



## CHAPTER 2

# EMPOWER TO PROSPER: Women Working for Growth

## Chapter 2. Empower to Prosper: Women Working for Growth

*Over the past three decades, South Asia has benefited from strong economic growth, accompanied by a shift toward the services sector, growing exports, and stronger legal protections for women. These changes have expanded opportunities for all, including for many women. And yet, women’s employment remains a source of untapped potential. South Asia’s female labor force participation remains among the lowest in the world: only 32 percent of working-age women in the region participate in the labor force, far below the EMDE average of 54 percent. This low participation rate represents a costly misallocation of resources: raising this rate to that of men could boost per capita incomes by up to one-half. A wide range of policies could help women enter the workforce. These include legal reforms to improve gender equality, faster job creation in the non-agricultural sector, and the removal of barriers to women working outside the home. Such measures will be more effective if accompanied by a shift in social norms toward greater acceptance of women’s employment.*

### Introduction

South Asia has grown briskly over the past three decades. Since 2000, the region has grown, on average, by 5.6 percent per year, and chapter 1 projects that growth will be sustained at more than 6.0 percent during 2025–2026, propelled in part by a rising working-age population (Kose and Ohnsorge 2024).

This rapid growth has been accompanied by major structural changes. Between 1990 and 2023, the share of South Asia’s population living in urban centers increased from 25 percent to 36 percent. The services sector grew from 39 percent of GDP to 50 percent. Average tariffs declined from 53.3 percent to 6.5 percent. Since the 1990s, legal reforms have been introduced that improve gender equality, including inheritance and asset ownership rights, and employment opportunities (World Bank 2024a).

Although South Asia’s projected growth rates are higher than of other EMDEs, they are not sufficient to reach the region’s development goals. For example, most South Asian countries aim to attain high-income status within the next three decades. But even if the growth rates expected for the 2020s can be sustained through the 2030s and 2040s, Bangladesh, India, and Sri Lanka would reach high-income status about a decade later than desired.

South Asia benefits from a relatively youthful population, but to fully reap this “demographic dividend” the region needs to put its people to work. Employment-to-population ratios are low and have been falling for two decades, with job creation failing to keep pace with increases in the working-age population. South Asia employed 55 percent of its working-age population in 2023, compared with 70 percent in other EMDEs.

Much of this jobs shortfall is driven by unusually low employment rates among women, many of whom are absent from the labor force entirely, seeking neither employment nor engaging in education or training (World Bank 2024b). Only 32 percent of working-age women in South Asia were in the labor force in 2023—well below the region’s male labor force participation rate of 77 percent and the EMDE-average female labor force participation rate of 54 percent (figure 2.1). Even in Bhutan, the country with the highest female labor force participation rate, only 64 percent of working-age women were in the labor force.<sup>1</sup>

South Asia’s rates of female labor force participation remain low despite faster-than-average progress over the past three decades. Between 1991 and 2023, female labor force participation in South Asia has risen by 6 percentage points of the working-age population to 32 percent, even as it has fallen by 5 percentage

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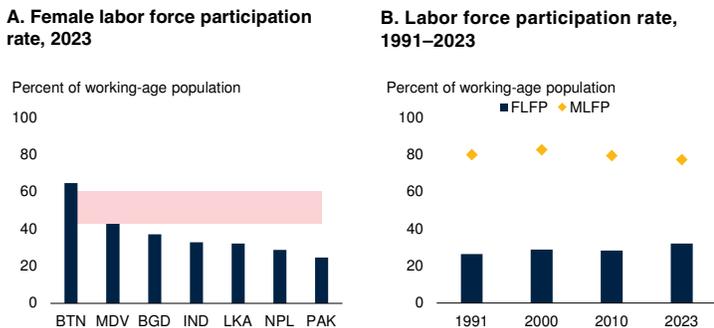
*Note:* This chapter was prepared by Maurizio Bussolo and Jonah Rexer, with inputs from Maggie Triyana, Jean Nahrae Lee, Lynn Hu, Tillmann Spindeldreier, Issac Yurui Hu, and Andy Jiang.

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<sup>1</sup>ILO modeled estimates of labor force participation rates are used where appropriate throughout this report to facilitate standardized comparisons across countries and over time. These numbers may differ from national estimates, which often use varying definitions and methodologies. For India, the 2023 ILO modeled

## FIGURE 2.1 Female labor force participation

Female labor force participation rates in most South Asian countries remain in the bottom quartile among EMDEs and far below male labor force participation rates.



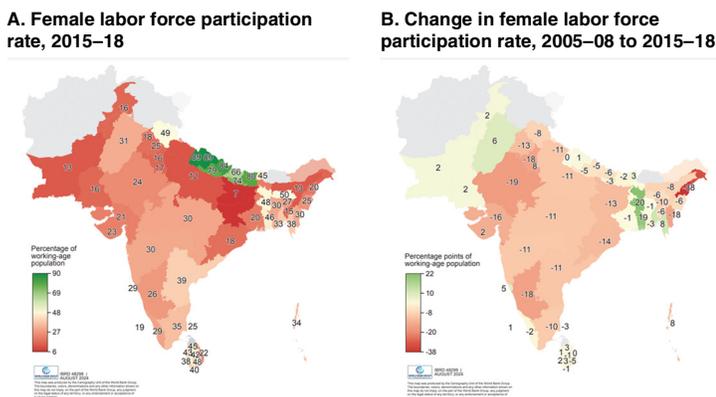
Sources: International Labour Organization (ILO); World Development Indicators (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; FLFP = female labor force participation; IND = India; LKA = Sri Lanka; MDV = Maldives; MLFP = male labor force participation; NPL = Nepal; PAK = Pakistan.

A. B. Red shaded region indicates interquartile range of EMDEs excluding South Asia (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka). EMDE averages are weighted by working-age population. Female (male) labor force participation rate is the share of the female (male) working-age population (15+) employed or looking for work, measured using ILO's ILOStat modeled data. Even if national data, based on national definitions, were used for South Asia, all countries except Bhutan and Maldives would remain in the bottom quartile among EMDEs. All regional averages are weighted by working-age population. Afghanistan has not published any official statistics since 2020.

## FIGURE 2.2 Female labor force participation in subnational units

There were almost no South Asian subnational units that posted sizable gains in female labor force participation between 2005–08 and 2015–18.



Source: World Bank Global Labor Database (GLD) labor force survey microdata (database); World Bank.

Note: A. B. Labor force participation is measured as the share of women of working age (15–64) who were actively engaged in the labor force during the seven days preceding the survey. Subnational boundaries are fixed for the first year in which GLD data are available for each country. GLD data are available for Pakistan, India, Nepal, Bangladesh, and Sri Lanka. Surveys used are in annex table 2.1. Subnational labor force participation rates are averaged across all available survey waves for two periods: 2005–08 and 2015–18.

estimate is 32.7 percent, while the national estimate is 37 percent or 31.6 percent, depending on recall period, according to estimates from the Periodic Labour Force Survey provided by the Ministry of Statistics and Programme Implementation. In any case, India remains in the bottom quartile of EMDEs. However, disagreements remain about the most appropriate methodology for measuring female labor force participation.

points on average across other EMDEs. However, there has been substantial variation across countries. Bangladesh, Maldives, and Pakistan all posted double-digit gains over this period, albeit from a low base. Gains were more modest in Bhutan, India, and Nepal, while the female labor force participation rate declined in Sri Lanka.

Afghanistan is excluded from most of the analysis in this chapter because of a lack of recent data: no official statistics have been published since 2021. Recent phone-based monitoring surveys conducted by the World Bank suggest that the prolonged economic crisis following the 2021 Taliban takeover has brought about a large increase in female labor force participation, from 14 percent in 2020 to 43 percent in 2023. However, given social norms, economic conditions and legal restrictions, the market has struggled to absorb the female labor market entrants, nearly half of whom remained unemployed in 2023 (World Bank 2023).

Within South Asian countries, female labor force participation has also been consistently low across states, regions, and other first-level subnational units (figure 2.2). Based on the latest available comparable subnational data across five countries (2015–18), no Indian state had a female labor force participation rate above 51 percent. Even in Kerala, which has the highest female literacy rate in India, female labor force participation stood at just 29 percent. In Sri Lanka, the highest province-level rate was 49 percent, while in Bangladesh no division surpassed 38 percent. In Pakistan, female labor force participation rates did not exceed 31 percent in any province. Only in Nepal did female labor force participation approach male levels, although this was primarily due to differences in measurement that treated some forms of women's household work as participation. Similarly, there were almost no subnational units that posted sizable gains in female labor force participation between 2005–08 and 2015–18. Female participation rates fell in nearly all Indian states and rose only in a handful of provinces in Pakistan and divisions in Bangladesh. However, national trends since 2018 have demonstrated a notable uptick in female labor force participation for India of 7–14 percentage points under official definitions, ILO estimates, and harmonized labor force survey data.

Ultimately, female labor force participation is the outcome of the interplay between labor supply, demand, and the ease of labor market adjustment (Bhalotra, Clarke, and Walther 2023; Bhalotra and Fernández 2024; Heath et al. 2024). On the supply side, the literature analyzing what affects the ability and willingness of women to join the workforce points to the importance of education, marriage and childrearing behavior, social norms, subsidized childcare, safety on the streets, commuting costs, and the incentives generated by welfare policies (Blundell et al. 2016; Eckstein and Lifshitz 2011; Eckstein and Wolpin 1989; Psacharopoulos and Patrinos 2018). On the demand side, the stylized, cross-country U-shaped relationship between female labor force participation and per capita income suggests that female employment is closely related to the development process (Goldin 1994; World Bank 2022b). That is, changes in the spatial and sectoral patterns of economic activity that often accompany long-run economic growth—such as urbanization, the shift to services, and increasing trade openness—may generate demand for female labor, opening up opportunities for women to join the workforce. Finally, recent evidence suggests that labor market frictions, such as incomplete information about job opportunities or the inability to signal qualifications (for example, through references) also play an important role in limiting female labor force participation (Abel, Burger, and Piraino 2020; Jensen 2012; Lowe and McKelway 2024).

### Key questions

This chapter explores the drivers and implications of South Asia's low female labor force participation, and policies to raise female participation, by addressing the following questions:

- What are the economic costs of low female labor force participation?
- What has been the impact of growth and structural change on female labor force participation?
- What has been the impact of supply constraints and labor market frictions on female labor force participation?

- What has been the impact of the legal framework and social norms on female labor force participation?
- What policy interventions might raise female labor force participation?

### Contributions

This chapter provides an in-depth analysis of the primary factors identified in the literature as key drivers of female labor force participation. In doing so, it makes several novel contributions.

**Compares estimates of output effects.** Previous work typically uses accounting (Woetzel et al. 2015), production function (Çelik et al. 2023; Pennings 2022), or semi-structural (Eberhard-Ruiz and Michel-Gutierrez 2022) approaches to estimate the output gains from increasing female labor force participation. This chapter compares these different estimators and identifies the role played by different assumptions about capital flexibility, complementarities in inputs, and the composition of employment. Some key policy recommendations emerge from this comparison.

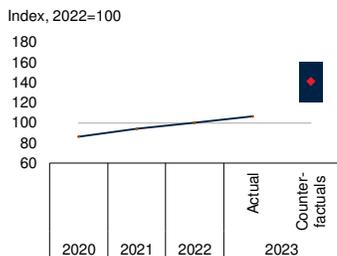
**Compares the effects of multiple structural changes.** Previous work has tested the effects of individual structural changes on female labor force participation, either in cross-country data or within individual countries (Heath and Mobarak 2015; Hyland, Islam, and Muzi 2020; Petrongolo and Ronchi 2020). This chapter is the first to use subnational microdata to compare the impacts of different structural changes on female labor force participation, both within countries and across South Asia. In particular, this chapter compares the effects of growth in the services sector, urbanization, and trade openness across South Asian labor markets.

**Examines the effects on female participation of the interaction between urbanization and social norms.** The rural-urban gap in female labor force participation in South Asia has been a topic of substantial investigation (Chatterjee, Murgai, and Rama 2015; Klasen and Pieters 2015). This chapter offers a new explanation: the interaction between social norms and labor market structure. Although urban areas offer high-wage opportunities to educated women, these are

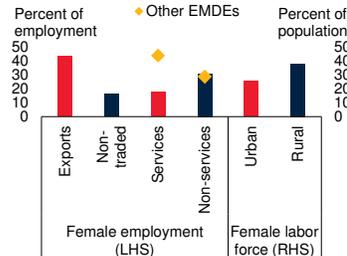
### FIGURE 2.3 Female labor force participation and its drivers

Female labor force participation rates in most South Asian countries are in the bottom quartile among EMDEs and far below male labor force participation rates. Were female labor force participation rates with the same as men's, output could be 13–50 percent higher. Demand-side and supply-side factors, social norms, and legal provisions are holding back female labor force participation.

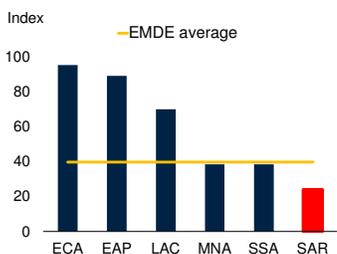
#### A. South Asia's output: Actual and counterfactual



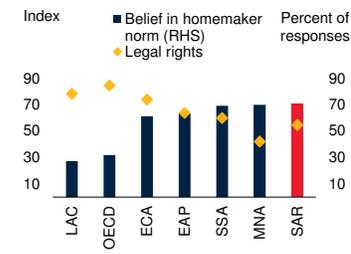
#### B. South Asia: Female employment shares labor force participation rate



#### C. Childcare provision



#### D. Women's legal rights and social norms



Sources: UN Comtrade; World Bank World Development Indicators (database); World Bank Women, Business, and the Law (database); World Bank Global Labor Database (GLD) labor force survey microdata (database); World Bank-Facebook Survey on Gender Equality at Home (database); World Bank.

Note: EAP = East Asia and the Pacific; ECA = Europe and Central Asia; EMDE = emerging market and developing economy; FLFP = female labor force participation; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; OECD = Organisation for Economic Co-operation and Development; SAR = South Asia; SSA = Sub-Saharan Africa.

A. Blue range shows counterfactual model estimates if South Asia's female employment shares were raised to parity with those for men. Blue line indicates prior GDP data from 2020–2023. Red diamond shows median model estimate. See main text and annex 2.2 for details on the models.

B. The female employment share is the proportion of women in a sector's workforce. Bars show female employment shares in export or non-tradable sectors, services and non-services sectors, or the female labor force participation of urban and rural women in SAR. Diamonds indicate the female share of services and non-services in other EMDEs. Export sectors are the top five sectors based on export share in total trade for that sector-year, (that is, the top-ranked export sector is the net exporting sector  $s$  in country  $c$  at year  $t$  for which  $x_{sct}/(x_{sct} + m_{sct})$  is the highest). Non-tradeable sectors are those for which  $x_{sct} = m_{sct} = 0$ . Labor force participation is the share of women of working aged 15–64 in the labor force within seven days of the survey. Female shares of export and non-tradeable sectors from GLD and UN Comtrade are available only for SAR. The female shares of services and non-services sectors come from ILO, and are the averages of 2021–2023 shares weighted by the female population of 2023. The female labor force participation rates come from GLD and SARLD microdata and only included the most recent available year of data: BGD – 2022, IND – 2022, LKA – 2021, NPL – 2017, PAK – 2020.

C. Bars show the regional average legal score of the provision of childcare services for children below three years of age. The horizontal line shows EMDE average excluding SAR countries (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka). All regional averages are weighted by the working-age population.

D. Diamonds show the share of respondents who agreed with the “female homemaker” norm by region; data is from 2020. Bars show the average legal index score by region. All regional averages are weighted by the working-age population.

insufficient to overcome social norms that pressure women to stay at home. Since urban labor markets are characterized by more formal employment relationships outside the home relative to home-

based self-employment in farming and household businesses, social norms against women's work bind more strongly. Other labor supply constraints, including availability of safe transport and accommodation, as well as quality childcare, may also bind more strongly in urban areas.

**Examines the role of social norms and laws.** The chapter combines several novel datasets to quantify, for the first time, how female labor force participation varies with the restrictiveness of social norms and the legal framework. However, the gap between the *de jure* legal framework and its *de facto* implementation may be wide. This chapter studies how social norms, institutional quality, and economic development jointly determine the implementation of gender equality laws. The chapter also provides the first estimation of the dampening effects of marriage on female employment in South Asia—a phenomenon closely related to social norms. This extends previous studies that have estimated the child penalties for 134 countries, and the marriage penalty only for a limited set of countries (Kleven et al. 2019; Kleven, Landais, and Leite-Mariante 2023).

### Main findings

**Output losses.** Overall, increasing women's labor force participation rate to the male rate would increase regional GDP by 13–51 percent (figure 2.3, 2.5). The effect would be greatest if additional capital accumulation accompanied the increase in labor supply, and if labor markets were sufficiently flexible to allow women to access higher-productivity jobs without crowding out men.

**Barriers to employment.** Despite a dramatic narrowing of gender gaps in educational attainment across South Asia, women's ability to supply their labor is constrained by such factors as the lack of safe transport, childcare, and legal protections. South Asia ranks last among EMDE regions on providing a legal framework for adequate childcare, and second-lowest on legal restrictions on women's mobility and overall legal equality for women.

**Development and structural change.** In all South Asian countries except Bhutan, female labor force participation rates in 2023 were lower—by 5–25 percentage points—than would be expected based

on their level of development. In line with international experience, female participation has tended to be higher in South Asian labor markets with greater export exposure. But in contrast to international experience, shifts toward services activity and urbanization have not been associated with greater female labor force participation. This highlights that, even when opportunities (such as from urbanization or service sector growth) have been created, women have faced obstacles to exploiting them.

**Social norms versus labor market signals.** Women in urban areas in South Asia earn an 8–51 percent wage premium compared with women in rural areas and a 10–63 percent wage premium in services compared with other sectors. An additional year of schooling increases the market wage by 10 percent for urban women but only 7.5 percent for urban men. Still, despite smaller wage gaps and higher returns to education in urban areas, female labor force participation is lower in urban centers than in rural areas. Similarly, female employment shares in key service activities that employ large shares of women in other EMDEs remain low in South Asia. This suggests that social norms and other supply-side constraints, such as childcare access, mobility, and safety, override labor market signals. The shortfall of women in the labor force and employment is most pronounced after marriage. Women in South Asia reduce their employment rates by 12 percentage points after marrying, even before they have children.

**Social norms and laws.** South Asian countries have legal frameworks—from business registration processes to inheritance laws—that are among the least female-friendly in the world. They also have among the most conservative gender attitudes in the world, with 70 percent of the population expressing beliefs that are opposed to women working outside the home. Conservative social norms strongly correlate with low female labor force participation. They deepen the impact of gender-biased legal frameworks, erode the implementation of more gender-neutral legislation, and dampen the effect of structural change in raising female labor force participation.

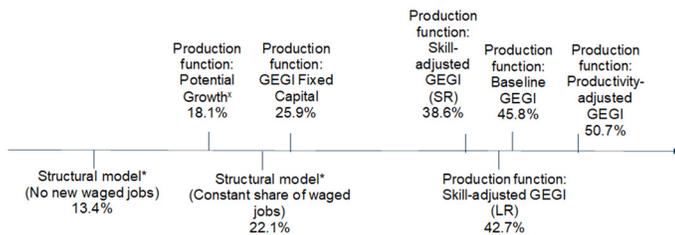
**Policies.** The diverse drivers of female labor force participation suggest the need for a multi-pronged policy effort to raise it. On the supply side, obstacles to women's employment outside the home, such as the lack of safe transport or quality child and elder care, as well as remaining legal biases (and shortcomings in their implementation) need to be removed. As supply constraints are relieved, demand-side measures that support continued shifts toward a more open, more services-based, and more urban economy are likely to facilitate greater female participation, especially if they are accompanied by productivity- and investment-enhancing measures. Such policies will be more effective if combined with a shift toward social norms that look more favorably on women working outside the home.

## Data

This chapter compiles data from numerous sources to study the costs of, and reasons for, low female labor force participation in South Asia (annex 2.1). Microdata on female labor force participation in South Asia are drawn from the World Bank's Global Labor Database (GLD) and are available for Bangladesh, India, Sri Lanka, Nepal, and Pakistan from 1990–2022. Cross-country data on female labor force participation are drawn from the World Bank's World Development Indicators (WDI), extended to 2023 using the International Labour Organization's ILOstat database, and are available for up to 187 countries, including 139 EMDEs, for 1992–23. Since much of this chapter relies on cross-country comparisons, these data are used to ensure cross-country comparability. That said, annex 2.1 shows that all South Asian countries other than Bhutan and Maldives fall into the bottom quartile of EMDEs in female labor force participation even if national definitions using the most recent national data are used. Other data sources include UN Comtrade statistics, the World Values Survey, the Demographic and Health Surveys, and the World Bank-Facebook Survey on Gender Equality at Home (note that the measurement of social norms is in its infancy; few datasets are available and their representativeness of the full population is imperfect).

## FIGURE 2.4 Impact on GDP of raising female labor force participation to the male rate

In South Asia, raising women's labor force participation rates to those of men could lift output by 13–51 percent, with larger impacts if the capital stock is increased to equip the additional female workers and if barriers to women's access to higher-productivity jobs are removed.



Sources: World Bank. Authors' estimations using different analytical approaches. See main text and annex 2.2 for details on the models.

Note: GEGI = gender employment gap index; LR = long run; SR = short run. The numbers show the percent difference in aggregate GDP between a scenario with no gender gaps in labor force participation and the baseline scenario with persistent gender gaps. The symbol x indicates this estimate includes only India, Pakistan, and Bangladesh, and the symbol \* denotes the exclusion of Afghanistan, Bhutan, and Maldives.

