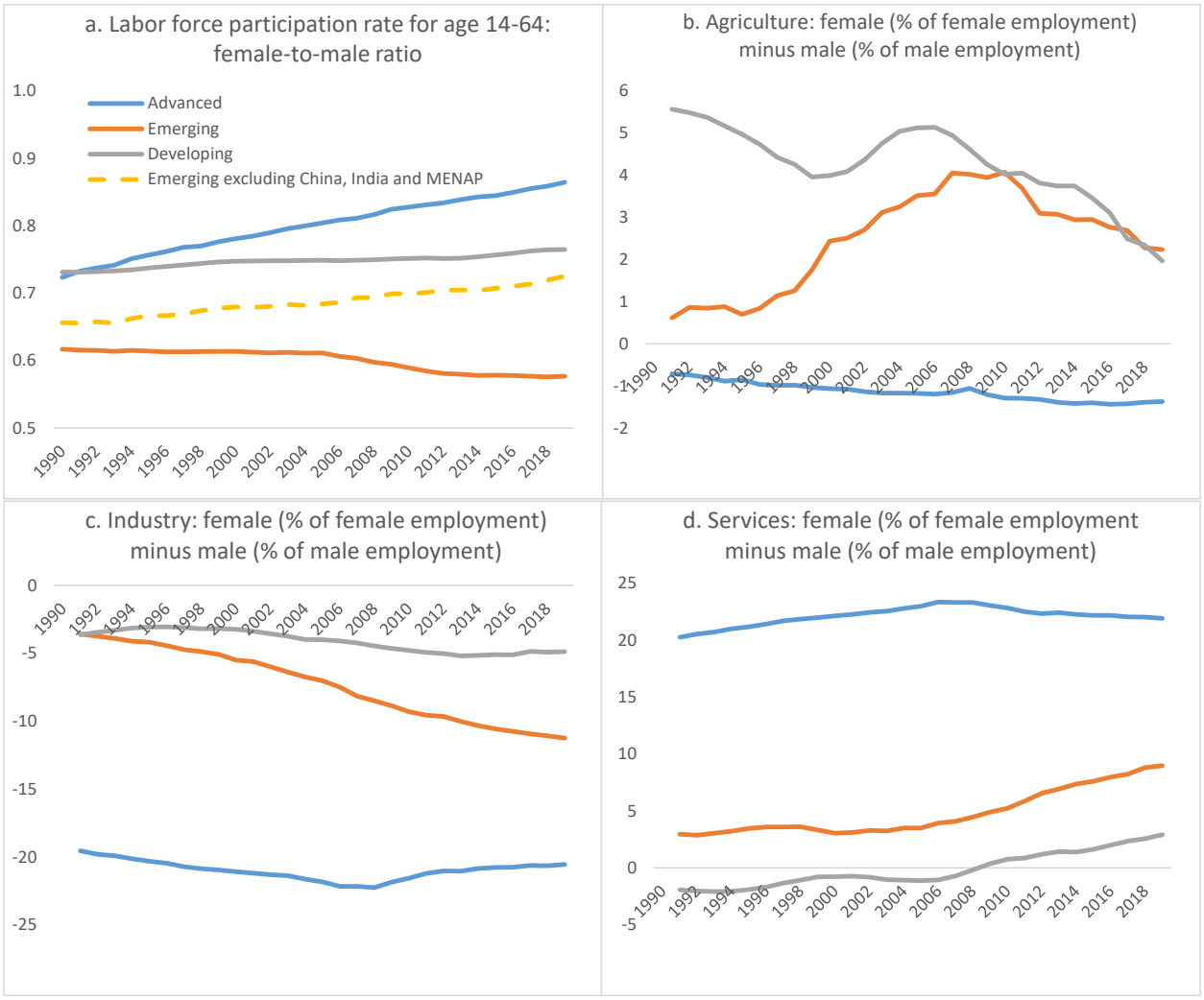


b. Percent of new entrants into tertiary education in each field that are female, OECD



Source: UNESCO Institute for Statistics; OECD (2017); and author's calculation.
Note: The global data are for 2014-2016; the OECD data are for 2014.