## Macroeconomic impact of closing the gender gap in labor force participation

*Estimates of the effect on GDP of raising the female employment rate to that of men range from 13 to 51 percent, depending on assumptions and modeling methods. Larger GDP impacts are obtained when the increase in female labor force participation is accompanied by capital accumulation and does not crowd out men, and when women can access all, including higher-productivity, jobs.*

In 2012, the World Bank's World Development Report argued that "greater gender equality is smart economics, [because it enhances] productivity and improves other development outcomes" (World Bank 2012, p. xiii). In 2015, the McKinsey Global Institute published the study "The Power of Parity: How Advancing Women's Equality Can Add \$12 Trillion to Global Growth," which showed the large potential effect that fostering gender equality could have on economic growth (Woetzel et al. 2015). This section explores the current empirical evidence relating to these statements using a range of macroeconomic modeling approaches. This exercise shows that large economic gains could be reaped from raising female to male labor force participation rates in South Asia.

The impact of raising female labor force participation rates to those of men will depend on three sets of mechanisms: (i) the time horizon and, in particular, whether it is long enough to allow an increase of physical capital to accompany the expansion of female employment; (ii) the differentiation between more and less productive jobs and the gender gap in access across job types; and (iii) the technology and how it combines different types of labor and capital.

Annex 2.2 describes in detail the approaches used in this chapter, which fall into two categories: production function models and empirical structural models; within these categories, there are eight model variants which produce a range of estimated effects. The most comprehensive approach is the productivity-adjusted Gender Employment Gap Index (GEGI) model of Pennings (2022) and Fiuratti, Pennings, and Torres Coronado (2024). The most restrictive approach is the potential growth approach (Celik, Kose, and Ohnsorge 2023), which allows neither for capital accumulation nor for productivity distinctions between jobs. Figure 2.4 summarizes the estimated effects on output of closing the gap between male and female labor force participation in South Asia as various assumptions are adjusted.

The exercises conducted here rest on several strong assumptions. First, they assume that the women drawn into the labor force are fully employed. Second, they assume that female employment does not crowd out male employment. Third, they assume that whatever tasks women were engaged in before they entered the labor market were not income-generating and that there is no loss of output when women switch out of them into employment. This assumption is unavoidable given existing data, but some evidence shows that women's economic contributions might be underestimated given current measurement approaches (Amir et al. 2018; Mancini 2021). Fourth, they assume that the increase in female labor force participation is achieved through the removal of barriers to women's employment rather than through the introduction of distortionary policies that could generate offsetting losses. Finally, very large increases in female employment are required to achieve gender parity, a situation that does not prevail even in advanced economies. These

scenarios should be viewed as aspirational rather than as explicit targets, quantifying the total losses associated with gender inequality in labor markets.

### Regional impact

**Impact on South Asia's output: 13–51 percent.** If labor force participation rates for women were raised to those of men, South Asia's regional GDP (and, by construction, also per capita income) would be 13–51 percent higher (figure 2.1). The largest 51 percent impact would be achieved if, on average, additional women entering employment are equipped with the same machines and tools as incumbent workers and can access jobs anywhere in the economy, including jobs with higher labor productivity, where gender participation gaps tend to be larger. This largest impact will be realizable only in the long term, once short-term barriers to mobility across sectors and jobs and impediments to capital accumulation are overcome. The smallest impacts occur when labor productivity declines as women's participation rises.

**Mechanisms of impact.** Comparisons between the results from the different models indicate several channels through which larger output impacts can be achieved when female labor force participation rises.

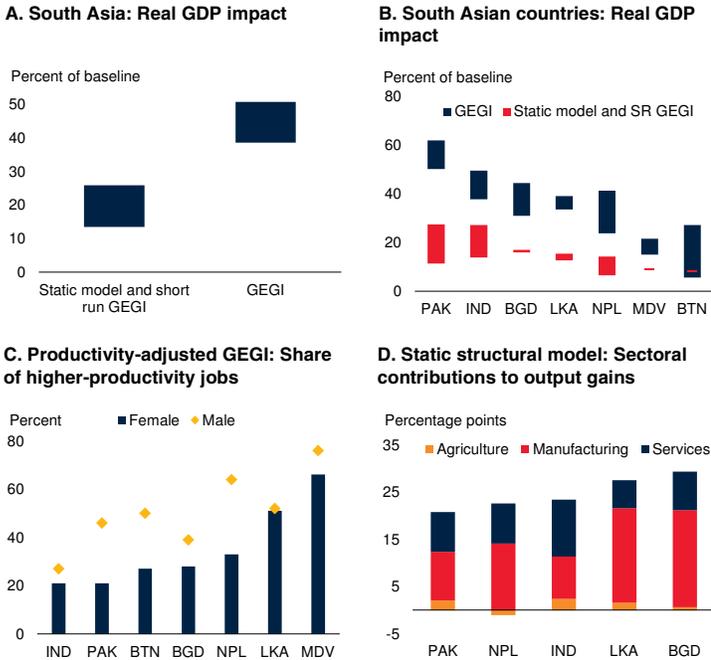
- **Capital accumulation and technology.** In the long term, capital stocks can increase to equip the increased labor supply, and raising the effect on output. A comparison between short-term and long-term versions of the GEGI model (Fiuratti, Pennings, and Torres Coronado 2024; Pennings 2022) indicates that this effect can account for nearly half of the total output impact (20 percentage points). If capital is complementary only to skilled, but not unskilled labor and if gender gaps are larger among unskilled labor, capital accumulation over the long term would be limited and the output gains from flexible capital would be lower.
- **Mobility and productivity differentials.** Gaps between female and male employment tend to be particularly large in sectors where labor productivity is relative high (annex table

A2.2.3). The effect of the openness to women of employment in all sectors is captured by the difference between two versions of the GEGI model, with and without a productivity adjustment. This suggests that the ability of women to enter all, including high-productivity, sectors could increase the gain in output by about 5 percentage points, from 45.8 percent to 50.7 percent.

- **Differences in gender gaps across skill levels.** Gender employment gaps in South Asia tend to be narrower for highly educated workers and wider among less educated ones. Raising female employment rates to those of men across all sectors will therefore lower average skills and labor productivity in the economy. The comparison between the baseline GEGI model and a skill-adjusted version that takes into account the difference in gender gaps suggests that closing South Asia's current gender gaps would mean increasing employment predominantly of less skilled women. Without further improving their skills, this could lower the gains in output impact by about 3 percentage points, from 45.8 to 42.7 percent (figure 2.4).
- **Occupational choice.** If competencies are distributed equally between women and men, and if women and men have the same preferences among occupations, then the differences in types of occupation between men and women reflect barriers to women choosing the jobs that best match their skills (Eberhard-Ruiz and Michel-Gutierrez 2022; Hsieh et al. 2019). By equalizing male and female employment rates across sectors, this misallocation is reduced and output rises. This is partially offset by falling value-added per worker, because of diminishing returns, as each sector's labor supply rises. The occupational choice model suggests that the net effect of raising female to male employment rates in all sectors would be an output increase of about 13 percent. Output gains would rise to 22 percent when allowing waged jobs to increase within each sector such that their share remains constant as female employment rises.

## FIGURE 2.5 Effects of raising female labor force participation to the male rate

Output gains from raising female participation would be largest in countries with the widest current gender gaps, when physical capital is allowed to increase, and when high-productivity jobs are open to women.



Sources: World Bank. Authors' estimations using different analytical approaches. See main text and annex 2.2 for details on the models.

Note: BGD = Bangladesh; BTN = Bhutan; GEGI = gender employment gap index; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan.

A. Bars show the range of regional GDP model estimates, reflecting the impact of raising female employment to parity with men on regional real GDP in South Asia. The left bar shows the range of estimates from the accounting and short-run (fixed capital) GEGI model, and the right bar shows other GEGI models.

B. Bars show the range of model estimates. Estimates reflect the impact of raising female employment to parity with men on country-level real GDP across South Asia. Red bar show the range of estimates from the accounting and short-run (fixed capital) GEGI model ("SR GEGI"). Blue bar show the range of estimates from the other GEGI models ("GEGI").

C. Bars show the share of higher-productivity waged jobs for women (bars) and men (diamonds), used in the productivity-adjusted GEGI model. Higher-productivity jobs include formal employment and non-agricultural jobs. Estimates are in annex table A2.2.3.

D. Estimates show sectoral contributions to GDP gains from the static structural model, using a constant share of waged jobs. Estimates are in annex table A2.2.4.

### Country impact

**Initial conditions.** The same methodologies are applied to individual country data. Countries with the widest initial employment gaps (such as India and Pakistan) would enjoy the largest output increases (annex table A2.2.3). The baseline GEGI estimates of long-term output gains range from below 20 percent in Bhutan, to around 40 percent in Bangladesh, and over 50 percent in Pakistan (figure 2.5). Impacts could be even larger if women have access to employment

opportunities in higher productivity activities, such as those in the formal and non-agricultural sectors. In the short term, when capital stocks are fixed, the output gains would be only about half the long-run gains.

**Sectoral composition.** In all South Asian countries, output gains from closing the gender gap in labor force participation would be driven by the manufacturing sector, followed by the services sector (annex table A2.2.4). The structural approach which estimates changes in productivity across sectors makes it possible to estimate the contributions of individual sectors to output gains. If more women were to access manufacturing jobs, output would rise by 9 percent in India and as much as 21 percent in Bangladesh, because of Bangladesh's higher initial labor productivity in manufacturing. Despite progress in the garment industry, gender gaps in employment across the broader manufacturing sector in Bangladesh remain sizable. The results also show that only modest gains can be expected from the agriculture sector because of low labor productivity and smaller gender gaps in employment.

## Labor demand: Development and structural change

*As in other EMDEs, South Asia's development path over the past three decades has been accompanied by major structural changes, including a shift toward service activities, urbanization, and greater trade openness. A large literature on each of these topics, spanning a multitude of countries and techniques, has found that these changes are usually associated with greater demand for female labor. In South Asia, indeed, women's earnings in urban areas, service sectors, and export-oriented activities are closer to men's earnings than elsewhere in the economy. However, the stronger demand, implied by these narrower wage gaps, has not been matched by higher female employment: neither urbanization nor the shift to services has been accompanied by greater female labor force participation. The exception is rising exports, which have been associated with greater female labor force participation in South Asia, but the effect has been small.*

## Development: rising per capita incomes

**Findings from the literature.** Typically, female labor force participation has had a U-shaped relationship with economic development, measured by per capita income (Boserup 1970; Durand 1975; Goldin 1994). At a low level of development, female participation rates are high because the need to raise income for subsistence overcomes the substitution effect of low earnings on the choice between work and leisure. As per capita incomes rise, the supply of labor is initially reduced as the income effect—increased demand for leisure time—outweighs the substitution effect, with female wages remaining too low to pull women out of their home-making specialization, so that female participation falls. But as per capita incomes rise further, the substitution effects again dominates, with women being pulled into the labor market by rising wages that converge with men's. The interplay between income and substitution effects is reinforced by shifts in the structure of the economy. The initial predominance of self-employment in agriculture—where women are often unpaid workers in small family farms—shifts to employment first in manufacturing and finally in services. The U-curve, however, remains a correlational and not necessarily a causal relationship (Gaddis and Klasen 2014).

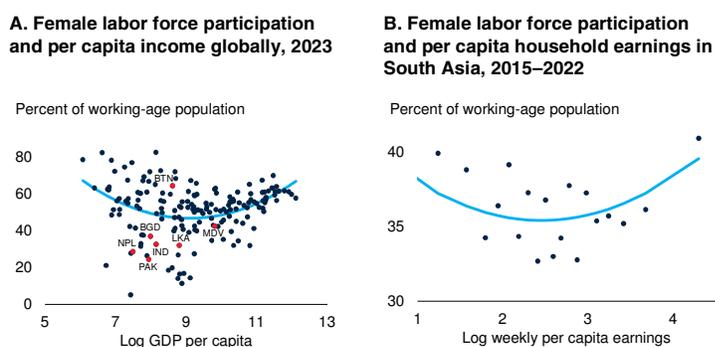
**South Asia's position in the U-curve.** Female labor force participation rates in all South Asian countries except Bhutan are well below the global U-shaped curve, by 5 to 25 percentage points (figure 2.6). The same forces that operate across countries also operate across households within a country. Data from household surveys in five South Asian countries show a U-shaped relationship between weekly per capita earnings and the share of women employed.

### Shift toward services

**Findings from the literature.** Inter-sectoral transformation—the process by which labor shifts from low-productivity agriculture to high-productivity manufacturing and services—may play an important role in expanding employment opportunities for women (Lewis 1954; McMillan, Rodrik, and Verduzco-Gallo 2014). For Asia, it was the rapid expansion of opportunities, both in

## FIGURE 2.6 Female labor force participation and development

*Female labor force participation has a U-shaped relationship with income, both across countries and across subnational units within South Asian countries. All South Asian countries, except Bhutan, fall well below the international U-curve.*



*Sources:* International Labor Organization (ILO); World Bank Global Labor Database (GLD) labor force survey microdata (database); World Development Indicators (database); World Bank.

*Note:* BGD = Bangladesh; BTN = Bhutan; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan.

A. Panel shows scatterplot of natural log per capita GDP and the female labor force participation rate. Blue line represents a quadratic fit. Female labor force participation rates are modeled International Labour Organization estimates for the female population ages 15+ in 2023. Per capita GDP is for 2022, measured in constant 2015 U.S. dollars.

B. Binned scatterplot of 20 quantiles of weekly natural log of per capita household earnings using Global Labor Database microdata for working-age women (15–64). Estimation sample is from the most recent survey year: BGD – 2016, IND – 2022, LKA – 2021, NPL – 2017, and PAK – 2020. Weekly per capita household earnings are the sum of all wage labor income divided by the number of household wage earners, converted to 2022 U.S. dollars. Blue line represents a quadratic fit of the underlying data.

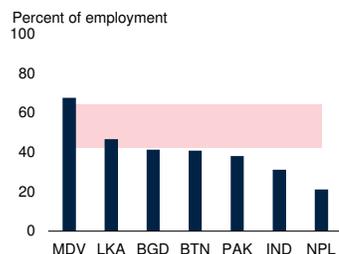
factory work and services, that drew women into the labor force (Brinton 2001). Historically, in the advanced economies, the services sector, in particular, has often served as an entry point for women to join the labor market (Petrongolo and Ronchi 2020). The rise of white-collar professional service occupations—such as stenographers, bookkeepers, and secretaries—accounts for a large share of the dramatic rise in female labor market participation in the United States after World War II (Ngai and Petrongolo 2017). Service sector jobs facilitate women's entry into employment since they do not place the same premium on physical strength as do jobs in agriculture and manufacturing (Borghans, Ter Weel, and Weinberg 2014; Galor and Weil 1996; Rendall 2024; Weinberg 2000). Thus it is not surprising that cross-country regressions show that as economies shift to services, more women enter the labor market (Ostry, Alvarez, and Papageorgiou 2018).

**Shift toward services in South Asia.** In South Asia, the services sector has grown rapidly in the past three decades, although from a somewhat

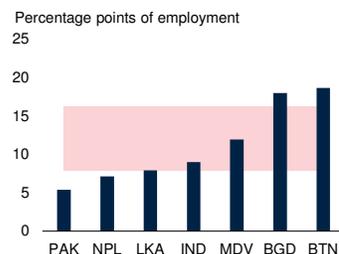
## FIGURE 2.7 Shift toward services

Rising shares of service sector employment in South Asia have not been associated with growing female labor force participation, unlike in other countries.

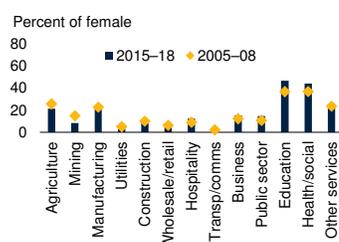
### A. Employment in services, 2022



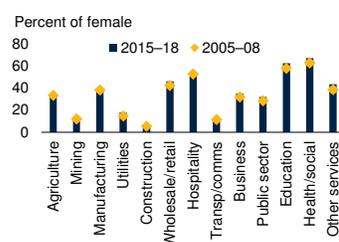
### B. Changes in employment shares of services, 1991–2022



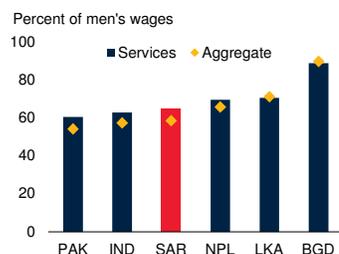
### C. Female employment: South Asia



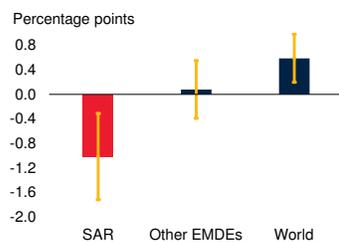
### D. Female employment: EMDEs



### E. Women's wages relative to men's



### F. Correlation between services employment share and female labor force participation



Sources: International Labor Organization (ILO); World Development Indicators (database); World Bank Global Labor Database (GLD) labor force survey microdata (database); World Bank South Asia Region Labor Database (SARLD) labor force survey microdata (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka); Trans/comms = transportation and communication.

A. Bars show the services share in total employment in 2022. Red shaded area is interquartile range for other EMDEs. EMDE average is weighted using working-age population. The EMDE average is weighted by the working-age population.

B. Bars show the change in the services share of total employment from 1991–2022. Red shaded area is interquartile range for other EMDEs. The EMDE average is weighted by the working-age population.

C.D. Plot shows women as a share of total employment for each sector for SAR (C) and other EMDEs (D). SAR data is from Global Labor Database (GLD) and South Asia Region Labor Database (SARLD) microdata, other EMDEs from the International Labour Organization (ILO). Sectors are harmonized and coded according to the ISIC3.1 Revision. Comparison years are selected based on maximum data availability. Shares represent the averaged shares from 2005–08 and 2015–18 and are weighted using the average female population during these two time periods (D) and survey weights divided by the number of survey waves (C).

E. The gender wage gap is calculated as the ratio of female to male average wages, conditional on education, in each sector. Estimates are derived from coefficients of country-specific regressions of log wages on interactions between gender and sector indicators, controlling for education and survey wave fixed effects. Survey waves are shown in annex 2.3. Estimates of gender wage premium by sectors are in annex table 2.3.

F. Residual relationship between services labor market concentration and female labor force participation is calculated by regressing the ratio of (log) female to male labor force participation on the share of services employment, controlling for log GDP per capita and country fixed effects. Country-level data from 1992–2022 is for 129 EMDEs, or for 171 countries, excluding those in South Asia. South Asian data at the subnational unit (state)-survey, are for Bangladesh, India, Nepal, Pakistan, and Sri Lanka for 1987–2022. SAR data is from GLD and SARLD microdata, and other EMDEs from ILO. GLD and SARLD survey waves are shown in annex table 2.1. Regression results for South Asia subnational data are from annex table 2.2.

lower starting point in the 1990s than other EMDEs (figure 2.7). From 1991 to 2022, services employment in the region as a whole grew broadly in tandem with other EMDEs, with the median change in the share of services employment across South Asian countries near the median for other EMDEs. However, because of the lower starting point, the share of services in 2022 remained below the EMDE average in all countries except Maldives, where the tourism sector dominates the labor market. Across South Asian countries, the fastest increase occurred in Bhutan, in part reflecting liberalization and rapid growth in the technology sector (Mason 2019), while the slowest increase was in Pakistan, where limited progress in raising education levels has held back higher-skill jobs in the services sector.

**Below-average female employment shares in services.** Globally, greater services employment has been associated with higher female labor force participation. But in South Asia greater services employment has been associated with lower female labor force participation at the subnational level, in part because the growing services sector has not absorbed women leaving agricultural employment (figure 2.7 and annex table 2.2). Except in education and health care, female employment shares have barely grown across services subsectors in South Asia and, for most services subsectors, remain lower than in agriculture and even manufacturing. In other EMDEs, women account for 30–50 percent of employment in subsectors such as retail, hospitality, business, and public administration and even more in social subsectors such as education, health, and social work. In South Asia, female employment shares in these services subsectors are 15 to 42 percentage points below those in other EMDEs (figure 2.7). Job creation in the non-agricultural sectors opens opportunities for female employment. However, supply-side constraints must be lifted for these opportunities to be realized.

**Wage differentials in services.** Female employment shares in the services sector are low despite gender wage differentials that are more favorable to women than in other sectors. On average across South Asia, women earn only 58 percent of men's earnings, but this gap narrows in the services sector, where women earn 64 percent

of men's earnings (figure 2.7, annex table 2.3). This is a pattern in all South Asian countries except Bangladesh and Sri Lanka, but it is most pronounced in India and Pakistan.

## Urbanization

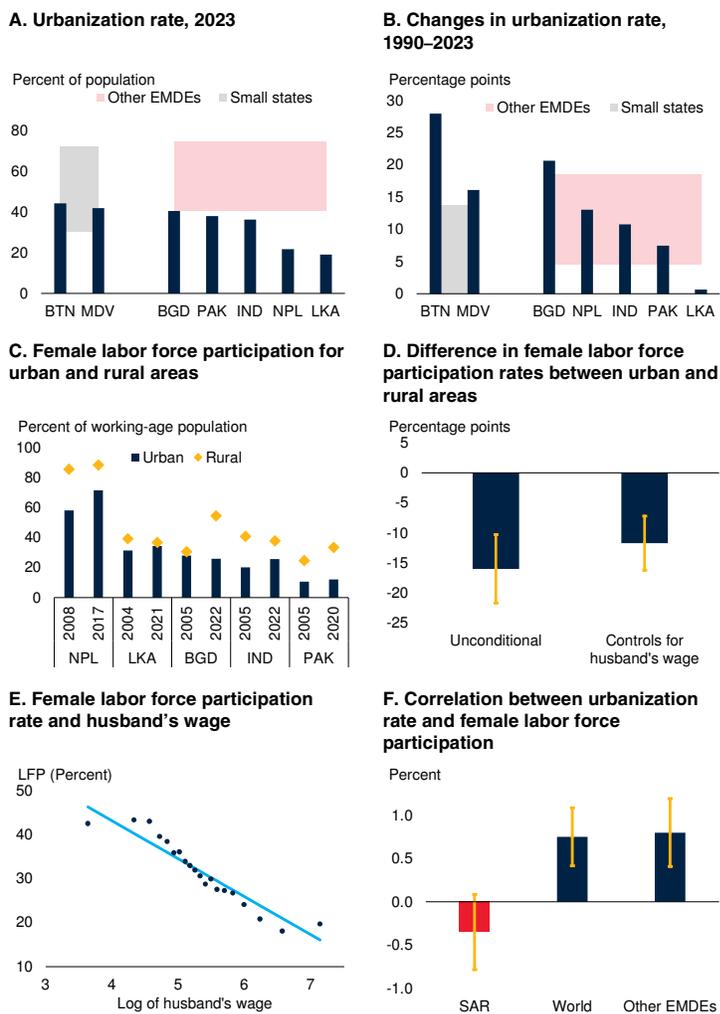
**Findings from the literature.** In urban areas, social norms tend to be less restrictive than in rural areas so that barriers to women's employment tend to be lower (Asher et al. forthcoming; Hyland, Islam, and Muzi 2020). Urban firms are also exposed to greater product and labor market competition, increasing incentives to forgo gender discrimination (Ashenfelter and Hannan 1986; Becker 1995; Cooke, Fernandes, and Ferreira 2019). Labor demand in urban areas is more concentrated in the services sector, both in South Asia (Desmet et al. 2015) and more generally, including in advanced economies (Michaels, Rauch, and Redding 2012), which typically employ a larger share of women. Finally, cities exhibit greater demand for skilled workers (Glaeser and Maré 2001), which benefits women, who tend to have higher returns to education (Psacharopoulos and Patrinos 2018). Conversely, higher salaries of husbands and fewer extended-family members for child care may discourage women in urban areas from working (Behrman et al. 1999).

**Urbanization in South Asia.** South Asia's population has rapidly moved to urban centers, although current urbanization rates remain lower than in other EMDEs. Between 1990 and 2023, the share of the population living in urban centers in South Asia has risen from 25 percent to 36 percent, still well below the 2023 average in other EMDEs of 60 percent (figure 2.8). Growth in employment that has accompanied urbanization in South Asia appears to have mainly benefited sectors that have historically disproportionately employed men (Klasen and Pieters 2015).

**Below-average female employment in cities.** Globally, greater urbanization has been associated with *higher* female labor force participation in both advanced economies and EMDEs (figure 2.8). But across South Asia, female labor force participation rates have been lower in urban centers than in rural areas (figure 2.8). The largest such gap is in Pakistan, where the female

## FIGURE 2.8 Urbanization

*In South Asia, urbanization is lower than elsewhere, although it has risen rapidly in recent years. In contrast to other EMDEs, urbanization has not been accompanied by rising female labor force participation.*



Sources: International Labor Organization (ILO); World Development Indicators (database); World Bank Global Labor Database (GLD) labor force survey microdata (database); World Bank South Asia Region Labor Database (SARLD) labor force survey microdata (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; LFP = labor force participation; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.

A. Bars show the urban share of total population in 2023. Red and gray shaded indicate the interquartile ranges for other EMDEs and small states EMDEs.

B. Bars show the change in urbanization rate from 1990–2023. Red and gray shaded areas indicate the interquartile ranges for other EMDEs and small states EMDEs. The 25 percent quartile of change in urbanization rate for small states EMDEs is below 0 (-0.7 percent) and is not shown in the graph.

C. Bars show female labor force participation as a share of the urban working-age (15–64) female population. Diamonds show female labor force participation as a share of the rural working-age (15–64) female population. Data is shown for the earliest available date from 2005–2008 and the most recent year.

D. Bars show estimates from a regression of a female employment indicator on an urban indicator, as well as age, survey year, and country fixed effects, in the sample of working-age women with wage-earning husbands. Controls for husband's income include the log of husband's daily wage and its square. The 95 percent confidence intervals are calculated from standard errors clustered at the state level.

E. Binned scatterplot using 20 quantiles shows the relationship between the log of husband's wages and female employment rate. Sample is all working-age women in SAR Global Labor Database (GLD) data. The regression model controls for country and year fixed effects as well as the spousal age gap. Blue line indicates a linear fit after residualizing covariates.

F. Residual relationship between urbanization rate and female labor force participation is obtained by regressing the (log) ratio of female to male labor force participation on the share of the urban population, controlling for log GDP per capita and country fixed effects. Country-level data from 1992–2022 for 132 EMDEs, or for 192 countries, excluding those in South Asia. South Asian data at the subnational unit (state)-survey, for Bangladesh, India, Nepal, Pakistan, and Sri Lanka for 1987–2022. SAR data is from GLD and SARLD microdata; other EMDEs is from International Labour Organization. GLD and SARLD survey waves are shown in annex table 2.1.

participation rate is 22 percentage points lower in urban centers than in rural areas. Administrative definitions of rural and urban areas are arbitrary and not comparable across countries, potentially yielding misleading results, but consistent measures of urbanization based on spatial data on the geographical distribution of population show that the negative association between urbanization and female participation remains robust (annex table 2.4).

**Wage differentials.** Female labor force participation in cities is low in South Asia despite considerably higher wages and smaller wage differentials favoring men, in cities than in rural areas. Women earn 35–50 percent higher wages in cities than in rural areas in India and Sri Lanka and 23–24 percent higher wages in Nepal and Pakistan—considerably larger differentials than those for men (figure 2.9). This larger urban wage premium for women appears mainly to reflect the greater prevalence of services in urban employment. Once sectoral composition is controlled for, on average across South Asia the urban wage premium falls to 32 percent of rural wages for women, lower than the 38 percent of rural wages for men (annex table 2.5). The still-substantial residual urban premiums for men and women are likely driven by greater productivity among urban workers, due to both selection and agglomeration effects (Glaeser and Maré 2001; Glaeser and Resseger 2010; Moretti 2011).

**Other factors.** Several other factors may depress female labor force participation in South Asia's cities below that in rural areas, despite higher relative wages.

- **Social norms.** In urban centers, formal and outside-the-home employment arrangements are more common, while in rural areas, women are more likely to be employed in household agriculture or self-employment (figure 2.9). Employment as a wage worker conflicts with social norms that discourage women from working outside the home; these norms may therefore be more binding in cities, even if they are less conservative than in rural areas. In urban India, household norms have been shown to restrict female labor supply (Jalota and Ho 2024).
- **Discrimination.** Women often face hiring and employment discrimination by employers, which becomes more relevant in urban areas where women are more likely to seek formal employment. A randomized control trial in Pakistan suggests that firms are willing to forego a wage subsidy of 15 percent to hire a man over a similarly qualified woman (annex 2.3; Bussolo et al., forthcoming).
- **Income differentials.** Incomes tend to be higher in urban areas, and higher spousal incomes are associated with lower female labor market participation (figure 2.8). Higher incomes may allow women to abandon their main home-based activities in rural areas: unpaid labor and self-employment (annex table 2.6). However, this income effect only explains 27 percent of the urban-rural female employment gap.

### Trade openness

**Findings from the literature: Exports.** Studies using cross-country panel regressions have found mixed evidence on whether export orientation promotes female labor market participation. Several cross-country studies have found a positive association (Bussmann 2009; Chen and Hu 2023; De Hoyos, Bussolo, and Núñez 2012; Özler, Taymaz, and Yilmaz 2009; Rocha and Winkler 2019;), while others have documented a negative association (Cooray, Dutta, and Mallick 2017; Gray, Kittilson, and Sandholtz 2006; Joekes 1999; Meyer 2006; Ozler, Wamboye, and Seguino 2015). In single-country studies, however, export orientation has been found to correlate with greater female labor force participation with several possible transmission mechanisms identified:

- **Cost competition.** Exporters compete in a larger, external market. In a more highly competitive environment, gender discrimination is more costly (Becker 2010; Heyman, Svaleryd, and Vlachos 2013; Weber and Zulehner 2014). Since women typically receive lower wages than men, and may often be no less productive, hiring women can be a cost-competitive strategy for exporters (Black and Brainerd 2004; Chen, Zhao, and Yu 2017; Ederington, Minier, and Troske 2009).

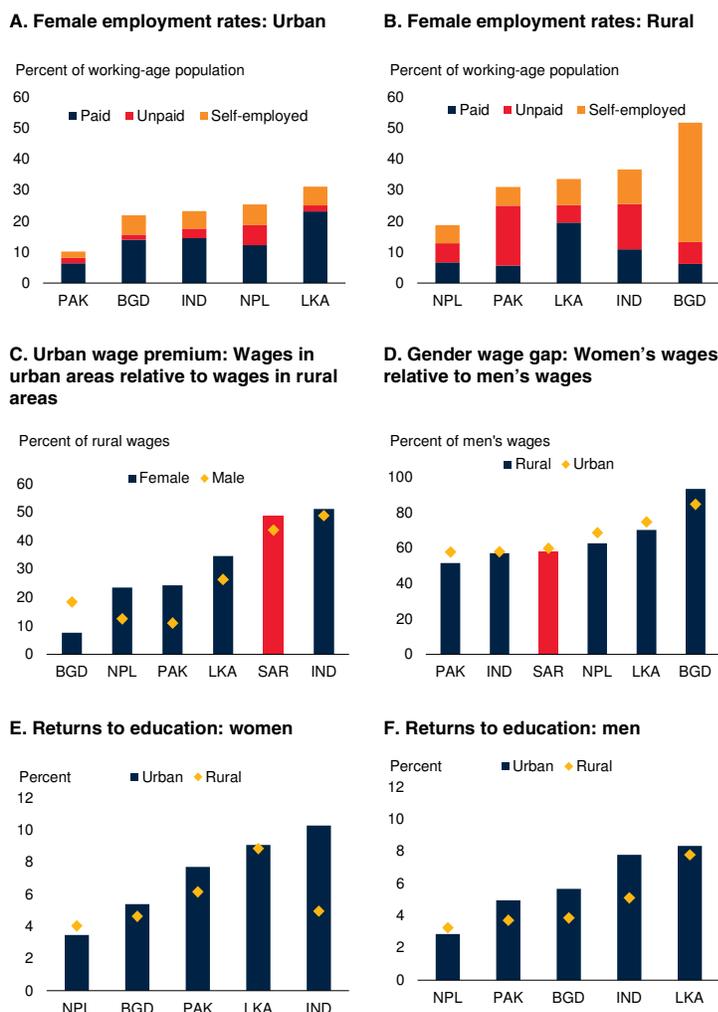
- **Technology upgrading.** Trade-induced competition may encourage firms to upgrade their technologies, reducing demand for labor to conduct physically demanding tasks and increasing female comparative advantage. For example, in response to tariff reductions in the North American Free Trade Agreement, Mexican firms increased exports, upgraded technology, and increased female employment (Juhn, Ujhelyi, and Villegas-Sanchez 2014).
- **Structural change.** If exports and output expand in initially female-intensive sectors, more women will tend to be drawn into the labor force (Aguayo-Tellez et al. 2014). For instance, rapid growth in ready-made garment exports in Bangladesh and Myanmar boosted the labor force participation of women living near garment factories (Heath and Mobarak 2015; Molina and Tanaka 2023).

**Findings from the literature: Imports.** How firms change the gender composition of their workforce in response to import competition is, in principle, ambiguous because different forces pull in different directions.

- **Comparative advantage.** A large literature in both advanced economies and EMDEs, a shows that increased exposure to import competition from tariff reductions can reduce employment prospects of lower-skill workers (Autor, Dorn, and Hanson 2013; Dix-Carneiro 2014; Dix-Carneiro and Kovak 2019; Dix-Carneiro, Soares, and Ulyssea 2018; Pierce and Schott 2016; 2017). Import competition may therefore reduce female employment in labor markets where women are disproportionately lower-skilled. It may also disproportionately reduce women's wages, as shown for India in sectors that competed with rising Chinese imports between 1990 and 2012 (Saha 2024).
- **Labor market rigidities.** Import competition may exacerbate gender gaps if women are more tenuously attached to labor markets or have more difficulty shifting their employment to expanding sectors. Mansour, Medina, and Velasquez (2022) found that in Peru, shocks that increased imports have had larger and more persistent negative

## FIGURE 2.9 Employment arrangements and wage differentials in cities

High female labor force participation rates in South Asia's rural areas mainly reflect unpaid labor and self-employment; both are less common in urban areas. Women earn significantly higher wages in cities than in rural areas and, in most South Asian countries, their wage gap with men is smaller. Returns to education are higher for women in urban areas as well.

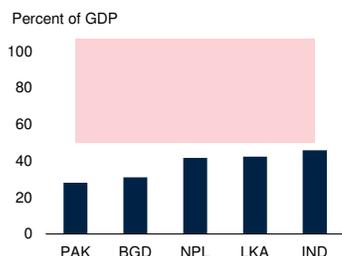


Sources: Global Labor Database (GLD) labor force survey microdata (database); World Bank.  
 Note: BGD = Bangladesh; BTN = Bhutan; IND = India; EMDEs = emerging market and developing economies; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.  
 A.B. Figures show the composition of employment for women in urban (A) and rural (B) areas, as a share of the total female working-age population (age 15–64). Survey waves used can be found in annex table 2.1.  
 C. Urban wage premiums, measured as the percentage increase over rural wages, are the coefficients of an individual-level regression of log wages on an urban indicator interacted with gender, controlling for education level. Estimates are in annex table 2.5.  
 D. Gender wage gap is calculated as the ratio of female to male average wages, conditioned on education, in urban and rural areas. Estimates are in annex table 2.5.  
 E.F. Figure shows estimated returns to education for women (E) and men (F) from country-wise regressions of log wages on years of schooling interacted with urban and gender indicators, controlling for age and state-by-year fixed effects.

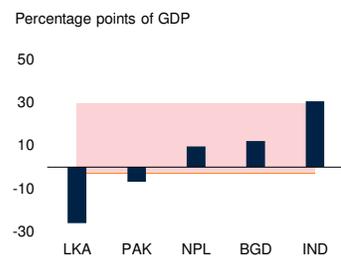
## FIGURE 2.10 Trade openness

South Asian countries are in the least open quartile of EMDEs. Within the region, greater export orientation has been associated with higher female employment across sectors and local labor markets.

### A. Trade openness, 2023



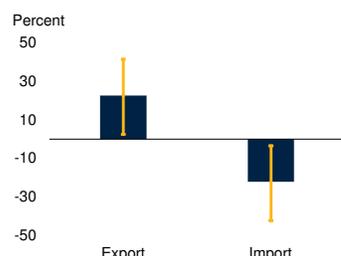
### B. Changes in trade openness, 1990–2023



### C. South Asia: Female employment share, by exposure to export and import shocks



### D. Impact of trade shocks on female labor force participation at subnational level



Sources: International Labor Organization (ILO); World Bank Global Labor Database (GLD) labor force survey microdata (database); World Development Indicators (database); UN Comtrade.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.

A. Bars show trade-to-GDP ratio in 2023. Trade is defined as the sum of goods and services exports and imports. Red shaded area is the interquartile range for other EMDEs. Data on Bhutan and Maldives are not available.

B. Bars show change in trade-to-GDP ratio from 1990–2023. Red shaded area is the interquartile range for other EMDEs. Red line is the EMDE average weighted by GDP (constant 2015 US\$). Data on BTN and MDV are not available.

C. Figure shows the female share of total sector employment by sector trade rank across all South Asian countries. Sectors are ranked at the country-year level based on their export or import share in total trade for that sector-year. For net export and import sectors, the top-ranked export sector is the net exporting sector  $s$  in country  $c$  at year  $t$  for which  $x_{sect}/(x_{sect} + m_{sect})$  is the highest. Sample years are 2010–21. Non-tradeable sectors are those for which  $x_{sect} = m_{sect} = 0$ .

D. Figure shows estimated coefficients from a subnational panel regression of relative female labor force participation, defined as the (log) ratio of female labor force participation to male labor force participation, on the log of state-year-level export or import exposure. Export and import exposure are calculated as the weighted average of national export or import volumes across sectors, where weights based on state-level sector employment shares. The OLS model includes only export and import shocks, while the fixed effects model includes state and year effects.

employment effects on women, who moved away from traded sectors or left the labor market entirely. In Brazil, however, such import shocks have hurt male and female workers similarly (Gaddis and Pieters 2017).

- **Household income losses.** Heckl (2024) found that in local labor markets in Mexico facing greater import competition, women increased their labor force participation through self-employment to offset household income losses. Similar effects are observed for women

of lower socioeconomic status as a result of tariff liberalization in India (Anukriti and Kumler 2019).

- **Informality.** Any negative impact of import competition on employment may be muted in the presence of a large informal sector, including in agriculture, which provides a margin of adjustment on quantity (Dix-Carneiro and Kovak 2019).

**Low trade openness in South Asia.** In the early 1990s, several South Asian countries underwent transformative trade liberalizations that ended decades of protectionist economic planning. After its exchange rate crisis in 1991, India abolished the government controls on the economy known as the “license raj,” slashed tariffs, and replaced negative lists of trade restrictions with positive lists (Aghion et al. 2008; Topalova and Khandelwal 2011). Bangladesh opened the garment sector to foreign trade and investment in 1993 (World Bank 2005). Pakistan and Nepal implemented large tariff reductions in the 1990s (Pathak, Leu, and Siriwardana 2023; Ul-Haq, Khanum, and Raza Cheema 2020). Sri Lanka liberalized more than a decade earlier in 1977 (Athukorala 2022). As a result, between 1990 and 2023, exports from countries in the region rose from an average of 8 percent of GDP to 20 percent, and imports increased from 11 percent of GDP to 23 percent (figure 2.10). These increases were slightly larger than for the other EMDEs. However, there was substantial variation across the region: changes in exports over this period ranged from a drop of 10 percentage points of GDP in Sri Lanka to a gain of 14 percentage points of GDP in India. Despite the increases across most of the region, trade-to-GDP and export-to-GDP ratios in all South Asian countries remain within the lowest quartile of EMDEs, except for the region’s two smallest states (Bhutan and Maldives). It has been estimated that South Asia has recently been exploiting only about 30 percent of its underlying export potential (World Bank 2019).

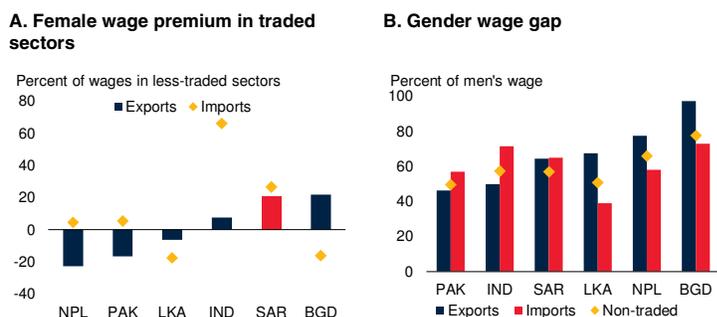
**Positive association between export orientation and female labor force participation.** In South Asia, export orientation appears to have expanded labor market opportunities for both men and women, but particularly for women.

- *At the sector level*, more export- or import-oriented sectors (that is, sectors that accounted for a larger share of national exports or imports) had greater shares of female employment, whereas the least traded sectors had negligible shares of female employment (figure 2.10). This is consistent with evidence of higher female employment shares in a range of export-oriented sectors across South Asia, such as ready-made garments in Bangladesh, call centers in India, and textiles in Sri Lanka.
- *At the subnational level*, the South Asian states or provinces with the highest exposure to export shocks (that is, national exports weighted by subnational sector employment) had significantly higher female labor force participation rates (figure 2.10, annex table 2.7). A 1-percent increase in export exposure was associated with a 6.9-percentage-point increase in labor force participation rates for women and a 3.3-percentage-point increase for men. Conversely, the states or provinces with the highest exposure to import shocks had significantly lower female labor force participation relative to men (figure 2.10, annex table 2.7). Consistent with the existing literature, import shocks reduced labor force participation rates substantially more for women than for men.

**Wage premium in export-oriented sectors.** Several studies have found evidence of a wage premium at exporting firms in both advanced and EMDEs, which is typically larger for skill-intensive exports (Brambilla, Depetris Chauvin, and Porto 2017; Egger et al. 2020; Fontes, Granitoff, and Tiing Tai 2020). In India, rising exports have driven wage gains across the economy, but mainly for higher-skilled workers (Artuc et al. 2019). Across South Asia as whole, wages for women are 20 percent higher in the most export-oriented goods-producing sectors than in the production of less traded goods, while for men, the premium is just 6 percent. However, this finding is primarily driven by Bangladesh and India; there is no export wage premium in Nepal, Pakistan, or Sri Lanka (figure 2.11). Because the models on which these estimates are based control for education, wage premiums are not driven by

## FIGURE 2.11 Wage premium in export-oriented sectors

Women generally earn higher wages in traded sectors than in non-traded sectors, and gender wage gaps in traded sectors tend to be smaller.



Sources: Global Labor Database (GLD) labor force survey microdata (database); International Labor Organization (ILO); World Development Indicators (database); UN COMTRADE; World Bank.

Note: EMDEs = emerging market and developing economies. BGD = Bangladesh; BTN = Bhutan; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan. SAR = South Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka).