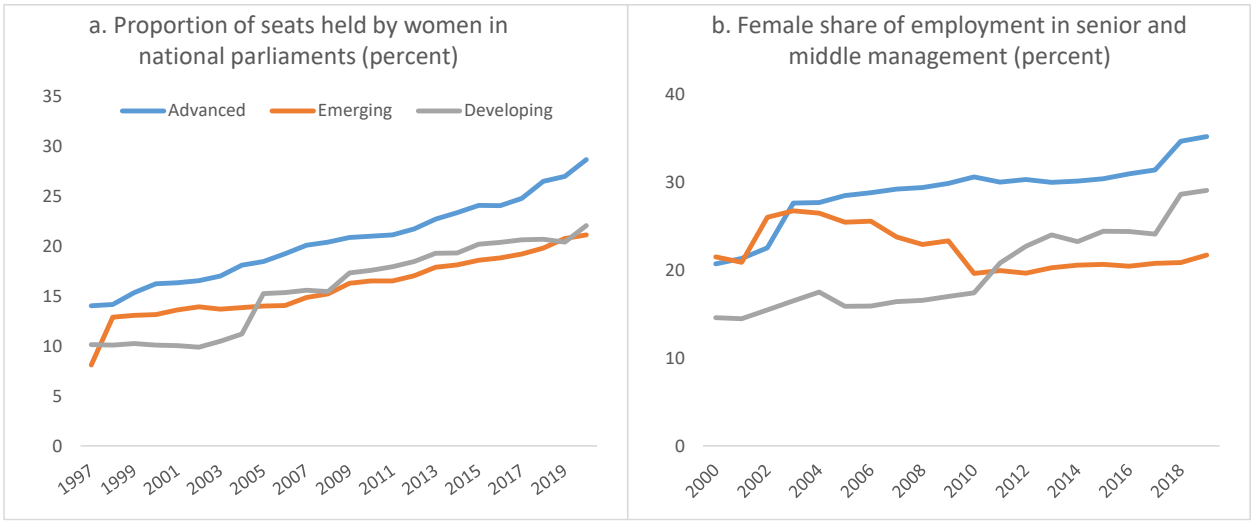
Appendix Figure 3. Gender Gaps in Labor Force Participation and Employment by Sector



Source: World Development Indicators, World Bank; and author's calculation.

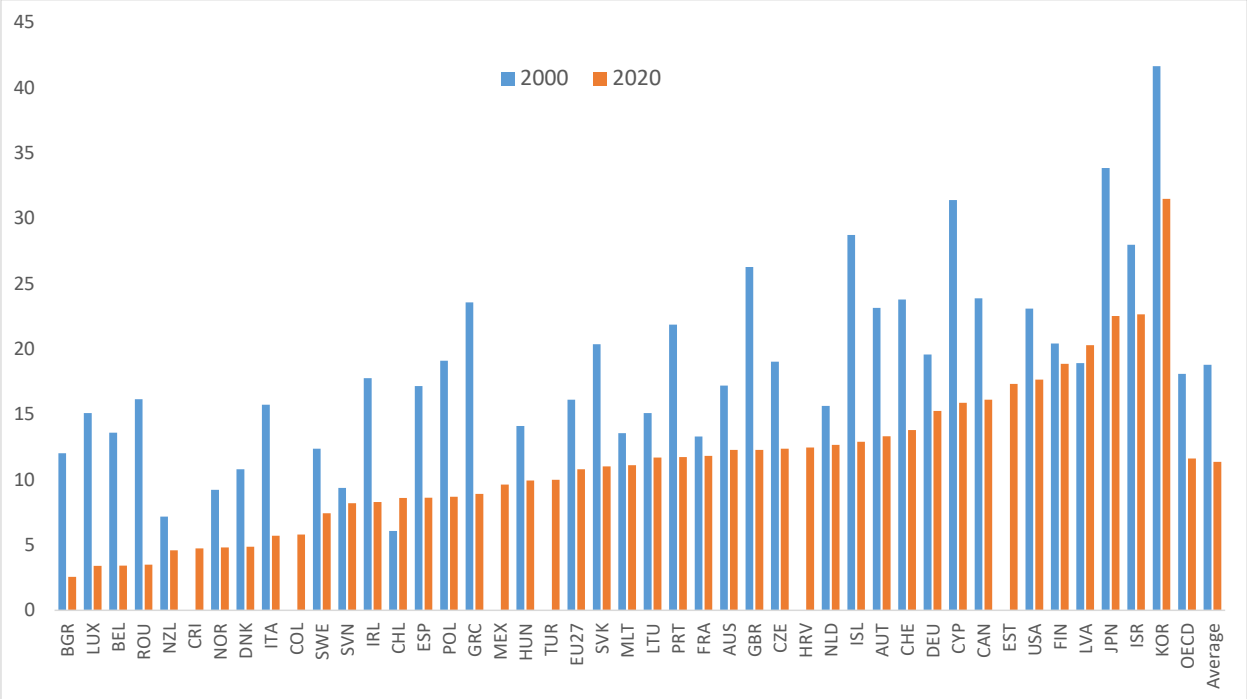
Note: The country grouping is consistent with that of the October 2021 Fiscal Monitor (Table A). The country averages are based on unbalanced samples and weighted by population size.