A. Bars and diamonds are estimates from country-specific regressions of log wages on indicators for employment in a top five export and/or import sector, interacted with gender indicators, controlling for education and survey wave fixed effects. Estimates are wage premium relative to less-traded sectors. Sample is all wage-earning adults in South Asia, for years in which national trade data is available. Employees in the service sector are dropped, because Comtrade data are only available for goods trade. Survey waves used can be found in annex table 2.1.

B. Bars and diamonds show average female wages as a share of male wages for top five export and import sectors, as well as less-traded sectors. These estimates are derived from coefficients of the regression described in A.

differences in sectoral skill intensity, but more likely by differences in firm-level productivity and patterns of export product specialization. Across South Asia, gender wage gaps in traded sectors are narrower than in non-traded sectors.

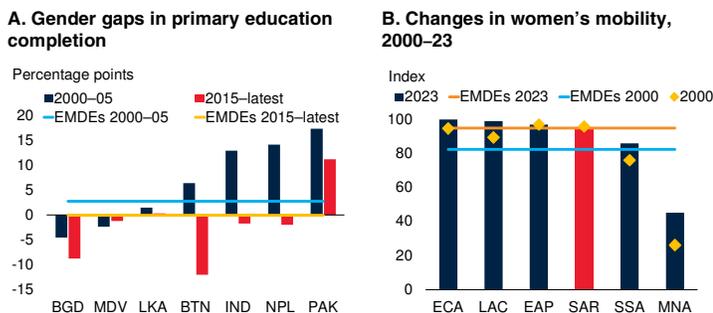
## Labor supply: Barriers to female labor force participation

*While improved education outcomes for South Asia's women, relative to men, coupled with high wage premiums for education, have increased women's labor market potential, significant barriers to their participation in the labor force still persist. These include limited availability of safe transport and childcare, as well as unfavorable social norms regarding women working outside the home.*

A woman's decision to enter the labor market is affected by supply-side factors that range from education to childcare to incentives arising from welfare policies (Bhalotra and Fernández-Sierra 2023; Blundell et al. 2016; Eckstein and Lifshitz 2011; Eckstein and Wolpin 1989). Alleviating supply-side barriers can increase female labor force participation through its direct impact on women's ability to enter the labor force, but also by helping break down demand-side barriers.

## FIGURE 2.12 Supply-side barriers to women's employment

Educational attainment for men and women has converged in South Asia, but South Asia is one of only two EMDE regions in which barriers to women's mobility have increased.



Sources: Women, Business, and the Law; World Development Indicators (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EAP = East Asia and the Pacific; ECA = Europe and Central Asia; EMDE = emerging market and developing economy; IND = India; LAC = Latin America and the Caribbean; LKA = Sri Lanka; MDV = Maldives; MNA = Middle East and North Africa; NPL = Nepal; SAR = South Asia; SSA = Sub-Saharan Africa.

A. Bars show the difference in primary education completion rates between men and women (calculated as rate for men minus rate for women) for the years 2000 to 2005 and 2015 to latest available data. Annual averages are used. Dotted lines indicate primary completion gap in EMDEs excluding South Asian countries.

B. Bars show the regional average mobility score in 2023. Diamonds represent the regional average mobility score in 2000. Horizontal bars show EMDE averages in 2000 and 2023, excluding SAR countries.

### Skills

**Education.** As recently as the early 2000s, women's education outcomes in South Asia fell well short of men's, and in more than half of the countries in the region, the gap was wider than the EMDE average. Since then, women's education outcomes have improved considerably more than men's (figure 2.12). Since 2015, the gender gap in primary school completion rates has been lower than the EMDE average in every country except Pakistan, in several cases favoring girls.

**Training.** To complement formal education, training for girls and women can improve women's economic engagement. In Rajasthan, life skills training for adolescent girls has been shown to be successful and reduce school dropout rates (Edmonds, Feigenberg, and Leight 2023). In Zambia, teaching adolescent girls negotiation skills improved their education outcomes over the following three years (Ashraf et al. 2020). A recent meta-analysis found that skills training for entrepreneurs raised profits of their firms by 5–10 percent, with several studies finding sizable positive effects for women (McKenzie 2020). Such training programs may fill gaps in formal education and prepare women for productive engagement in the workforce.

### Access to work outside the home

**Safe transport.** Women's lack of access to safe transport is often a barrier to labor force participation (World Bank 2023). This is particularly salient for South Asia: it is one of only two EMDE regions in which women's mobility has not improved in the past two decades (figure 2.12). Poor safety in transit to and from work, particularly in urban areas, has been shown to reduce mobility and depress female labor force participation in both Pakistan (Field and Vyborny 2022) and Bangladesh (Buchmann, Meyer, and Sullivan 2023). Recent evidence from Dhaka shows that women who feel safe outside the home are almost 10 percentage points more likely to participate in the labor market (Kotikula, Hill, and Raza 2019). Policies that improve public safety may therefore also affect labor markets: in a field experiment with the Hyderabad City Police, increased policing reduced the incidence of severe street harassment against women (Amaral et al. 2023).

**Caregiving.** Since women typically spend more time on childcare than men, the availability of quality and affordable childcare may increase female labor force participation. South Asia scores the lowest among EMDE regions, and substantially below the EMDE average, on its legal framework around access to childcare (figure 2.3). However, evidence on how female labor force participation responds to the availability of childcare is mixed. In both advanced economies and EMDEs, childbearing and childrearing have been identified as responsible for a large share of the gender gap in employment outcomes (Kleven et al. 2019; Kleven, Landais, and Leite-Mariante 2023; Aaronson et al. 2021). Access to childcare has been shown to increase female labor force participation in several EMDEs outside South Asia (Evans, Jakiela, and Knauer 2021; Halim, Perova, and Reynolds 2023) and, inside South Asia, national childcare legislation and publicly-provided daycare have been associated with higher female labor force participation (Alderman and Friedman 2018; Anukriti et al. 2023). In India, access to preschool has been associated with higher maternal labor force participation (Jain 2016) and lack of childcare has been cited as a reason women turn down paid work in Bangladesh (Elsej et al.

2020). However, in India, recent randomized experiments show no impact of offering childcare on female employment outcomes (Nandi et al. 2020; Richardson et al. 2018) and take-up rates of work offers among women with and without childcare responsibilities are almost identical (Ho, Jalota, and Karandikar 2024).

**Social norms and flexible work.** Other constraints, including unfavorable views of women working outside the home, may discourage women from participating in the labor force. Indeed, a recent experiment among married Indian women found very little take-up of well-paid job offers that included on-site childcare and were within a five-minute walk from home. But offers allowing remote work increased take-up from 27 to 56 percent (Jalota and Ho 2024). Home-based work options could encourage higher female labor force participation, particularly if they have a “gateway effect” that leads to subsequent engagement outside the home, as shown in an experiment in India (Ho, Jalota, and Karandikar 2024). However, this effect may not materialize. Recent evidence from Sub-Saharan Africa (Devoto et al. 2024) shows that women who had taken up (outside the home) jobs in a public works program, reverted back to non-participation when the temporary program ended.

## Labor market frictions

*Unusually low female labor force participation rates in South Asia may in part reflect labor market frictions, especially in typically female occupations. Such frictions include information asymmetries and limited access to employment networks. Digital platforms could ease such frictions by improving transparency.*

**Information asymmetries: Labor demand.** Since firms often have limited information on the ability of potential workers, they tend to use education metrics for screening (Arcidiacono, Bayer, and Hizmo 2010). In South Asia, however, the low quality of education may reduce the value of such metric (Singh 2020). Other ways for jobseekers to signal their skills include apprenticeships and skill-based tests (Groh, McKenzie, and Vishwanath 2015; Hardy et al. 2019). These may be particularly valuable for

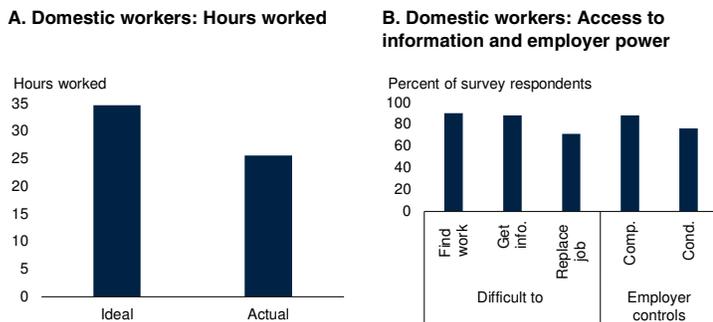
groups that firms have limited experience with and who may not have access to local educational systems. Refugees are a salient example: firms often lack information about their abilities and even their legal status (Loiacono and Silva Vargas 2019). Similar considerations may apply in the case of potential female workers: training programs with their credentialing function can be used by firms that have limited experience with employing female workers. Similarly, when ability is not readily observable, employers may tend to rely on references, which women may find harder to obtain, although a study in South Africa found that when reference letters are obtained, they tend to benefit women more than men (Abel, Burger, and Piraino 2020).

**Information asymmetries: Labor supply.** Workers may have limited information about potential jobs or may not even know where to search for employment. In rural India, for example, women were much more likely to invest in education, enter the labor market, and delay child bearing when they were provided information on labor market opportunities in nearby call centers (Jensen 2012). Women may also have limited information on the competitiveness of the labor market, and information on the number of applications can encourage more women to apply and enter the labor market (Gee 2018). The evidence on job search assistance for refugees suggests that job counseling is especially beneficial for populations, such as women, that face difficulties accessing the labor market (Battisti, Giesing, and Laurensyeva 2019).

**Lack of support networks.** Workers’ networks can affect their labor market outcomes, especially in lower-income settings where network-based hiring is common (Calvo-Armengol and Jackson 2004; Chandrasekhar, Morten, and Peter 2020). For women, the labor force participation of a woman’s peers has been shown to affect her labor market participation (Maurin and Moschion 2009; Nicoletti, Salvanes, and Tominey 2018). However, married women in South Asia have tightly circumscribed social networks that may limit their access to information about employment opportunities and working conditions (Anukriti et al. 2020; Anukriti, Herrera Almanza, and Karra 2024).

### FIGURE 2.13 Labor market frictions

Domestic workers in Bangladesh would like to work more but have difficulty finding information about work opportunities. Wage setting and work conditions are typically determined by employers.



Sources: Survey data from Anukriti et al. (forthcoming); World Bank.

Note: Comp. = compensation; Cond = work condition.

A. Bars show the average actual and ideal weekly hours worked as reported by survey respondents. Sample is 4,391 domestic workers in Dhaka, Bangladesh, in 2023.

B. Bars show the share of survey respondents answering “yes” to the questions indicated on the categorical axis. The question on compensation is: “The people I work for in this house have more say in my compensation than I do.” The question on working conditions is: “The people I work for in this house have more say on my working conditions and hours than I do.” The sample consists of 4,391 domestic workers in Dhaka, Bangladesh, in 2023.

#### Digital platforms and employer market power.

By easing information frictions, digital platforms might improve access to employment, reduce employer market power, and improve conditions of work for informal workers. Several recent studies have shown that employer market power is an important feature of labor markets, both in EMDEs (Amodio and Roux 2023; Sharma 2023; 2024) and in advanced economies (Deb et al. 2022; Yeh, Macaluso, and Hershbein 2022). For example, increases in labor demand at former coworkers’ firms affect the wages that workers are paid, likely through information sharing among workers (Caldwell and Harmon 2019). For workers in markets with severe information frictions and limited opportunities for documenting skills, employer market power is likely to be greater. An example is the market of domestic workers. This is large, especially in urban areas, and most of the workers are women. By increasing information and transparency, digital platforms can improve employer-employee matching and be especially supportive for women in this market. In addition, digital platforms may facilitate enforcement of labor market regulations, such as minimum wages.

#### Evidence from domestic workers in Bangladesh.

A randomized control trial introduced a digital app that improved access to information on the

marketplace for domestic work in Dhaka, Bangladesh (Anukriti et al., forthcoming). About four-fifths of the 1.3 million domestic workers in Bangladesh are female, with a high prevalence of child labor (Oxfam 2020). Domestic workers are not protected under the labor law (the Bangladesh Labour Act of 2006) and are among the most underprivileged in the country—with poor living conditions, low wages, long working hours, and a lack of contracts or other labor protections. Hiring of domestic workers is highly dependent on referrals, making employees dependent on employers for assistance with finding future work. When the app was introduced, female domestic workers were surveyed about their working conditions. They were typically dissatisfied with underemployment in their current job but information on alternative opportunities was difficult to find, according to about 90 percent of them. Large majorities viewed employers’ market power as a significant factor in wage negotiations and in determining working conditions (figure 2.13).

## Laws and social norms

*A country’s legal framework and social norms set the context in which labor demand, labor supply, and labor market frictions operate. Among EMDEs, South Asian countries have some of the most restrictive legal frameworks—both as written and as applied—and some of the most conservative social norms regarding women’s economic activity. More restrictive laws and more conservative social norms are associated with significantly weaker labor market outcomes for women.*

### Legal framework

**Findings from the literature.** The legal framework helps determine women’s ability and willingness to participate in the labor market. It affects such factors as women’s freedom of movement, the presence of discrimination in employment and harassment in the workplace; and whether there is equal remuneration for work of equal value, parity in marriage and in parenthood, equal treatment for pensions, and equal rights of asset ownership, entrepreneurship, and inheritance. Many studies have documented that more gender-equal legislation is associated with higher female labor force participation. This has been shown in correlations in large cross-country datasets

spanning several decades (Gray, Kittilson, and Sandholtz 2006; Hallward-Driemeier, Hasan, and Rusu 2013; Hyland, Djankov, and Goldberg 2020) and in causal evidence from such diverse contexts as Ethiopia (Hallward-Driemeier and Gajigo 2015), India (Heath and Tan 2020; Naaraayanan 2019), and the United States (Stevenson 2008). These studies show that the effect runs through both labor demand and supply.

- **Labor demand.** In a large cross-country sample, the prohibition of gender discrimination in hiring and remuneration was associated with higher female labor force participation (Hyland, Djankov, and Goldberg 2020). In Ethiopia, the removal of work restrictions on women was associated with higher female employment outside the home in paid full-time jobs (Hallward-Driemeier and Gajigo 2015). In India, however, the introduction of legislation to combat workplace sexual harassment increased the perceived cost of hiring women for regulated firms, reducing demand for female labor more than it increased its supply (Bhalotra et al. 2023).
- **Labor supply.** In Ethiopia, legislation to improve wives' property rights encouraged more women to seek education and employment outside the home (Hallward-Driemeier and Gajigo 2015). In several OECD countries, the introduction of parental leave policies was associated with an increase in female employment rates (Olivetti and Petrongolo 2017). In large cross-country samples spanning decades, legal frameworks with more equal women's rights were associated with better education and health outcomes, and greater female entrepreneurship, as well as higher female labor force participation (Gonzales et al. 2015; Hallward-Driemeier, Hasan, and Rusu 2013). Similarly, in a large cross-country sample of firms, less restrictive laws on women's rights to inheritance, property ownership, and finance were associated with higher female employment and entrepreneurship (Islam, Muzi, and Amin 2017). In India, an inheritance law reform that equalized rights between sons and

daughters increased female bargaining power within the household, leading to greater labor force participation (Heath and Tan 2020).

**Laws in South Asia.** South Asian countries have made great strides over the past three decades in expanding their laws to protect women's rights, except for some slippage in the legal protection of women's freedom of movement (figure 2.14). Nevertheless, they still rank well below the EMDE average in terms of laws that protect women's rights and support their economic participation. The most severe shortcomings concern women's safety (laws addressing child marriage, sexual harassment, domestic violence, and femicide), parenthood (laws concerning the provision and administration of paid maternity, paternity, and parental leave, and the treatment of pregnant workers), and childcare (laws governing the provision of childcare services for children below three years of age). However, there are important differences within the region. In Bangladesh, the South Asian country with the least protective laws for women, the shortcomings are most severe in safety; in Nepal, the country with the most protective laws in the region, shortcomings remain in relation to childcare.

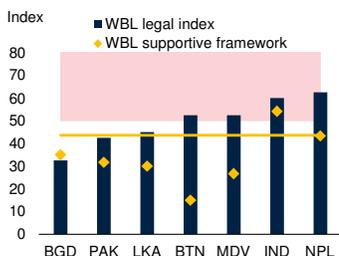
**Laws and female labor force participation rates in South Asia.** Figure 2.14 shows the positive relationship between female labor force participation and gender equality before the law in cross-country data for 119 countries in 2020, even after controlling for per capita incomes. But South Asia's female labor force participation was even lower than would be expected based on its legal framework. In part, this may reflect poor implementation of laws, or administrative processes or social norms that discourage the exercise of legal rights. The role of social norm is discussed below.

**Implementation of laws.** The legal framework index (*de jure* index) of the World Bank's Women, Business, and the Law database summarizes countries' legal provisions while the "supportive framework" index (*de facto* index) captures the administrative processes involved in exercising those legal rights. For example, consider the right of freedom of movement, in particular the entitlement to a passport. The *de jure* index assesses whether a woman's legal

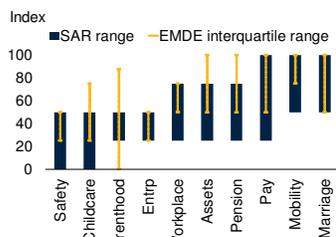
**FIGURE 2.14** Legal restrictions on women’s economic participation

Several South Asian countries are in the bottom quartile of EMDEs in terms of the gender equality of their legal frameworks. More gender-equal laws are associated with higher female labor force participation. Even so, South Asian countries have much lower female labor force participation than would be predicted, based on their laws.

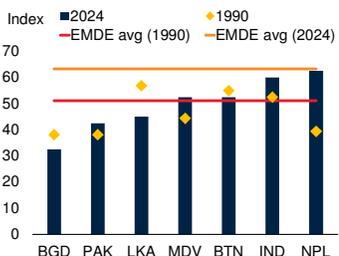
**A. Legal gender equality index, 2024**



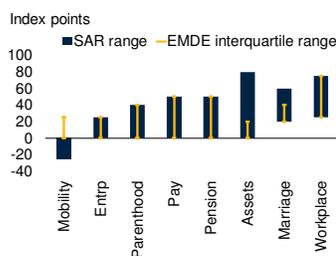
**B. Legal gender equality sub-indices, 2024**



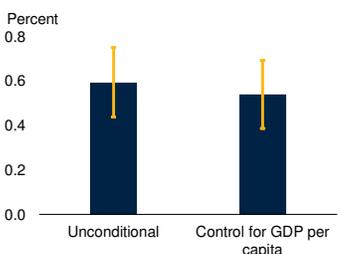
**C. Legal gender equality index, 1990 and 2024**



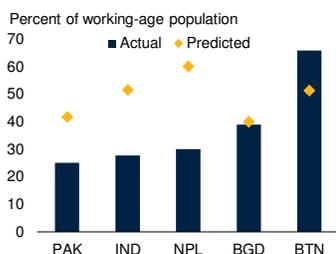
**D. Changes in legal gender equality sub-indices, 1990–2023**



**E. Correlation between female labor force participation and legal gender equality**



**F. Actual and predicted female labor force participation**



Sources: International Labour Organization (ILO); World Bank Women, Business, and the Law (database); World Bank; World Development Indicators (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; Entrp. = entrepreneurship; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan; SAR = South Asia.

A. Bars show values of the Women, Business, and the Law (WBL) gender equality legal index (“de jure rights”) in 2024. Diamonds represent values for the WBL supportive framework index (“de facto rights”) in 2024. Red shaded area indicates the interquartile range for the “de jure rights” in other EMDEs. Yellow line represents the other EMDE average of the “de facto rights,” weighted using countries’ total populations in 2023.

B. Blue bars show the range of WBL subcomponent indices across South Asian countries for 2024. Yellow whiskers represent the interquartile range of other EMDEs.

C. Bars show values of the WBL gender equality legal index in 1990, and diamonds in 2024. EMDE average is weighted using working-age population.

D. Blue bars show range of the change in WBL subcomponent indices across South Asian countries from 1990 to 2023. Yellow whiskers represent the interquartile range of other EMDEs.

E. Bars show coefficients from a regression of female labor force participation (FLFP) on the WBL legal index for 119 countries in 2020, with and without controls for log GDP per capita and its square (annex table 2.8). Estimates reflect the change in FLFP from a one-unit change in the legal index. The FLFP rate is the share of the female (male) working-age population (15–64 years old) employed or looking for work, measured using International Labour Organization’s ILOStat modeled data.

F. Bars show actual female labor force participation for 2020; diamonds show the labor force participation rate predicted from the regression in E, controlling for log GDP per capita and its square.

entitlement to a passport is identical to that of a man, whereas the *de facto* index assesses whether the application process—the application forms, the office where the forms have to be presented, and other practical details, such as any requirement to have an assenting signature by the spouse—is the same for men and women. For both indexes, high values represent high gender equality. Most South Asian countries (with the exceptions of India and Nepal) rank in the lowest quartile of EMDEs ranked in terms of both protective *de jure* provisions and the gender-equality of the *de facto* framework (figure 2.14).

**Social norms**

**Findings from the literature.** Social norms may be defined as informal rules that embody beliefs about which behaviors are approved or disapproved in a specific context by a given social group. These norms and specifically those linked to gender roles—which portray women as homemakers and men as breadwinners—have been linked the non-participation of women in economic activities (Akerlof and Kranton 2000; Andreoni and Bernheim 2009 Bénabou and Tirole 2006; Bussolo et al. 2024). A large literature has traced the origin of social norms to historical and evolutionary pressures (annex 2.4). Several studies have identified long-run relationships between the historical conditions that determined gender roles, the formation of social norms, and the effects of these norms on contemporary female labor force participation (Alesina, Giuliano, and Nunn 2013; Carranza 2014). Other studies, using the so-called epidemiological approach, have shown that social norms can affect female labor force participation in modern labor markets. Focusing on immigrants in the United States, these studies have found that labor force participation rates among second-generation women are strongly correlated with female labor force participation of their parents’ country of origin (Antecol 2000; Blau, Kahn, and Papps 2011; Fernández and Fogli 2009). Increasing women’s economic empowerment by improving access to finance can liberalize gender norms and can result in more female employment outside the home (Field et al. 2021).

**Personal beliefs and social expectations in South Asia.** South Asia has some of the most conservative personal beliefs and social expectations among EMDEs. The World Bank-Facebook Survey on Gender Equality at Home offers individual-level data for 120 countries in 2020-21 on personal beliefs and social expectations, including five South Asian countries.

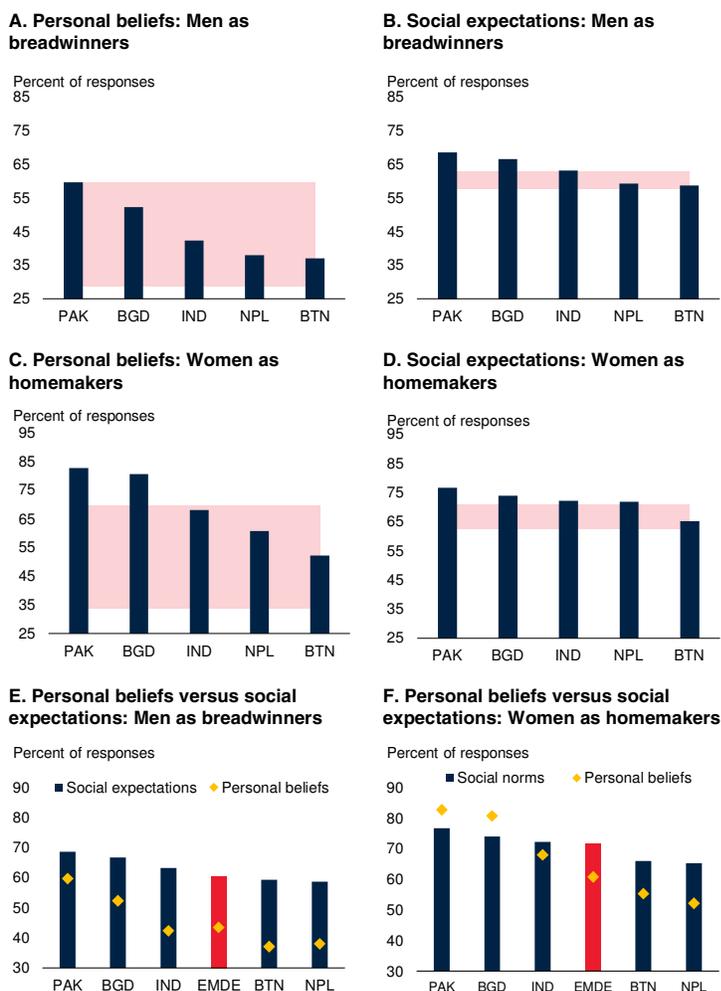
- *Conservative personal beliefs* are measured using agreement, or strong agreement, with the statement that men are responsible for household expenses (male breadwinner norm) and that women's most important role is to take care of the home and children (female homemaker norm).
- *Conservative social expectations* are measured using the answers on the perceived share of neighbors who agree with these statements.

Most South Asian countries rank above the EMDE average on these measures (figure 2.15). For social expectations of the female homemaker, all countries except Bhutan rank in the top quartile of EMDEs ranked by conservatism. As in other regions, personal beliefs tend to be less conservative than social expectations, but this gap is somewhat smaller in South Asia than elsewhere, especially for the female homemaker norm. Bangladesh and Pakistan have the most conservative social expectations, and personal beliefs; Bhutan and Nepal the least conservative.

**Social norms and *de jure* laws.** Social norms are shaped by, and shape, *de jure* legal rights—but also have effects independent of the law (box 2.1). Evidence on the influence of laws on female participation was discussed earlier. Extending this analysis, regressions are used to estimate the cross-country correlation between female labor force participation rates and both *de jure* legal rights and social norms, controlling for per capita GDP (annex table 2.8). The coefficient estimates suggest that female labor force participations rates were 8.3 percentage points higher in the top than in the bottom quartile of EMDEs ranked by *de jure* legal gender equality, and 3 percentage points higher in the top than in the bottom quartile of EMDEs ranked by social expectations (figure 2.16). Indeed, the impact of social norms on female labor force participation has also been documented at the household level. Novel data from Nepal confirm

**FIGURE 2.15 Social norms**

South Asian countries have some of the most conservative personal beliefs and social expectations among EMDEs. Gaps between personal beliefs and social norms are smaller in South Asia than in other EMDEs.



Sources: World Bank-Facebook Survey on Gender Equality at Home; World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan.

A.C. Data for 120 countries for 2020. Data on Maldives and Sri Lanka are not available. Bars show averages of the shares of the population that agree with either the male breadwinner (A) or female homemaker (C) norm. The shaded region represents the interquartile range for other EMDEs. The EMDE average is weighted by working-age population.

B.D. Data for 120 countries for 2020. Data on Maldives and Sri Lanka are not available. Bars show average responses of the share of other people in the country that the respondent thinks hold either the male breadwinner (B) or female homemaker (D) belief. The shaded region represents the interquartile range for other EMDEs. The EMDE average is weighted by the working-age population.

E.F. Social norms are the beliefs about others' attitudes from B and D. Personal beliefs are individual survey attitudes from A and C.

that both conservative social expectations and conservative personal beliefs were associated with a lower probability that women work outside the home. Social norms may also be at the root of the marriage penalty for South Asian women (box 2.2). The share of employed women, once married, even without children, falls by 12 percentage points, whereas the share of employed men after marriage rises by 13 percentage points.

### BOX 2.1 The role of laws, beliefs, and social expectations in labor markets<sup>a</sup>

*Both restrictive laws and conservative social norms depress female labor force participation. In part, this may result from weak implementation of de jure rights because of more conservative personal beliefs and, particularly, social expectations.*

#### Introduction

Laws shape not only labor market outcomes but also social norms. Several studies provide empirical evidence that laws can causally influence social norms across various contexts. Experiments conducted in multiple countries indicate that laws can influence social norms by shaping both people's beliefs about others' behavior and their views on what actions are socially appropriate (Albiston and Correll 2024; Eisner, Turner-Zwinkels, and Spini 2021; Lane, Nosenzo, and Sonderegger 2023). In many low- and middle-income countries, policies aimed at enhancing paid maternity leave have been shown to promote more egalitarian gender norms related to work and household decision-making (Chai et al. 2022). Similarly, lockdown laws during the COVID-19 pandemic drastically shifted perceptions of norms around social distancing behaviors in the United Kingdom (Galbiati et al. 2021). In countries with more cohesive social norms and higher trust in health authorities, vaccine acceptance was less sensitive to changes in lockdown laws than elsewhere (Bussolo, Sarma, and Torre 2023). The ability of laws to shift attitudes appears to depend on how deeply ingrained these attitudes are in social norms.

The converse can also be true; that is, social norms can shape laws and likely also affect their implementation. This is perhaps most evident when laws conflict with deeply entrenched norms. In parts of Pakistan, for instance, domestic violence laws that clashed with prevailing conservative gender attitudes led to an increase rather than a decrease in domestic violence (Gulesci, Leone, and Zafar 2024). In the United States, social policy laws, such as language prohibitions for immigrant children in U.S. schools after the First World War, induced backlashes that strengthened minority groups' cultural identity, the opposite of the law's intent (Fouka 2020; Wheaton 2020). In fact, the rule of law itself can serve as a social norm that connects society's formal institutions with its informal ones (Licht 2008).

<sup>a</sup> This box was prepared by Maurizio Bussolo, Lynn Hu, and Jonah Rexer.

**Questions.** This raises the question of the relative role of social norms and legal protection of rights in determining labor market outcomes. This box addresses two questions:

- Do laws and social norms have an influence, independent of each other, on female labor force participation?
- Is there an interaction effect and, specifically, do social norms affect the implementation of laws?

**Contributions.** The box is the first attempt to quantify the relative role of social expectations, personal beliefs, and legal rights in determining female labor force participation rates across countries. The existing literature has established that each of these factors matters for labor market outcomes, but no previous studies have compared their relative impacts.

**Main findings.** This box offers two new findings:

- Restrictive laws and conservative social expectations independently depress female labor force participation. In contrast, conservative beliefs at the individual level that differ from broader social expectations are not associated with significantly lower female participation.
- Both conservative personal beliefs and conservative social expectations are associated with weaker *de facto* economic rights for women. In South Asia, the contribution of social expectations is stronger than that of personal beliefs.

#### Data and methodology

**Data source.** The Facebook (2020) Survey on Gender Equality at Home was conducted in collaboration with Facebook, CARE, Ladysmith, the World Bank, and UNICEF. This survey was rolled out in 2020 and 2021 through Facebook's online platform, which invited Facebook users across 208 countries, islands, and territories to participate. Results of this large-scale survey were weighted to represent the online population in each country or region (not just the Facebook user

### BOX 2.1 The role of laws, beliefs, and social expectations in labor markets (continued)

population). One advantage of this survey method is its extensive reach and the ability to collect valuable information in regions where organizing household surveys is difficult due to conflict or logistical barriers. This box used the 2020 survey round, which received more than 461,000 complete responses from 126 locations around the world. The survey questions used in the analysis are listed below.

#### i) Female Homemaker:

- **Personal belief:** How much do you agree or disagree with the following statement? “Woman’s most important role is to take care of her home and children.”
- **Social expectation:** Out of 10 of your neighbors, how many do you think believe that a woman’s most important role is to take care of her home and children?

#### ii) Male Breadwinner:

- **Personal belief:** How much do you agree or disagree with the following statement? “Household expenses are the responsibility of the man, even if his wife can help him.”
- **Social expectation:** Out of 10 of your neighbors, how many do you think believe that household expenses are the responsibility of the man, even if his wife can help him?

#### Definition of social expectations and personal beliefs.

For the analysis in this box, national and regional averages are calculated for personal beliefs and social expectations regarding the normative statements above. Surveyed individuals can answer questions about their personal beliefs on a five-point Likert scale, with five potential responses: strongly agree, agree, neutral, disagree, and strongly disagree. The share of respondents who agree or strongly agree with the two normative statements measures the percentage of the population that believes in the statement. Social expectations are measured by the responses to the two questions about neighbors’ views. Social expectations are calculated as the average share of neighbors that respondents believe agree with the normative statements.

**Methodology:** Relative role of legal rights, social expectations, personal beliefs. To establish the link

between female labor force participation and its three potential drivers—legal rights, social expectations, personal beliefs—a linear regression is estimated using cross-country data for 2020:

$$FLFP_c = \alpha + \beta_1 Socialexpectation_c + \beta_2 Personalbelief_c + \beta_3 laws_c + \beta_4 \log GDP_c + \beta_5 (\log GDP_c)^2 + u_c$$

where the dependent variable  $FLFP_c$  is the female labor force participation rate for each country  $c$  measured by the modeled estimate of the International Labour Organization’s *ILOstat* database, which is the share of the female population aged 15 to 64 years who are in the labor force. The conservative  $Socialexpectation_c$  is measured as the average share of neighbors that respondents believed agreed with the statement that household expenses are the responsibility of the man, even if his wife can help him. Conservative personal beliefs  $Personalbelief_c$  are measured as the share of respondents that agreed, or agreed strongly, with the statement that household expenses are the responsibility of the man, even if his wife can help him. The regression controls for the U-shaped relationship between female labor force participation and GDP per capita (at 2015 prices and market exchange rates) from the World Bank’s World Development Indicators.

**Methodology: Social norms and implementation of the law.** A cross-country linear regression is conducted for 118 countries in 2024 to estimate the correlation between the implementation gap and the strength of conservative social expectations and conservative personal beliefs. The implementation gap is defined as 100 minus the *de facto* Supportive Framework Index of the World Bank’s Women, Business, and the Law database. The regression controls for general government effectiveness, as measured by the Government Effectiveness index from the World Bank’s Worldwide Governance Indicators database.

#### The role of laws, social expectations, and personal beliefs

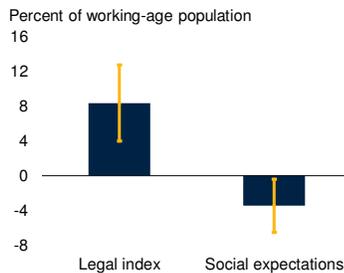
**Results.** A strong correlation is found between female labor force participation and laws, as well as between female labor force participation and social norms (annex table 2.8). Conservative personal beliefs, however, are not significantly correlated with female labor force participation once laws and norms are controlled for.

## BOX 2.1 The role of laws, beliefs, and social expectations in labor markets (continued)

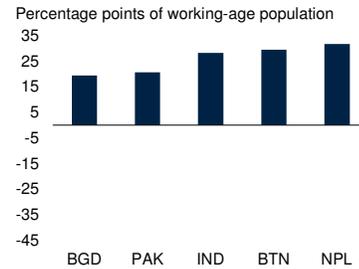
### FIGURE B2.1.1 The role of laws, social expectations, and personal beliefs

In South Asia, conservative social expectations depress female labor force participation more than the lack of legal rights or conservative personal beliefs.

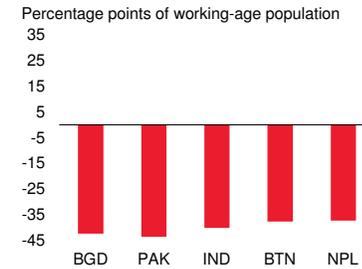
#### A. Female labor force participation gap by social expectations and legal rights: Bottom vs. top quartile of EMDEs



#### B. Contribution of legal framework to predicted female labor force participation rates



#### C. Contribution of social expectations to predicted female labor force participation rates



Sources: ILOStat (International Labour Organization); World Bank-Facebook Survey on Gender Equality at Home; Women, Business, and the Law (World Bank); World Development Indicators (database); World Bank.

Note: BGD = Bangladesh; BTN = Bhutan; EMDEs = emerging market and developing economies; IND = India; NPL = Nepal; PAK = Pakistan. "Legal index" stands for index of legal framework. "Social norms" is the average share of people who believe that their neighbors agree that men are responsible for household expenses even if women can help.

A. Chart shows the difference in regression-predicted female labor force participation rates between the top and bottom quartiles of EMDEs, based on the *de jure* legal index or by social expectations, controlling for log GDP per capita and its square. Estimates are based on data from 119 countries (91 EMDEs) in 2020, using regression results from column (3) of annex table 2.8. The female labor force participation (FLFP) rate represents the share of the female working-age population (15–64 years old) employed or looking for work, measured using ILOStat modeled data.

B. C. Chart shows contributions of legal index (B) and social expectations (C) to predicted FLFP, controlling for log GDP per capita and its square. Predicted contributions are formed by multiplying the coefficient on each variable with the level of that variable for each country. Estimates are based on regression results from column (3) of annex table 2.8, using 2020 data. The FLFP rate is the share of the female (male) working-age population (15–64 years old) employed or looking for work, measured using ILOStat modeled data.

- **Role of laws.** Applying the regression coefficients to the social norms or legal indices of the top and bottom quartile of EMDEs for each measure yields a predicted difference between the two quartiles (figure B2.1.1). Predicted female labor force participation rates are 8.4 percentage points higher in the quartile of EMDEs with the least restrictive laws than in the quartile with the most restrictive laws.
- **Role of social expectations.** Differences also emerge for social expectations: predicted female labor force participation rates are 3.5 percentage points lower in the quartile of EMDEs with the most restrictive expectations than in the quartile with the least restrictive expectations.

**Country example.** As an example, Bangladesh's female labor force participation rate is 39 percent. Based solely on its level of development and the U-shaped cross-country pattern that determines the relationship between development and female labor force

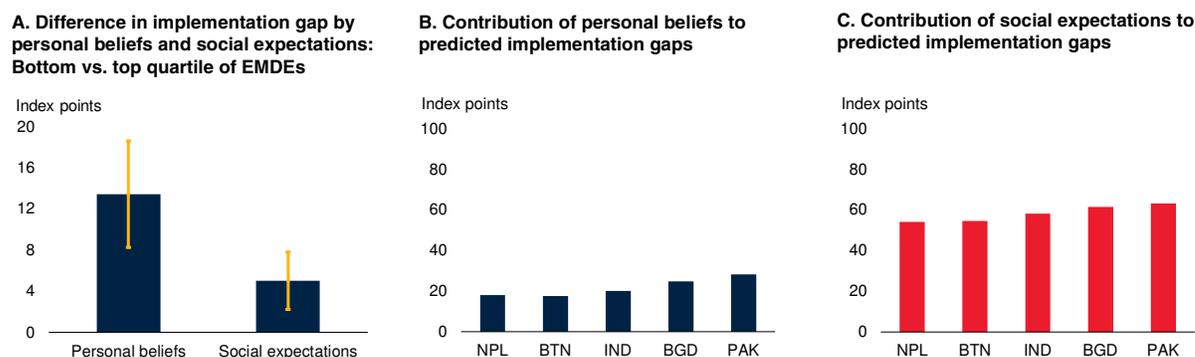
participation, Bangladesh's female labor force participation rate would be expected to be 52 percent. When social norms are accounted for, the predicted female labor force participation falls to 45 percent, and when the legal protections are also factored in, the final prediction of the female labor force participation rate is 40 percent—very close to Bangladesh's actual rate of 39 percent. For other South Asian countries, the regression leaves a somewhat larger share of female labor force participation unexplained.

### Social norms and implementation of laws

**Results.** Both more conservative personal beliefs and more conservative social expectations are associated with weaker *de facto* legal rights, as measured by a lower index for supportive frameworks (annex table 2.9). This association holds for both the male-breadwinner and the female-homemaker beliefs and norms. Globally, personal beliefs are more powerful than social expectations in determining female labor force participation—unlike in South Asia.

**BOX 2.1 The role of laws, beliefs, and social expectations in labor markets (continued)****FIGURE B2.1.2 The role of law implementation, social expectations, and personal beliefs**

*In South Asia, conservative social norms dampen the implementation of laws more than conservative personal beliefs.*



Sources: Women, Business, and the Law (World Bank); World Bank-Facebook Global Gender Equality Survey; World Development Indicators (database); World Governance Indicators (database); World Bank.

Note: EMDEs = emerging market and developing economies. BGD = Bangladesh; BTN = Bhutan; IND = India; NPL = Nepal; PAK = Pakistan. Charts show implementation gap, which is defined as 100 minus the de facto index of supportive framework of the Women, Business and the Law 2024 database. "Social expectations" is the average share of neighbors agreeing that men are responsible for household expenses even if women can help. "Personal beliefs" is the average share of respondents agreeing, or agreeing strongly, to the same statement.

A. Chart shows the difference in regression-predicted implementation gap (measured as index points) between the top and bottom quartiles of EMDEs by personal beliefs or by social expectations, controlling for government effectiveness, log GDP per capita, and its square. Based on regression estimates in column (2) and (4) of annex table 2.9. All data except for the implementation gap (2024 data) come from year 2020 and are available for 91 EMDEs (including SAR countries).

B. C. Chart shows contributions of personal beliefs (B) and social expectations (C) to predicted female labor force participation, controlling for government effectiveness, log GDP per capita, and its square. Predicted contributions are formed by multiplying the coefficient on each variable with the level of that variable for each country. Estimates are based on regression estimates in column (2) and (4) of annex table 2.9. All data except for the implementation gap come from year 2020.

- **Role of personal beliefs.** Predicted implementation gaps are 13.4 index points wider in the quartile of EMDEs with the most conservative personal beliefs than in the quartile with the least conservative beliefs.
- **Role of social expectations.** Similarly, predicted implementation gaps are 5 index points wider in the quartile of EMDEs with the most conservative social expectations than in the quartile with the least conservative social expectations (figure B2.1.2).
- **Relative roles in South Asia.** However, in South Asia, social expectations contribute more to implementation gaps than personal beliefs. Across five South Asian countries (Bangladesh, Bhutan, India, Nepal, and Sri Lanka), the contribution of conservative social expectations to the predicted implementation gap is two to three times higher than that of personal beliefs (figure B2.1.2).

**Country example.** Consider the difference in implementation between Pakistan and Colombia. Pakistan ranks among the lowest South Asian countries

in terms of both *de facto* women's rights and social expectations. It also ranks in the most conservative quartile of EMDEs in terms of social expectations and personal beliefs. In contrast, Colombia ranks in the top quartile of EMDEs in terms of *de facto* women's rights and in the quartile of EMDEs with the least conservative social expectations and personal beliefs. The regression (annex table 2.9) suggests that differences in personal beliefs and social expectations account for 43 and 59 percent, respectively, of the difference in *de facto* women's rights between Pakistan and Colombia.

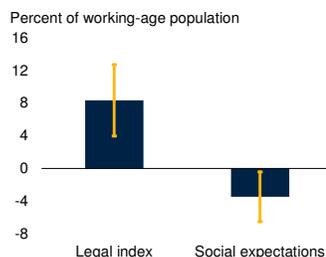
### Conclusion

Conservative social norms and restrictive laws depress female labor force participation independently of each other. In addition, social norms can inhibit the laws' *de facto* impact. This suggests that efforts to pass laws protecting women's rights are most likely to succeed when supported by social norms.

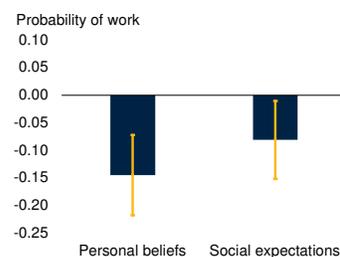
## FIGURE 2.16 Legal restrictions, social norms, and female labor force participation

More conservative social expectations, in addition to more restrictive laws, depress female labor force participation.