Appendix Figure 4. Gender Gaps in Leadership Positions



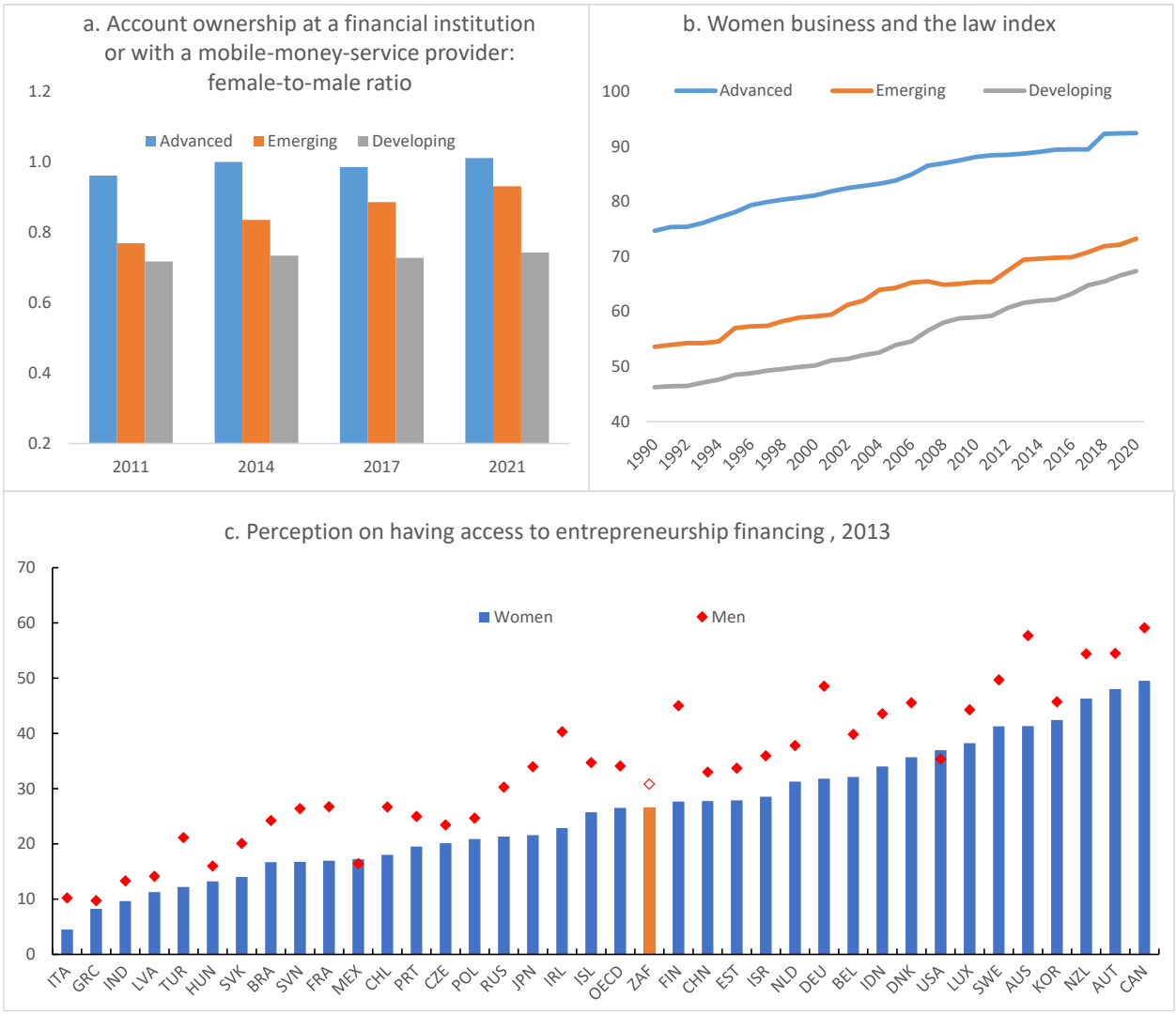
Source: World Development Indicators, World Bank; and author's calculation.
Note: The country grouping is consistent with that of the October 2021 Fiscal Monitor (Table A). The country averages are based on unbalanced samples and weighted by population size. The downward trend for emerging economies between 2003 and 2010 does not appear to be driven by the unbalanced panel.