### A. Difference in female labor force participation between bottom to top quartile of EMDEs, by social expectations or de jure legal gender equality



### B. Household survey, Nepal: Impact of social norms on probability of women's work



Sources: Bussolo et al. (forthcoming); International Labour Organization (ILO); World Bank Women, Business, and the Law (database); World Development Indicators (database); World Bank.

Note: EMDEs = emerging market and developing economies.

A. Bars show the difference in regression-predicted female labor force participation rates between the top and bottom quartiles of EMDEs by de jure legal index or social expectations, with 95 percent confidence intervals. Regression coefficients are from column (3) of annex table 2.8. All data are from the year 2020 and include 91 EMDEs (including SAR countries). The female labor force participation rate is the share of the female (male) working-age population (15–64 years old) employed or looking for work, measured using International Labour Organization's ILOStat modeled data.

B. Based on Bussolo et al. (forthcoming) survey on social norms. The sample consists of 1,150 individuals in Nepal. Bars show the impact of a one standard deviation increase in social expectations/beliefs around gender roles on the probability of women working, with 95 percent confidence intervals. Regressions models control for socioeconomic status, province fixed effects, and enumerator fixed effects.

**Social norms and *de facto* implementation of laws.** Just as social norms shape *de jure* legal rights, they also shape the *de facto* implementation of legal rights (box 2.1). A cross-country linear regression is used to estimate the correlation of the implementation gap—the deviation of the supportive framework index from its maximum—with the strength of conservative social expectations and personal beliefs. Implementation gaps are found to be significantly wider in the quartile of EMDEs with the most conservative social norms than in the quartile with the least conservative norms. The difference is particularly pronounced for social expectations and is equivalent to about one-quarter of the implementation gap in the average EMDE.

## Policy implications for South Asia

*The wide range of factors that have contributed to South Asia's exceptionally low female labor force participation rates suggest that a comprehensive policy packages, tailored to conditions in individual countries, would be needed to meaningfully lift participation rates. Policies in general should avoid side-effects that are harmful to female participation, like disadvantaging sectors, locales, or contractual arrangements that disproportionately attract female employees or, if such side-effects are unavoidable, seek to take offsetting action. Additionally, policies would need to remove obstacles and deterrents to women's employment. Policy changes are more likely to be effective if they are transparent, minimize labor market frictions, and are accompanied by a shift toward less conservative social norms.*

### Labor demand

**Efficient capital markets.** Strong investment growth is key to absorbing new female workers in productive employment. Reforms that improve the functioning of credit market and raise productivity will have the added benefit of improving prospects of female workers if and when constraints on their participation are relieved.

**Trade openness and competitiveness.** Women tend to account for a larger share of employment in export sectors and export-oriented regions. South Asia remains one of the world's least integrated regions (box 1.1). Increased trade integration could therefore bring more women into the workforce. In the short run, however, it may trigger job losses among firms that are not sufficiently competitive. Evidence suggests that such job losses from import competition may disproportionately affect women, implying tradeoffs to increased openness. To reduce disruptions caused by this process, policies can encourage the swift reallocation of worker toward more productive jobs and accelerate firms' growth (chapter 1).

## BOX 2.2 The marriage penalty in South Asia<sup>a</sup>

*Marriage reduces women’s labor force participation in South Asia—a phenomenon known as the “marriage penalty.” Married men, on the other hand, enjoy a marriage premium in the labor market. Education can mitigate a woman’s marriage penalty.*

### Introduction

The persistence of traditional roles of women and men in society is reflected in gender inequality in labor force participation. In South Asia, marriage reduces women’s participation—a phenomenon dubbed the marriage penalty—while men enjoy a marriage premium. Recent research shows that the unequal burdens of childbearing and childrearing play an outsized role in explaining these labor market gender gaps. The child penalty refers to the negative effects parenthood has on women relative to men in the labor market. Sharp changes in the outcomes of women relative to men around the birth of the first child explain a substantial share of gender inequality in the labor market (Kleven et al. 2019). Women spend more time on unpaid care and domestic work, including childrearing. In Asia, women spend around five times more hours than men on these tasks (Van der Gaag et al. 2019). It is therefore unsurprising that childrearing continues to be a major obstacle to women’s labor force participation in South Asia.

However, even among childless women, deeply entrenched gender norms around women’s household roles may limit labor market participation (Jayachandran 2021). Specifically, women may experience a marriage penalty in labor force participation following marriage but even before childbearing. Such a penalty might arise if conservative gender norms put limits on married women’s mobility outside the house, or if women aim to signal their compliance with such norms by reducing labor force participation. Unlike the child penalty, which may be driven in part by women reallocating their efforts to valuable care work, the marriage penalty represents pure misallocation of labor by preventing women from realizing their labor market potential. However, by encouraging women to return to the labor market and by engendering more liberal social attitudes, education can serve as a mitigating factor against the marriage penalty.

**Questions.** Using nationally representative data from four countries in South Asia, this box examines the following questions:

- Is there a marriage penalty for women in South Asia?
- What is the role of education as a potential mediating channel?

**Contributions.** This box contributes to the literature on the role of gender norms in female labor force participation. In settings with very traditional gender roles, spousal disagreement over the provision of the household public good can arise (Bertrand et al. 2016; Fernandez, Fogli, and Olivetti 2002). This intra-household disagreement may be particularly evident in childrearing. Child penalties have been documented in high- and lower-income settings with magnitudes as low as zero in some East Asian countries and 64 percent in a Middle Eastern country. The magnitude of the child penalty is generally higher in places with more traditional gender roles (Kleven 2022; Kleven, Landais, and Leite-Mariante 2023; Kleven, Landais, and Søgård 2019). However, before childrearing, marriage might independently affect female labor force participation in settings with deeply entrenched gender norms. The marriage penalty is investigated by Kleven, Landais, and Leite-Mariante (2023) for several advanced and developing economies. This box is the first to explore marriage penalties for women in South Asia and to test whether education can mitigate the marriage penalty. The results suggest that, unlike in advanced economies, in South Asia, marriage penalties vastly outweigh child penalties in depressing female employment.

**Main findings.** The main findings of this box are as follows.

- Women’s employment rates drop 12 percentage points following marriage, while men’s rise 13 percentage points in South Asia.
- Women with more than secondary schooling or who married men with more than secondary schooling are less likely to be affected by the marriage penalty, suggesting that education has a role in mitigating the marriage penalty for women.

<sup>a</sup> This box was prepared by Jonah Rexer and Margaret Triyana.

## BOX 2.2 The marriage penalty in South Asia (continued)

### Methodology

**Data.** This analysis used data from the Demographic and Health Survey (DHS) from Bangladesh, India, Maldives, and Nepal. These nationally representative surveys form a repeated cross section of women between the ages of 15 and 45 (i.e., their peak reproductive years). The DHS data include information on women's age, education, urban residence, employment status, marital status, age at marriage, and birth history. The DHS in these countries also surveys the women's husbands and other household members. The men's sample includes information on age, education, marital status, and employment status.

**Estimation.** Following Kleven et al. (2019), the analysis compares the labor market outcome of cohorts of women before and after marriage by creating pseudo cohorts. The procedure matches observations of married women to unmarried women with the same demographic characteristics, who serve as the pre-marriage counterfactual. A married woman is matched to a surrogate unmarried, younger woman in the same survey wave with the same education and rural or urban residence. A similar procedure is used in the post-marriage space. A married woman is matched to a surrogate older, married woman with the same demographic characteristics who married at the same age as the reference woman. The pseudo cohort's labor force participation is then estimated before and after marriage for a symmetric 10-year window around the year of marriage. Methodological details can be found in Bussolo, Rexer, and Triyana (2024). A similar estimation is conducted for men's labor force participation before and after marriage. A negative estimate is consistent with a marriage penalty and a positive estimate is consistent with a marriage premium. Because women tend to have children shortly after marriage, women's marital status can affect their labor market outcome—either through childrearing itself or as a result of gender norms even in the absence of children. To separate these mechanisms, the post-marriage matching pool is restricted to women without children as of year  $t$  after marriage.

### Marital status and labor force participation

On average, post-marriage South Asian female employment rates drop by 12 percentage points, about one third of the female pre-marital employment rate—even in the absence of children. The marriage penalty ranges from not statistically significant in Nepal to 12 percentage points in India and Maldives. This marriage penalty among married women without children persists up to five years after marriage in India and Maldives (figure B2.2.1). Conversely, men in South Asia are 13 percentage points more likely to be employed after marriage, which represents about 19 percent of the 69 percent male pre-marital employment rate. This is similar to the marriage premium on earnings in the United States (Hersch and Stratton 2000). The estimated premiums for men range from 13 percentage points in India and Nepal to 17 percentage points in Bangladesh and Maldives. These findings suggest a marriage premium for men that generally diminishes five years after marriage and a marriage penalty for women that persists. When the sample also includes women with children, female employment penalties rise slightly, reflecting the additional role of the child penalty. However, the vast majority of the post-marriage employment decline can be explained by the marriage penalty alone. This echoes results from Abraham et al. (2021), who find minimal evidence of a child-employment penalty in India.

### The role of education

Education interacts with other aspects of human capital and affects labor market outcomes (Heath and Jayachandran 2016). More-educated women have better labor market opportunities and perhaps greater household bargaining power, which raises the opportunity cost of the marriage penalty. At the same time, holding the wife's education constant, more-educated husbands may have more liberal social attitudes, which also mitigates the marriage penalty.

Women with more than secondary school are less affected by the marriage penalty in Bangladesh, India, and Nepal (figure B2.2.1). Similarly, a husband's higher education also mitigates a woman's marriage penalty in Bangladesh and India. A marriage market in which

**BOX 2.2 The marriage penalty in South Asia (continued)**

**FIGURE B2.2.1. Marriage penalties and premiums**

South Asian women face a marriage penalty in the labor markets, men a marriage premium. Better-educated women married to better-educated husbands experience a smaller marriage penalty in employment.



Sources: Demographic and Health Survey (DHS); World Bank.

Note: BGD = Bangladesh; IND = India; MDV = Maldives; NPL = Nepal; SAR = South Asia (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka). Sample consists of women and men without children. Data on women from the following DHS are used: Bangladesh 1993, 1999, 2004, 2007, 2014, and 2017; India 1993, 1998, 2005, 2015, and 2019; Maldives 2009 and 2016; and Nepal 1996, 2001, 2006, 2011, 2016, and 2022.

A.–D.  $t=0$  refers to the year of marriage;  $t=5$  refers to five years after marriage. Estimates are from an event-study regression, with methodological details Bussolo, Rexer, and Triyana (2024). Whiskers show the 95 percent confidence interval.

E. Bars show the coefficients on the interaction terms between an indicator for women's higher education and an indicator for post-marriage. Whiskers show the 95 percent confidence interval.

F. Bars show the coefficients on the interaction terms between an indicator for husband's higher education and an indicator for post-marriage. Whiskers show the 95 percent confidence interval.

women with more education would marry men with more education likely plays a role in lowering the marriage penalty for women with more education (Becker 1993). Indeed, about 70 percent of women with more than secondary schooling are married to men with the same level of education. Even when controlling for husbands' education, a woman's educational attainment remains a significant mitigating factor for the marriage penalty. These results suggest the role of education for both men and women to mitigate the marriage penalty for women.

**Conclusion**

Studies show the importance of child penalties in gender inequality in labor market outcomes. Even without considering children, there is evidence of a marriage penalty for women South Asia. The result is consistent with gender norms in South Asia as a source of misallocation. Increased education for both men and women could mitigate the marriage penalty for women, helping them realize their labor market potential.

**Urbanization.** Women enjoy better wages and higher returns to education in urban areas. However, gender discrimination is still widespread among urban employers and urban labor markets can tighten the constraints imposed by conservative social norms. Hence, urbanization is more likely to raise female labor force participation if accompanied by rapid job creation and the removal of other obstacles to women's participation.

With the objective of boosting labor demand, the World Bank is working on a 'job accelerator' initiative. This is a supporting program which will focus on identifying and removing obstacles to job creation in sectors with high job-growth potential, complementing the above described economy-wide approaches.

### Labor supply

**Safe transport and workplaces.** Poor safety in transit to and from work, particularly in urban areas, has been shown to reduce women mobility and their labor force participation across South Asia (Buchmann, Meyer, and Sullivan 2023; Field and Vyborny 2022; Kotikula, Hill, and Raza 2019). Improving public safety and reducing gender-based violence more broadly can also affect labor markets (Amaral et al. 2023; Siddique 2022). Inadequate workplace safety, including harassment and gender discrimination, can also constrain female labor supply, though data on the prevalence of workplace harassment is limited. Robust enforcement of existing labor and anti-harassment laws to protect women at work can help make workplaces more female-friendly.

**Affordable childcare.** In addition to marriage penalties, South Asian women face child penalties. In fact, marriage penalties themselves may reflect expected childbearing and child penalties. Expanded access to high-quality childcare could entice women to remain in the labor market throughout the family formation process. However, recent evidence on the effectiveness of childcare provision in promoting female labor force participation in South Asia is weak, suggesting multiple constraints may need to be lifted at once.

**Home-based work.** If such constraints as lack of safe transport and restrictive social norms have to be taken as given, at least in the short term, jobs that women can do from home may offer more feasible possibilities for participation. In one study, when Indian women were offered home-based work options, their willingness to take up employment more than doubled, in contrast to negligible take-up of high-wage job offers even within a five-minute commute of home (Jalota and Ho 2024). These results suggest that the introduction of remote-work arrangements may benefit both firms and female participation, and that policies that increase awareness of this possibility among firms may bring significant benefits.

### Labor market frictions

**Signaling.** Policies that improve women's ability to signal their capabilities to employers may help reduce hiring discrimination, particularly when the information provided by education metrics is weak. Apprenticeships, training, certifications, and improving access to references have all been shown to be effective in relieving information asymmetries disfavoring women.

**Digitization.** Digital platforms can help women in job search by providing information about employment opportunities, safety, and working conditions. Digital intermediation platforms or other forms of increasing transparency in the labor market can help improve the search and matching process and boost female employment. Digital platforms can also facilitate more flexible work arrangements. However, such platforms can only play an important role in settings with high literacy and mobile phone penetration.

### Laws and norms

**Laws and their implementation.** Implementation of gender equality legislation has been uneven across South Asia, and improving its enforcement would enhance the economic empowerment of women. For example, enforcing existing laws against street harassment could improve the safety of public spaces for women and facilitate greater mobility and access to job opportunities (Amaral

et al. 2023). Similarly, stronger implementation of existing labor laws could reduce gender discrimination in the hiring process (annex 2.3).

**Social norms.** Policies are likely to be more effective if accompanied by less conservative social norms. In some countries, the gap between personal beliefs and social expectations suggests that steps to correct misperceptions of social expectations can help boost female participation. This has been demonstrated in Saudi Arabia in the context of its comprehensive overhaul of women’s economic role (Bursztyjn et al. 2020). Direct interventions to improve women’s economic empowerment, such as increasing their financial inclusion, can also shift gender norms around women’s work (Field et al. 2021). Digital finance can play a particularly important role by separating women’s finances from the claims of other household members (Riley 2024).

**Quotas and role models.** Social norms are transmitted not only through peer groups but also via role models. The system of gender-based political quotas in India that “reserves” certain local elections for female candidates has been shown to improve gender norms and increase female employment through role model effects (Beaman et al. 2009; Deininger et al. 2022; Pande 2003). Such quotas can meaningfully shift norms and increase female labor force participation when women are poorly represented in public life.

## Annex 2.1 Data

**Data** on labor force participation, individual demographics, education, sector of work, occupation, and wages come from the World Bank’s Global Labor Database (GLD). The GLD harmonizes periodic labor force survey microdata across a variety of indicators, countries, and periods. GLD data are compiled for Bangladesh, India, Nepal, Pakistan, and Sri Lanka. These countries form the core of the labor market analysis in this chapter. GLD data are available for these countries over the period of 1983–2022, although coverage is not uniform. Each country has, on average, one survey every three years. A full list of GLD surveys is available in annex table 2.1. For Bangladesh, 2022 data come from the World Bank’s South Asia Region Labor Database (SARLD). SARLD is a

similar but smaller harmonized Labor Force Survey database than GLD, prepared by the World Bank South Asia Poverty and Equity Data Lab. Throughout the report, when using harmonized GLD microdata, participation is defined using current weekly status and the working-age population is the 15–64 age range.

**Cross-country data** on labor force participation, per-capita income, governance, urbanization, labor market structure, and other comparable cross-national indicators come from the World Development Indicators (WDI) produced by the World Bank. The model-based estimates from the International Labour Organization (ILO) are used to extend the data to 2023. A global sample of 209 countries from 1990–2023 is used in all cross-country analysis. These ILO modeled estimates of country-level labor force participation rates are used where appropriate throughout this report to facilitate standardized comparisons across countries and over time, as well as to allow for a common time period of study. ILO estimates use current weekly status to measure labor force participation, and either 15+ or 15–64 age ranges, as indicated in figure notes. ILO modeled estimates may differ, in some cases substantially, from national estimates, which often use varying definitions and methodologies, some of which even change within countries over time (annex table A2.1.1).

**Trade data** on product-specific imports and exports for all South Asian countries come from the United Nations Comtrade. The annual data spans the period 1996–2021, with gaps.

**Data on the legal framework** come from the Women, Business, and the Law (WBL) initiative at the World Bank. Composite indices on gender equality in the legal framework, as well as de facto implementation of gender-equal laws, are available for 190 countries from 1971–2024.

**Data on social norms** come from several sources. The 2020 World Bank-Facebook Survey on Gender Equality at Home provides a cross-section of country-level survey data on attitudes across a variety of gender-related questions. These data are available for 120 countries, including all of the South Asian countries, and is representative of urban-rural and gender cells.

Facebook data were collected from surveys of platform users and weighted to be representative of the online population. However, individuals without internet access are not represented. Microdata on social norms in Nepal come from Bussolo et al. (2024). Additional information on gender attitudes and norms is also taken from the World Values Survey (WVS) and the Demographic and Health Surveys (DHS) from the U.S. Agency for International Development.

Data on marriage and employment come from the DHS for India, Maldives, Bangladesh, and Nepal. The dataset spans the period 1993–2022. On average, each country has one survey every five years.

## Annex 2.2 Assessing the effect on GDP of raising female labor force participation

Two main approaches are used to estimate the effect on GDP of an increase in female labor force participation (for a summary see annex table A2.2.1). The first involves using a production function embedded in a growth model and simulating the impact of the entry of additional women into the labor market. Variants of this approach consider whether physical capital adjusts, the disaggregation of the economy to include different sectors and different skills, and how the technology combines different factors. A final variant of this first approach uses the potential growth approach and is described in detail in Celik, Kose, and Ohnsorge (2023).

The second approach mimics an occupational choice model similar to the Roy model and relies on the recent experience of developing countries that have experienced increases in female participation to predict what may happen if South Asia follows a similar path.

### Baseline GEGI model

The first set of models—the Gender Employment Gap Index (GEGI) approach and its variants—is based on a macro growth model described in detail in Pennings (2022) and Fiuratti et al. (2024). This growth model is summarized by an

aggregate production function that transforms labor and capital into output and mechanisms that account for the accumulation of both factors. In the long-run steady state of the model, the capital to labor ratio remains constant and it can be shown that:

$$\frac{y^*}{y} - 1 \times 100 \text{ percent} = \frac{L_m - L_f}{L} \times 100 \text{ percent}$$

where  $y^*$  is the GDP level obtained with equal participation of men and women and  $y$  is GDP with currently unequal rates of participation. The percentage increase in per capita GDP is the percentage difference between male and female participation ( $L_m - L_f$ ). This version of the model calculates an increase of about 46 percent of per-capita GDP in the case of South Asia. This is a long-run estimate, that is, the GDP increase is obtained thanks to rising female labor force participation that is accompanied by an increase in the capital stock that keeps the capital-to-labor ratio unchanged.

This baseline version does not differentiate between sectors or skill levels, and capital stocks are allowed to adjust. These assumptions are changed in three variants of the model (annex table A2.2.2).

### GEGI model with fixed capital

The fixed-capital GEGI model assumes that capital cannot adjust, either because not enough time passes or because of other restrictions on factors and financial markets. In this case, the fixed capital assumption reduces the impact of the higher female participation rate to 26 percent.

### GEGI model with productivity differences in jobs

A second variant, developed in Fiuratti et al. (2024), accounts for employment composition effects by including two segments in the economy: one with more productive jobs and one with less productive jobs. Because women in EMDEs tend to be predominantly employed in subsistence agriculture, small-scale retail, or more generally in household microenterprises, and in the baseline

<sup>2</sup> See, for example, Hanmer et al. (2014).

scenario, the new entrants are assumed to be allocated to these in the same proportion as for existing female participants.<sup>2</sup> However, assuming that new entrants are allocated to professions in the same proportion as men increases the output gain to 51 percent.

### GEGI model with skill differences among workers

A final variant of the GEGI is one in which labor is differentiated into skilled and unskilled types, and capital and skilled labor are complements.<sup>3</sup> This setup takes account of the likelihood that new female entrants would be relatively unskilled, which reduces the estimated increase in GDP.<sup>4</sup>

### Structural occupational choice model, as in Hsieh et al. (2019)

Two well-known examples of structural occupational choice models used to estimate the impact of higher female labor force participation on GDP are described in Hsieh et al. (2019), who focus on the United States, and Cuberes and Teignier (2016), who employ a global model.<sup>5</sup>

In these models, the premise is that women and men have similar distributions of talents, and that any barriers to the full deployment of these talents are detrimental to efficiency since they create misallocations that are reflected in gender gaps in employment rates across sectors and occupations.

<sup>3</sup> This set up has been used by a large body of the literature that studies the evolution of labor markets. Well known references are Acemoglu and Autor (2011) and the Goldin and Katz (2010) book on the race between technology and education. Both focus on explaining the evolution of employment and skill wage premiums in the United States and globally.

<sup>4</sup> In more detail, when there are capital-skill complementarities, if closing gender employment gaps does not lead to an increase in the share of skilled workers in the economy, then the effect on output per person would be less strong than a change in the total number of workers that leaves the skill composition unaltered. This is because the capital per worker ration ( $K/L$ ) decreases. In the long run, capital is determined by savings, which are a fixed share of GDP (the Solow-Swan assumption). If closing the gender gap increases proportionally more low-skilled than high-skilled employment, then the average skills level in the economy falls:  $Y$  increases by less than  $L$ . As  $K$  is proportional to  $Y$  under the Solow-Swan assumption ( $K=sY/\delta$ ), then  $K$  increases less than  $L$ , and so  $K/L$  falls. Also, because capital and skills are complements, lower skills levels make capital relatively less productive.

<sup>5</sup> Although not focused on gender disparities, an example of a structural model applied to the case of India is presented by Cassan, Keniston, and Kleineberg (2021).

Barriers include: (i) limits to accessing education or training; (ii) constraints on credit or access to physical capital, including land; and (iii) discrimination or (social norms internalized) preferences. All of these can limit not only participation, but also mobility across sectors and jobs, and result in efficiency costs. The economy misallocates resources by not employing (or educating) women who are, on the margin, productive, and preventing individuals from following their comparative advantage.<sup>6</sup>

### Structural model, as in World Bank (2022a)

To implement the approach just described, World Bank (2022a) and Eberhard-Ruiz and Michel-Gutierrez (2022) estimate the relationship of sector-specific value-added per worker as a function of employment in the sector, the ratio of wage workers in the sector, and other control variables. The coefficients obtained from this regression are then used to simulate impacts on value-added (GDP) when female employment is equalized with male employment across different sectors. The regression specification in Eberhard-Ruiz and Michel-Gutierrez (2022), for country  $i$ , sector  $s$ , and year  $t$ , is:

$$\begin{aligned} \log(\text{prod}_{ist}) &= \gamma_i + \alpha_1 \log(\text{emp}_{ist}) + \beta_1 \text{wshare}_{ist} \\ &+ \sum_{k=2}^8 \alpha_k \log(\text{emp}_{ist}) \times (s = k) \\ &+ \sum_{k=2}^8 \beta_k \text{wshare}_{ist} \times (s = k) + \varepsilon_{ist} \end{aligned}$$

Where  $\text{prod}$  is value-added per worker,  $\text{emp}$  is sectoral employment levels, and  $\text{wshare}$  is the share of waged jobs in the sector. To simulate an increase in female employment, the  $\alpha$  coefficients are multiplied by the sector-specific increases in

<sup>6</sup> Note also that while these structural models could be used to make predictions about what would be the ex-ante impact of increased female labor force participation, they are normally used to estimate ex-post the contribution of reducing barriers to female labor force participation on GDP growth. Hsieh et al. (2019), estimate that the reduced sectoral segregation against women and African American employment during the past 50 years explains between 20 and 40 percent of economic growth in the United States during the same period. For South Asia, Cuberes and Teignier (2016) estimate a 25 percent income loss from gender gaps, with almost 40 percent of it the result of occupational gaps in entrepreneurship between men and women.

female employment under a given scenario, and the predicted gains are then added up across sectors. To simulate a change in the share of wages jobs, the  $\beta$  coefficients are multiplied by the change in waged jobs. Sector-specific changes in output arising from bringing female employment to parity with men for several South Asian countries are in annex table A2.2.4. The smallest contributions come from agriculture, where female and male employment rates are closer to parity, while the largest come from manufacturing, where the gender gap in employment is widest. For example, in India, total employment in agriculture rises by 73 percent if female participation is brought to parity with men. In manufacturing, employment rises by over 217 percent to achieve parity. In services, a nearly sevenfold increase is required to achieve parity.

### Caveats: General equilibrium effects and welfare

None of the methodologies discussed above account for general equilibrium effects because all models assume that the closing of the gender employment gap is costless, and then subsequently estimate its effect on GDP. However, any shock that catalyzes such a large increase in female labor force participation is likely to yield general equilibrium effects on male labor force participation, wages, prices, and structural change.

These general equilibrium effects depend on several factors, including the nature and source of the shock, the prevailing economic conditions, and the subsequent policy responses:

- If the surge in female participation stems from enhanced educational access or improved labor demand, it could potentially inspire a parallel uptick in male labor force engagement, particularly in an expanding economy.
- If the rise in female participation results from cultural shifts or policy changes favoring women without commensurate benefits for men, it might precipitate a decrease in male labor force involvement, especially if perceived competition for jobs intensifies.

Wages may adjust in response to the altered labor supply dynamics:

- An influx of female workers could exert downward pressure on wages for both genders if demand growth fails to match the expansion of the labor pool.
- However, if the increased female participation enhances productivity or fills critical skill gaps, it may contribute to higher wages for both men and women over time.

Price levels could also undergo adjustments, reflecting changes in consumption patterns, production costs, and market dynamics.

Furthermore, this chapter does not estimate the impact on welfare. Services such as child and elderly care and other household tasks are mostly provided by women and, especially in developing countries, are not marketed activities and therefore not included in the calculations of labor participation or GDP estimates. However, welfare is influenced by the provision of both marketed and un-marketed services. An interesting alternative methodological approach that explicitly considers this issue can be found in Ilkkaracan (2024), and Onaran and Oyvat (2023). These papers do not assume that women who do not participate are idle but, rather, that they are dedicated to care giving in the “home” sector. Therefore, they suggest the need for investment in care services and that this should be modeled as an additional sector in the economy.

## ANNEX 2.3 Discrimination in labor demand

Firms in South Asia often state an explicit preference for male over female workers in their hiring. A randomized control trial in Pakistan suggests that firms would require a 15 percent wage subsidy to hire an additional female worker. Offering subsidy increases female hires by 11 percentage points.

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*Note:* This annex was prepared by Maurizio Bussolo, Jean Nahrae Lee, and Jonah Rexer.

## Introduction

Discriminatory hiring preferences may reduce demand for female employees and limit female labor participation. Surveys in India (Chowdhury et al. 2018) and Pakistan (Gentile et al. 2023) show that firms have a high rate of stated preference for male workers over female workers. For example, Chowdhury et al. (2018) found that firms participating in an online jobs portal, such as Indeed.com, commonly state a preference for men over women in job advertisements. Similarly, a door-to-door census of firms in a Pakistani city as reported by Vyborny et al. (forthcoming) showed that nearly all surveyed firms strongly preferred male hires.

This gender preference may be driven by social norms or the perceived need to provide women-specific amenities, such as separate toilets, prayer rooms, childcare, transport, flexible work hours, or maternity leave. In Pakistan, many managers say that they would require a subsidy to hire a woman over a man, despite the market wage differential that already makes it cheaper to hire a woman (Bussolo et al. 2023). Similarly, a survey of firms in several Indian cities found that many employers believe men should be prioritized over women when jobs are scarce, consider men better employees, and view some jobs as more suitable for men than women (Das et al. 2019).

One way to overcome demand-side gender discrimination is through gender-targeted wage subsidies. In addition to direct effects on hiring, exposing potentially reluctant employers to female colleagues through wage subsidies may shift employer beliefs, leading to more progressive attitudes and greater future hiring of women. Drawing on evidence from a novel randomized control trial in Pakistan, this box addresses the following questions:

- Do employers discriminate against female hires?
- What is the impact of temporary wage subsidies on female hiring?
- Do different types of employers respond differently to subsidies?

**Contributions.** Most research on norms focuses on supply-side constraints, as summarized in this chapter and Box 2.1. However, the impact of biased norms on the demand-side is less understood. While gender-neutral wage subsidies have been well-studied across advanced economies (Katz 1996), very few studies have considered the role of wage subsidies in overcoming bias and incentivizing female hiring, particularly in emerging market and developing economies. Groh et al. (2016) study individual wage subsidies for Jordanian women, but this study is the first to test firm-level subsidies' effectiveness in reducing gender discrimination in hiring. Also, this is the first use of an incentivized mechanism to elicit employer preferences on female hiring in developing countries.

**Main findings.** This box documents the following findings:

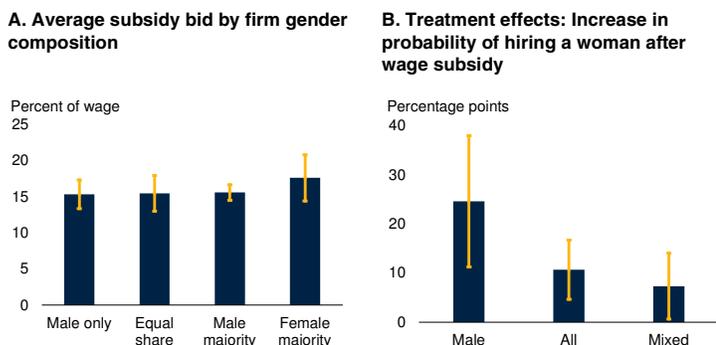
- Employer discrimination in hiring is pervasive. On average, a 15 percent wage subsidy is required to encourage employers to select a female hire over an equally qualified male hire.
- Discrimination is consistent across all types of employers, regardless of the composition of the existing work force.
- Wage subsidies significantly increase female hiring, increasing it by 11 percentage points on average, with even greater effects in male-only firms.

## Design of the randomized control trial

To study the extent of hiring discrimination and the impact of wage subsidies, Bussolo et al. (2024) conduct a randomized control trial with 1,227 firms in urban Pakistan. In collaboration with the online jobs portal Rozee.pk, researchers randomly selected firms that had posted job advertisements for technical and professional roles. Firms were then randomized into two groups: a treated group, which received a wage subsidy offer for hiring a woman, and a control group, which did not. A baseline phone survey was conducted for all firms to measure gender attitudes, employment composition, and details about the posted

### FIGURE A2.3.1 Wage subsidies to firms in Pakistan

In an experiment in Pakistan, all types of firms indicated a preference for male hires, requiring on average a 15 percent wage subsidy to hire a woman. Receipt of the subsidy significantly increased female hiring, particularly for male-only firms.



Sources: Bussolo et al. (forthcoming); World Bank.

Note: A. Bars show the average subsidy bid in the Becker-DeGroot-Marschak preference elicitation of firms with different gender compositions, with 9 percent confidence intervals. "Male majority" indicates more than 60 percent male employees. "Equal share" indicates between 40 and 60 percent female employees. "Female majority" indicates more than 60 percent female employees.

B. Bars show the coefficients from a linear probability model estimating the likelihood of hiring a woman post-subsidy, based on interaction terms between a treatment indicator and firm composition indicators. Treatment indicator equals one if the firm was randomized to receive a subsidy offer. "Mixed" indicates a positive share of female employees. Whiskers show 95 percent confidence intervals.

position. All firms were asked to self-report how large a six-month subsidy, as a share of the wage, would be required to hire a qualified female candidate.

Before the intervention, the preferences of treated firms (those randomly assigned to receive the wage subsidy offer) were elicited using an incentive compatible Becker-DeGroot-Marschak mechanism. Firms were asked about their desired subsidy, but also informed that if their requested amount was higher than a random subsidy draw, they would not be paid any share of the hired female employee's salary. Firms that bid below the randomly generated value were then offered a six-month subsidy to hire a female worker for the posted position at the randomly generated value. A follow-up survey was conducted with all firms about one month later to determine whether the position had been filled by a man or a woman, along with details about the hiring process.

Effects of the subsidy are estimated with a standard intent-to-treat linear probability model regression for the full sample of firms  $i$  of the form:

$$y_i = \alpha + \beta \text{treat}_i + \varepsilon_i$$

Where  $y_i$  is a binary variable indicating that the position was filled by a woman, and  $\text{treat}_i$  is the randomly assigned treatment status. For heterogeneity analysis, this regression is estimated on four mutually exclusive subgroups: (i) firms with a majority of women in their workforce; (ii) firms with an approximate gender balance in their workforce composition; (iii) firms with a majority of men in their workforce; and (iv) firms that were all male at baseline.

#### Extent of hiring discrimination and impact of subsidy

Firms exhibited strong preferences against hiring women. In the initial survey, firms self-reported needing a 26.4 percent subsidy to hire a woman. However, when preferences were incentivized, the average firms' bid for only a 15 percent subsidy to fill the position with a woman (figure A2.3.1). This bid did not vary significantly based on the firm's initial gender composition. Across all types of firms, a substantial subsidy was necessary to employ a woman, suggesting demand-side discrimination even among firms with a majority of female employees.

The subsidy offer significantly increased female hiring (figure A2.3.1). On average, treated firms (that were offered a subsidy) were 10.7 percentage points more likely to fill the advertised position with a woman. Among male-only firms, the subsidy increased female hiring by 24 percentage points. Effects were significantly smaller for firms with a mixed workforce composition (7.6 percentage points) and non-significant for female-only firms. No significant differences were found across industries or firm locations.

#### Conclusion

Although hiring managers in Pakistan exhibit substantial discrimination against female job candidates, incentivized measures result in somewhat less gender bias than stated preferences. In the short run, wage subsidies work to reduce gender discrimination and increase the rate of female hiring. Future analysis could focus on whether hiring women shifts the attitudes of managers and workers in the treated firms, and whether temporary subsidies can lead to durable changes in gender bias in hiring.

## Annex 2.4. Social norms: Review of the literature and measurement

*Social norms have emerged as an important explanation for gender gaps in economic participation where standard economic models fall short. Properly defining and measuring social norms remains a challenge that constrains empirical work. Attention must be paid to the critical distinction between personal beliefs and social expectations.*

### Impact of social norms on labor market outcomes

The collective bargaining model has often been used to explain time allocation decisions: women have historically tended to specialize in home-making roles and men in breadwinning ones (see Becker 1973; Gronau 1973a; 1973b; Chiappori 1988, 1992). In this model, the relative *productivities* of the two spouses in market activities and household tasks, as well as their preferences, determine the specialization of men and women in either working outside the home or family care. Following on this approach, studies have attributed gender gaps in labor market participation to differences in relative productivities and preferences between men and women, with these being driven by variables such as education, marriages and fertility, and the availability of childcare (Albanesi and Olivetti 2016, Benhabib et al. 2011). However, a growing literature suggests that even when these determinants are accounted for, a large share of the gender gap in labor force participation remains unexplained (Bertrand 2020, Bussolo et al. 2024, Giuliano 2020, Jayachandran 2021).

To explain this persistent gap, new approaches explicitly account for the influence of social norms on women's economic activities (Akerlof and Kranton 2000; Andreoni and Bernheim 2009; Bénabou and Tirole 2006). A main advantage of these approaches is that they allow for more comprehensive models of human behavior and explain empirical observations when neoclassical models fail. Bussolo et al. (forthcoming) present a simple extension to the household collective

bargaining model by adding to the utility function an “identity concern”—the notion that “men should not do women's work in the home and should earn more than their wives” (Akerlof and Kranton 2000).

Social norms have three transmission mechanisms: vertical, horizontal, and oblique. Vertical transmission of social norms occurs within the family across generations, from parents to children. Focusing on immigrants in the United States, Antecol (2000), Blau, Kahn, and Papps (2011), and Fernández and Fogli (2009) have found that labor force participation rates among second-generation women are strongly correlated with female labor force participation in their parents' country of origin.

The second mechanism is horizontal transmission among peers, typically a group including extended family, friends, co-workers, neighbors, and members of the community who provide the social context within which individuals learn what is acceptable or unacceptable behavior (Bicchieri 2016). For a global perspective, Bursztyn et al. (2023) collect data similar to the World Bank-Facebook survey mentioned in annex 2.1 on personal beliefs and social expectations regarding women's participation in the labor market. The authors find that married men who support women working outside the home tend to underestimate the similar support that other men may have. Evidence from an experiment in Saudi Arabia shows that an intervention to correct this misperception led to increased female labor force participation (Bursztyn, González, and Yanagizawa-Drott 2020).

The final transmission channel is oblique, which involves the influence of role models—such as religious or other community leaders and teachers—in spreading social norms (Beaman et al. 2009). This discussion is useful because it can suggest different policy interventions: education for vertical transmission, correction of misperceptions or “debiasing” (as in Bursztyn et al. 2020) for horizontal transmission, and, for the oblique transmission, role model interventions such as “edutainment,” that is, entertainment with an educational element.

### Measurement of social norms

Even if theory has embedded social norms as a factor influencing female labor force participation, empirical applications are less common. The difficulty in the accurately defining and measuring social norms remains the primary obstacle to more widespread empirical applications. However, social norms are often thought of as “informal rules that embody beliefs about which behaviors are approved or disapproved of in a specific context by a given social group” (Bicchieri 2005, 2016; Cislighi and Heise 2019; Nosenzo and Görge 2020). Bicchieri (2012) applies this approach in examining the decision of a woman to work outside the house for pay by organizing beliefs—or alternatively, expectations or preferences—along two dimensions: social and normative. As illustrated in the table below, the columns distinguish the social dimension, and the rows distinguish the normative dimension.

In annex table A2.4.1, beliefs influencing the decision of a woman about working for pay outside the home are either *personal beliefs*—those

held by the woman herself—or *social expectations*—those held by people in her reference group, such as neighbors. These beliefs can also be *factual*—based on observations of how things usually are—or *normative*—based on expectations of how things should be. Personal *normative* beliefs drive behavior through internal motivation, while social expectations, shaped by perceptions of others' beliefs, influence behavior differently from personal attitudes (Cislighi and Heise 2018; Mackie et al. 2015).

Measuring social norms accurately and not through proxies, such as personal attitudes, is critical. In fact, in most countries in the world, social expectations tend to be more conservative than personal beliefs (Bursztyn et al. 2023; Bussolo et al. 2024). In other words, most people think that they are living in a society where views are less permissive than their own. Consequently, using personal attitudes risks underestimating the role of non-economic factor in explaining the gap in female participation.

### ANNEX TABLE 2.1 Labor Force Survey (LFS) data overview

| Country    | Waves  |
|------------|--|
| Bangladesh | 2005, 2010, 2013, 2015, 2016, 2022   |
| India      | 1983, 1987, 1993, 1999, 2004, 2005, 2007, 2009, 2011, 2017, 2018, 2019, 2020, 2021, 2022   |
| Nepal      | 1998, 2008, 2018   |
| Pakistan   | 1992, 1999, 2001, 2003, 2005, 2007, 2008, 2009, 2010, 2012, 2013, 2014, 2017, 2018, 2020   |
| Sri Lanka  | 1992, 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2006, 2007, 2008, 2011, 2012, 2013, 2014, 2015, 2019, 2020, 2021 |

Note: All LFS data come from the World Bank Global Labor Database (GLD) except for Bangladesh LFS 2022 data, which come from the World Bank South Asia Region Labor Database (SARLD).

**ANNEX TABLE 2.2. Employment in services and relative female labor force participation**

|                              | (1)                    | (2)                    | (3)                    | (4)                    | (5)                    | (6)                    | (7)                    | (8)                    |
|------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Employment share in services | -1.2334***<br>(0.3140) | -1.4392***<br>(0.3585) | -1.1079***<br>(0.3355) | -1.5474***<br>(0.4202) | -1.2582***<br>(0.3638) | -1.1137***<br>(0.3549) | -1.5227***<br>(0.4407) | -1.7888***<br>(0.4385) |
| Log GDP per capita           |                        | 0.1480***<br>(0.0517)  | 0.1451**<br>(0.0576)   | 0.1816***<br>(0.0604)  | 0.0493<br>(0.1016)     | -0.6411**<br>(0.2987)  | -0.4042*<br>(0.2051)   | -0.9070<br>(0.6641)    |
| Observations                 | 617                    | 617                    | 617                    | 617                    | 617                    | 617                    | 617                    | 617                    |
| R-squared                    | 0.1074                 | 0.1309                 | 0.4288                 | 0.7863                 | 0.3665                 | 0.5059                 | 0.8573                 | 0.8649                 |
| Country FE                   | No                     | No                     | Yes                    | No                     | No                     | Yes                    | No                     | Yes                    |
| State FE                     | No                     | No                     | No                     | Yes                    | No                     | No                     | Yes                    | Yes                    |
| Year FE                      | No                     | No                     | No                     | No                     | Yes                    | Yes                    | Yes                    | Yes                    |

Source: World Bank, Global Labor Database (GLD).

Note: FE = fixed effects. Standard errors in parentheses, clustered at the state level. Sample is all state-year observations in the GLD. Outcome variable is the log of state-level female labor force participation divided by male labor force participation. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**ANNEX TABLE 2.3. Gender wage gap across sectors**

(Percent)

|            | All             | Services        | Industry        | Agriculture     |
|------------|-----------------|-----------------|-----------------|-----------------|
| <b>SAR</b> | 58.42<br>(0.14) | 64.41<br>(0.28) | 52.39<br>(0.27) | 61.08<br>(0.22) |
| <b>BGD</b> | 89.57<br>(0.45) | 88.65<br>(0.74) | 90.98<br>(0.63) | 88.63<br>(1.03) |
| <b>IND</b> | 57.26<br>(0.16) | 62.69<br>(0.32) | 50.24<br>(0.31) | 61.41<br>(0.23) |
| <b>LKA</b> | 71.01<br>(0.32) | 70.49<br>(0.48) | 51.07<br>(0.62) | 52.82<br>(0.82) |
| <b>NPL</b> | 65.60<br>(0.85) | 69.31<br>(1.43) | 66.66<br>(1.93) | 82.43<br>(1.77) |
| <b>PAK</b> | 54.05<br>(0.27) | 60.42<br>(0.43) | 43.03<br>(0.48) | 60.87<br>(0.55) |

Source: World Bank Global Labor Database (GLD).