Appendix Figure 5. Gender Wage Gap in Selected Economies



Source: OECD gender wage gap indicator (accessed on 02 March 2022); and author's calculation.
Note: The gender wage gap is defined as the difference between median earnings of men and women relative to median earnings of men, for full-time employees; when data are missing for year 2000 or 2020, data from adjacent years are used, 1998-2002 and 2018-2020 respectively (except for LUX for which the data is for 2014).

Appendix Figure 6. Gender Gaps in Financial Access and Legal Barriers to Gender Equality



Source: World Development Indicators, World Bank; Entrepreneurship at a Glance 2016, OECD; and author's calculation.
Note: The data for panel c is based on the question, "Do you have access to money you would need if you wanted to start or grow a business?"; data for New Zealand refer to 2014 and data for China, India and Indonesia refer to 2015. The country grouping is consistent with that of the October 2021 Fiscal Monitor (Table A). The country averages in 6a and 6b are based on unbalanced samples and weighted by population size. The Women, Business, and the Law Index has the highest possible score of 100, which indicates no legal differences in access to economic opportunities between men and women in the dimensions covered.

Appendix Figure 7. Large Variations in Gender Gaps across Countries

Source: World Development Indicators; OECD gender wage gap indicator (accessed on 02 March 2022); and author's calculation.
Note: Based on latest year of available data between 2015 and 2019. The country grouping is consistent with that of the October 2021 Fiscal Monitor (Table A). Advanced = advanced economies; CEE/CIS = Emerging Europe and Commonwealth of Independent States; EDA = Emerging and Developing Asia, LAC = Latin America and the Caribbean; MENAP = Middle East, North Africa, Afghanistan, and Pakistan.

Appendix Table 1: Alternative Specifications on the Effects of Laws and Regulations on Selected Gender Gaps

	Log of														
	Account ownership at a financial institution or with a mobile-money-service provider: female-to-male ratio			Labor force participation rate: female-to-male ratio			Female share of senior and middle management (percent)			Proportion of seats held by women in national parliaments (percent)			Gender wage gap (percent)		
Log women business and the law index (one lag)	0.482***	0.543***	0.415***	-0.018	0.202***	-0.003	0.129	0.476***	0.282*	0.506**	1.398***	0.610***	-0.080	-0.832	-0.131
	(0.105)	(0.103)	(0.075)	(0.039)	(0.039)	(0.039)	(0.181)	(0.166)	(0.158)	(0.214)	(0.219)	(0.187)	(0.639)	(0.731)	(0.571)
Log GDP per capita in PPP	-0.065	-0.003	0.065***	-0.051**	0.034*	-0.049**	-0.058	0.135	0.045	0.119	0.603***	0.096**	0.190	-0.367	0.265
	(0.090)	(0.075)	(0.011)	(0.021)	(0.019)	(0.020)	(0.131)	(0.116)	(0.042)	(0.090)	(0.095)	(0.048)	(0.414)	(0.394)	(0.269)
Time trend	0.003		0.001	0.007***		0.007***	0.011***		0.008***	0.032***		0.031***	-0.023***		-0.024***
	(0.002)		(0.002)	(0.001)		(0.001)	(0.003)		(0.003)	(0.003)		(0.003)	(0.004)		(0.003)
Constant	-1.710*	-2.472***	-2.595***	0.046	-1.528***	-0.032	3.113**	-0.082	1.511**	-1.177	-8.769***	-1.416*	1.411	10.168***	0.764
	(0.969)	(0.812)	(0.335)	(0.218)	(0.170)	(0.206)	(1.358)	(0.980)	(0.644)	(1.141)	(0.866)	(0.826)	(2.418)	(1.807)	(1.616)
Fixed/Random effects	FE	FE	RE	FE	FE	RE	FE	FE	RE	FE	FE	RE	FE	FE	RE
Number of observations	527	527	527	4,826	4,826	4,826	1,312	1,312	1,312	4,038	4,038	4,038	632	632	632
Adjusted R^2	0.090	0.085	0.083	0.337	0.186	0.337	0.117	0.084	0.113	0.423	0.338	0.423	0.195	0.132	0.195

Source: World Development Indicators; OECD gender wage gap indicator (accessed on 02 March 2022); and author's calculation.

Note: Robust standard errors are reported; * represents statistically significant at 10 percent level; ** represents statistically significant at 5 percent level; *** represents statistically significant at 1 percent level.

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PUBLICATIONS

Tackling Gender Inequality: Definitions, Trends, and Policy Designs
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