Note: BGD = Bangladesh; IND = India; LKA = Sri Lanka; NPL = Nepal; PAK = Pakistan; SAR = South Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka).

Standard errors in parentheses, clustered at the household level. Sample is all wage-earning individuals across all Global Labor Database survey rounds in annex table 2.1. Gender wage gaps are expressed as female wages as a percentage of male wages. These estimates are taken from coefficients of regressions for each sector of log wages on interactions between male and sector indicators, controlling for education and survey year fixed effects.

**ANNEX TABLE 2.4 Urban population share and relative female labor force participation**

|  | (1)                 | (2)                 | (3)                 | (4)                  | (5)                  |
|--|---------------------|---------------------|---------------------|----------------------|----------------------|
| <b>Panel A: Administrative measurement</b> |                     |                     |                     |                      |                      |
| Urban population share                     | -0.531**<br>(0.203) | -0.512**<br>(0.206) | -0.443*<br>(0.248)  | -0.350<br>(0.221)    | -0.378<br>(0.241)    |
| Log GDP per capita                         |                     | 0.049<br>(0.069)    | 0.091<br>(0.107)    | -0.017<br>(0.044)    | -1.377***<br>(0.231) |
| Year FE                                    | No                  | No                  | Yes                 | No                   | Yes                  |
| Country FE                                 | No                  | No                  | No                  | Yes                  | Yes                  |
| Observations                               | 713                 | 713                 | 713                 | 713                  | 713                  |
| R-squared                                  | 0.050               | 0.052               | 0.189               | 0.411                | 0.478                |
| <b>Panel B: Spatial measurement</b>        |                     |                     |                     |                      |                      |
| Urban population share                     | -0.420**<br>(0.206) | -0.441**<br>(0.202) | -0.482**<br>(0.197) | -0.518***<br>(0.171) | -0.513***<br>(0.174) |
| Log GDP per capita                         |                     | 0.129<br>(0.113)    | 0.034<br>(0.110)    | 1.394***<br>(0.255)  | 0.546<br>(0.457)     |
| Year FE                                    | No                  | No                  | Yes                 | No                   | Yes                  |
| Country FE                                 | No                  | No                  | No                  | Yes                  | Yes                  |
| Observations                               | 261                 | 261                 | 261                 | 261                  | 261                  |
| R-squared                                  | 0.048               | 0.058               | 0.167               | 0.374                | 0.426                |

Source: Global Labor Database (GLD), Nelson et al. (2019); World Bank.

Note: FE = fixed effects. Standard errors in parentheses, clustered at the state level. Sample in Panel A is all state-year observations in the GLD. Sample in Panel B is all state-year observations from 2015 onwards. Outcome variable is the log of state-level female labor force participation divided by male labor force participation. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**ANNEX TABLE 2.5 Wage premium by gender in cities**

| Outcome variable<br>Sample | Log (wages)          |                      |                      |                     |                      |                      |
|----------------------------|----------------------|----------------------|----------------------|---------------------|----------------------|----------------------|
|                            | SAR                  |                      | BGD                  |                     | IND                  |                      |
|                            | (1)                  | (2)                  | (3)                  | (4)                 | (5)                  | (6)                  |
| Urban                      | 0.398***<br>(0.005)  | 0.276***<br>(0.005)  | 0.073***<br>(0.009)  | 0.067***<br>(0.009) | 0.413***<br>(0.006)  | 0.274***<br>(0.006)  |
| Urban X Male               | -0.036***<br>(0.005) | 0.046***<br>(0.005)  | 0.096***<br>(0.010)  | 0.087***<br>(0.010) | -0.016**<br>(0.006)  | 0.074***<br>(0.007)  |
| Services                   |                      | 0.326***<br>(0.006)  |                      | 0.072***<br>(0.009) |                      | 0.347***<br>(0.007)  |
| Services X Male            |                      | -0.136***<br>(0.006) |                      | 0.026*<br>(0.010)   |                      | -0.137***<br>(0.007) |
| Female urban premium       | 0.489                | 0.318                | 0.075                | 0.070               | 0.512                | 0.316                |
| Male urban premium         | 0.437                | 0.381                | 0.184                | 0.167               | 0.488                | 0.417                |
| Observations               | 2257876              | 2257876              | 124061               | 124061              | 1361254              | 1361254              |
| R-squared                  | 0.692                | 0.698                | 0.547                | 0.550               | 0.719                | 0.725                |
|                            | <b>LKA</b>           |                      | <b>NPL</b>           |                     | <b>PAK</b>           |                      |
| Urban                      | 0.297***<br>(0.010)  | 0.271***<br>(0.010)  | 0.211***<br>(0.025)  | 0.196***<br>(0.026) | 0.217***<br>(0.010)  | 0.132***<br>(0.011)  |
| Urban X Male               | -0.063***<br>(0.011) | -0.065***<br>(0.011) | -0.093***<br>(0.026) | -0.076**<br>(0.027) | -0.113***<br>(0.010) | -0.025*<br>(0.011)   |
| Services                   |                      | 0.345***<br>(0.009)  |                      | 0.059*<br>(0.027)   |                      | 0.242***<br>(0.011)  |
| Services X Male            |                      | 0.010<br>(0.009)     |                      | -0.059*<br>(0.028)  |                      | -0.209***<br>(0.011) |
| Female urban premium       | 0.345                | 0.311                | 0.234                | 0.217               | 0.243                | 0.141                |
| Male urban premium         | 0.263                | 0.228                | 0.125                | 0.128               | 0.110                | 0.112                |
| Observations               | 368705               | 368705               | 23084                | 23084               | 380772               | 380772               |
| R-squared                  | 0.470                | 0.475                | 0.727                | 0.727               | 0.588                | 0.590                |
| Survey year FE             | Yes                  | Yes                  | Yes                  | Yes                 | Yes                  | Yes                  |
| Education controls         | Yes                  | Yes                  | Yes                  | Yes                 | Yes                  | Yes                  |

Source: World Bank Global Labor Database (GLD).

Note: BGD = Bangladesh; FE = fixed effects; IND = India; LKA = Sri Lanka; NPL = Nepal; PAK = Pakistan; SAR = South Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka). Standard errors in parentheses, clustered at the household level. Sample is all wage-earning individuals across all Global Labor Database survey rounds in annex table 2.1. Urban wage premium for women is calculated as  $\exp(\text{urban}) - 1$ ; urban wage premium for men is  $\exp(\text{urban} + \text{urban} \times \text{male}) - 1$ . Wage premiums are estimated relative to rural areas, the omitted group. All models control for survey year effects and years of education, and use harmonized survey weights. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**ANNEX TABLE 2.6** Composition of employment, by employment arrangement

(Percent)

|            |        |       | Paid | Unpaid | Self-employed |
|------------|--------|-------|------|--------|---------------|
| <b>BGD</b> | Male   | Rural | 40   | 3      | 33            |
|            |        | Urban | 45   | 3      | 24            |
|            | Female | Rural | 6    | 7      | 38            |
|            |        | Urban | 14   | 2      | 6             |
| <b>IND</b> | Male   | Rural | 33   | 9      | 33            |
|            |        | Urban | 46   | 4      | 20            |
|            | Female | Rural | 11   | 15     | 11            |
|            |        | Urban | 15   | 3      | 6             |
| <b>LKA</b> | Male   | Rural | 43   | 2      | 27            |
|            |        | Urban | 46   | 1      | 19            |
|            | Female | Rural | 20   | 6      | 8             |
|            |        | Urban | 23   | 2      | 6             |
| <b>NPL</b> | Male   | Rural | 30   | 3      | 10            |
|            |        | Urban | 34   | 3      | 11            |
|            | Female | Rural | 7    | 6      | 6             |
|            |        | Urban | 12   | 7      | 7             |
| <b>PAK</b> | Male   | Rural | 35   | 10     | 36            |
|            |        | Urban | 43   | 5      | 25            |
|            | Female | Rural | 6    | 19     | 6             |
|            |        | Urban | 6    | 2      | 2             |

Source: World Bank Global Labor Database (GLD).

Note: BGD = Bangladesh; IND = India; LKA = Sri Lanka; NPL = Nepal; PAK = Pakistan Sample is all working age (15–64) individuals across all GLD survey rounds in annex table 2.1. All quantities measured as a percent of the working age population.

**ANNEX TABLE 2.7** South Asia: Trade exposure and relative female labor force participation

|                     | (1)                 | (2)                |
|---------------------|---------------------|--------------------|
| Log export exposure | 0.225**<br>(0.095)  | 0.235**<br>(0.108) |
| Log import exposure | -0.220**<br>(0.102) | -0.218*<br>(0.129) |
| Year FE             | Yes                 | Yes                |
| Country FE          | No                  | Yes                |
| Year-by-Country FE  | No                  | Yes                |
| State FE            | Yes                 | Yes                |
| Observations        | 407                 | 407                |
| R-squared           | 0.881               | 0.884              |

Sources: World Bank Global Labor Database (GLD); UN Comtrade.

Note: FE = fixed effects. Standard errors in parentheses, clustered at the state level. Sample is all state-year observations in the GLD for which trade data are available at the national level. Outcome variable is the log of state-level female labor force participation divided by male labor force participation. \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1.

**ANNEX TABLE 2.8** Regression of female labor force participation on social expectations (breadwinner) and laws

|                              | (1)                  | (2)                  | (3)                  |
|------------------------------|----------------------|----------------------|----------------------|
| WBL Legal Index              | 0.540***<br>(0.0781) |                      | 0.393***<br>(0.105)  |
| Social expectations          |                      | -1.351***<br>(0.222) | -0.634**<br>(0.286)  |
| Per capita GDP (log)         | -43.46***<br>(12.62) | -32.33**<br>(13.73)  | -37.36***<br>(13.16) |
| Per capita GDP (log squared) | 2.552***<br>(0.707)  | 1.787**<br>(0.775)   | 2.115***<br>(0.756)  |
| Observations                 | 119                  | 119                  | 119                  |
| R-squared                    | 0.453                | 0.399                | 0.481                |

Sources: International Labour Organization; World Bank - Facebook (2020) Survey on Gender Equality at Home; Women, Business, and Law (database); World Development Indicators (database).

Note: Robust standard errors reported in parentheses. Outcome variable is female labor force participation as a share of the female working age population. "Social expectations" is the average response to the question: "Out of 10 of your neighbors, how many do you think believe that household expenses are the responsibility of the man, even if his wife can help him?" Legal index is (de jure) Legal Index from the World Bank's Women, Business, and the Law database. Sample includes 119 countries, data are from 2020. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**ANNEX TABLE 2.9** Regression of legal implementation gap on personal beliefs and social expectations

|                          | Male breadwinner norm |                      | Female homemaker norm |                      |                          | Male breadwinner norm |                      | Female homemaker norm |                      |
|--------------------------|-----------------------|----------------------|-----------------------|----------------------|--------------------------|-----------------------|----------------------|-----------------------|----------------------|
|                          | (1)                   | (2)                  | (3)                   | (4)                  |                          | (5)                   | (6)                  | (7)                   | (8)                  |
| Personal beliefs         | 0.535***<br>(0.1)     | 0.475***<br>(0.093)  | 0.480***<br>(0.094)   | 0.442***<br>(0.089)  | Social expect.           | 1.062***<br>(0.274)   | 0.922***<br>(0.262)  | 1.097***<br>(0.311)   | 0.942***<br>(0.302)  |
| Government effectiveness |                       | -0.325***<br>(0.076) |                       | -0.350***<br>(0.075) | Government effectiveness |                       | -0.340***<br>(0.078) |                       | -0.345***<br>(0.084) |
| Per capita GDP (log)     | -5.444***<br>(1.313)  | -0.605<br>(1.724)    | -5.063***<br>(1.401)  | 0.287<br>(1.765)     | Per capita GDP           | -5.745***<br>(1.417)  | -0.689<br>(1.826)    | -5.274***<br>(1.647)  | -0.239<br>(2.005)    |
| Observations             | 118                   | 118                  | 118                   | 118                  | Observations             | 118                   | 118                  | 118                   | 118                  |
| R-squared                | 0.539                 | 0.6                  | 0.537                 | 0.608                | R-squared                | 0.499                 | 0.565                | 0.487                 | 0.555                |

Sources: International Labour Organization; World Bank - Facebook (2020) Survey on Gender Equality at Home; Women, Business, and Law (database); World Development Indicators (database).

Note: Robust standard errors reported in parentheses. Dependent variable is the 100 minus the de facto Supportive Frameworks Index. Personal beliefs and social expectations are defined in Box 2.1. Personal beliefs are individual survey attitudes and social expectations are the shares of other people in the country that the respondent thinks hold either the male breadwinner or female homemaker belief. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**ANNEX TABLE A2.1.1 Female labor force participation rates: Internationally comparable statistics versus national statistics, latest available data**

|            | ILO modeled estimate |      | National statistics |         | Harmonized estimate |         |
|------------|----------------------|------|---------------------|---------|---------------------|---------|
|            | 2022                 | 2023 | Estimate            | Year    | Estimate            | Year    |
| Bangladesh | 37.0                 | 37.0 | 42.8                | 2022    | 42.8                | 2022    |
| Bhutan     | 64.9                 | 64.5 | 56.8                | 2023    | 53.7                | 2022    |
| India      | 28.0                 | 32.7 | 37.0**              | 2022–23 | 31.4                | 2022–23 |
| Maldives   | 42.0                 | 42.6 | 48.4                | 2022    | 45.7                | 2019–20 |
| Nepal      | 28.4                 | 28.7 | 26.3                | 2017–18 | 27.8                | 2017–18 |
| Pakistan   | 24.4                 | 24.5 | 21.4*               | 2020–21 | 24.8                | 2020–21 |
| Sri Lanka  | 32.1                 | 32.1 | 31.3                | 2023    | 32.0                | 2022    |

Source: International Labour Organization (ILO); national statistical offices; World Bank.

Note: Labor force participation rate is the proportion of the population ages 15 and older that is economically active. \*Pakistan's national FLFP rate is the participation rate of working age population of 10 years and above. \*\*India's FLFP rate uses the "usual status" definition. The estimate using currently weekly status with a seven-day recall period is 31.6 percent. National FLFP rates come from the following sources: Bangladesh: Bangladesh Bureau of Statistics, Labour Force Survey 2022 report (page xxiii); Bhutan: National Statistics Bureau, 2023 Quarterly Labour Force Survey report (page 7); India: Ministry of Statistics and Programme Implementation, Periodic Labour Force Survey July 2022–June 2023 Annual Report (page vi); Maldives: Maldives Bureau of Statistics, Improving Labor Market Dynamics - An Analysis from Census 2022 report; Nepal: Report on the Central Bureau of Statistics, Nepal Labour Force Survey 2017/18 report (page 13); Pakistan: Pakistan Bureau of Statistics, Pakistan Labour Force Survey 2020–21 report (page viii); and Sri Lanka: Department of Census and Statistics, Sri Lanka Labour Force Statistics - Quarterly Bulletin, First Quarter 2024 (page 1). Harmonized estimates, provided courtesy of SAR-POV, use current weekly status and come from harmonized labor force survey microdata, with the exception Maldives, which uses the Maldives Household Income and Expenditure Survey.

**ANNEX TABLE A2.2.1 Theoretical background of models**

| Model   | Source  | Detail   |
|---|---|--|
| Gender Employment Gap Index (GEGI)                | Pennings (2022); derived from Loayza and Pennings (2022)                                | Production function embedded in growth model (3 versions: Long Run, Short Run, with differentiated employment) |
| GEGI with complementary Capital and Skilled labor | Fiuratti, Pennings, and Torres Coronado (2024); derived from Loayza and Pennings (2022) | Production function considers complementarities between skilled labor and capital                              |
| Structural Model                                  | Eberhard-Ruiz and Michel-Gutierrez (2022)   | Inspired by Hsieh et al (2019), uses a reduced-form estimation of average labor productivity                   |
| Potential Growth                                  | Kose and Ohnsorge (2022)  | Production Function that estimates potential growth over time  |

**ANNEX TABLE A2.2.2 Key assumptions for model calculations**

| Method                                    | Assumptions  |
|---|--|
| Gender Employment Gap Index (Basic)       | Capital/output ratio is constant in the long run (no constraint on savings).<br>All other factors—productivity, human capital, population, etc.—remain equal across both scenarios (with and without gender parity).                           |
| Skill-complementarity Production Function | Skilled labor and capital are considered complements, so increasing output requires more skilled workers and more capital. However, this combination (Sk+Kap) substitutes for unskilled labor.   |
| Structural Model                          | Labor productivity of men and women is equal across sectors.<br>Male participation does not decrease in response to higher female entry into the workforce.  |
| Potential Growth                          | Elasticity of substitution between labor and capital is equal to one.<br>Future trends of population (working age population), health and education outcomes, productivity, investment, etc., are derived from reduced form panel regressions. |

### ANNEX TABLE A2.2.3 Initial conditions for modelling the output impact of closing the gender gap in employment

(Percent)

| Model  | Metrics  | AFG | BGD | BTN | IND | MDV | NPL | PAK | LKA |
|--|--|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Production Function: Baseline GEGI</b>              | Employment rate - female                                       | 22  | 36  | 52  | 29  | 51  | 26  | 23  | 33  |
|  | Employment rate - male   | 75  | 81  | 74  | 76  | 79  | 53  | 79  | 74  |
|  | Index  | 55  | 38  | 17  | 45  | 22  | 34  | 55  | 38  |
|  | Female “other employment” rate                                 | 22  | 26  | 38  | 23  | 17  | 17  | 18  | 16  |
|  | Male “other employment” rate                                   | 51  | 49  | 37  | 56  | 19  | 19  | 43  | 35  |
| <b>Production Function: Productivity-adjusted GEGI</b> | Index (other employment)                                       | 40  | 31  | -1  | 42  | 6   | 6   | 41  | 37  |
|  | Female “better employment” rate                                | 0.1 | 10  | 14  | 6   | 34  | 9   | 5   | 17  |
|  | Male “better employment” rate                                  | 24  | 32  | 37  | 20  | 60  | 34  | 36  | 39  |
|  | Index (better employment)                                      | 99  | 52  | 45  | 54  | 28  | 58  | 76  | 39  |
| <b>Production Function: Fixed Capital GEGI</b>         | Labor share of GDP   | 46  | 42  | 47  | 60  | 46  | 44  | 50  | 40  |
| <b>Production Function: Skill adjusted GEGI</b>        | Skilled share - female   | 2   | 3   | 8   | 11  | 10  | 4   | 7   | 5   |
|  | Skilled share - male   | 8   | 7   | 13  | 14  | 11  | 8   | 8   | 3   |
| <b>Structural Model</b>                                | Average female employment share across industries (unweighted) |     | 25  |     | 22  |     | 42  | 15  | 37  |

Source: World Bank.

Note: AFG = Afghanistan; BGD = Bangladesh; BTN = Bhutan; IND = India; LKA = Sri Lanka; MDV = Maldives; NPL = Nepal; PAK = Pakistan. Table shows male-female differences in relevant employment statistics by country, depending on model. Modeling scenarios equalize these statistics by bringing female levels to parity with male levels. Employment rates by gender are calculated as the number of employed females (or males) divided by the total number of working-age females (or males). “Other employment” and “better employment” rates are defined as in (Pennings 2022). Specifically, “better employment” includes females employees (non-agricultural) and female employers as a share of working-age females (and analogously for males), while “other employment” represents the residual category. The GEGI index is calculated as (male employment rate – female employment rate) / (male employment rate + female employment rate). The same formula applies to the indexes of “better” and “other” employment.

### ANNEX TABLE A2.2.4 Sectoral output increase resulting from closing the gender gap in employment

(Percent)

| Sector        | India | Bangladesh | Pakistan | Nepal | Sri Lanka |
|---------------|-------|------------|----------|-------|-----------|
| Agriculture   | 2.36  | 0.63       | 2.05     | -1.00 | 1.57      |
| Manufacturing | 8.97  | 20.56      | 10.30    | 14.13 | 20.02     |
| Services      | 12.09 | 8.12       | 8.42     | 8.51  | 5.93      |
| Total         | 23.42 | 29.31      | 20.75    | 21.64 | 27.52     |

Sources: International Labour Organization, ILO National Accounts; code by Eberhard-Ruiz and Michel-Gutierrez (2022).

Note: Based on the static structural model, holding the share of waged jobs fixed.

**ANNEX TABLE A2.4.1 Normative and social components of beliefs**

|                          | Personal beliefs (1 <sup>st</sup> Order Beliefs)  | Social expectations (2 <sup>nd</sup> Order Beliefs)   |
|--------------------------|---|---|
| <b>Factual Beliefs</b>   |   |   |
| Definition               | Beliefs about reality (excluding beliefs about people's behavior and thought)                                     | Beliefs about what people (in a reference group) do   |
| Example                  | A woman's main role <b>is</b> that of the homemaker and that of a man <b>is</b> of the breadwinner                | All the women in my neighborhood <b>are</b> homemakers and the men <b>are</b> breadwinners                    |
| <b>Normative Beliefs</b> |   |   |
| Definition               | Beliefs about what one should do  | Beliefs about what other people (in a reference group) think one should do                                    |
| Example                  | A woman's main role <b>should be</b> that of the homemaker, and that of a man <b>should be</b> of the breadwinner | People in my neighborhood think that women <b>should be</b> homemakers and men <b>should be</b> breadwinners. |

Source: Adapted from Bicchieri (2012).

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