



## CLOSING GENDER GAPS IN EARNINGS

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### OVERVIEW

Gender gaps in earnings persist across all regions. For every dollar men make, women make 77 cents. Closing this gap can lead to sizeable gains for economies—a 14 percent increase in total wealth globally. A multitude of factors contribute to this gap. This note sheds light on four key drivers:

1. **Gender gaps in skills**
2. **Gender-based occupational segregation**
3. **Under-representation of women in leadership**
4. **Gender biases in the workplace**

Effective evidence-backed policy options to close the earnings gap include providing information on work opportunities and returns to employment, training in socio-emotional skills, imparting sector-specific technical skills to address occupational segregation and adopting pay-transparency laws.

The World Bank Group actively supports countries to boost women's access to better, high-quality jobs through development policy lending, advisory and analytical work, and supporting reforms to address constraining contextual factors. This note examines an array of policy options that are effective or show promise in closing gender gaps in earnings and offers the following takeaways:

- **Design gender-smart programs** that address multiple constraints, including norms, faced by women in accessing and thriving in high-quality jobs
- **Engage role models** to create opportunities for peer mentorship and impart leadership skills among women to reduce gender gaps in promotion
- **Target specific contexts and groups** to account for relevant cultural and social factors, while also designing interventions for vulnerable groups, such as women with disabilities, single mothers and sexual and gender minorities.
- **Engage parents, partners, and other family and community members** to positively impact attitudes, beliefs and norms relating to women's work and type of work
- **Strengthen data and close knowledge gaps**, especially on women's participation in jobs across sectors, including in the informal economy and part-time employment, as well as employment outcomes for women from vulnerable and minority groups

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This thematic policy note is part of a series that provides an analytical foundation for the World Bank Group Gender Strategy (2024–2030). This series seeks to give a broad overview of the latest research and findings on gender equality outcomes and summarize key thematic issues, evidence on promising solutions, operational good practices, and key areas for future engagement on promoting gender equality and empowerment. The findings, interpretations, and conclusions expressed in this work are entirely those of the author(s). They do not necessarily reflect the views of the World Bank Group or its Board of Directors.

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Despite improvements in women's human capital development, gender gaps in labor market outcomes—in terms of both labor force participation and earnings—continue to persist worldwide and worsen in some regions. According to the World Bank [Gender Data Portal](#), the gender gap in workforce participation is around 30 percent globally. While several countries are adopting laws to mandate equal remuneration for work of equal value, the wage gap between men and women stands at 23 percent ([UN Women](#)).<sup>1</sup> This implies that for every dollar men make, women make 77 cents.

The economic cost of this gap is non-trivial. Closing the gender gaps in lifetime earnings, economies stand to gain as much as 14 percent increase in wealth, on average (Wodon and de la Brière 2018).<sup>2</sup> Narrowing the gender gap in earnings can also facilitate broader development

outcomes.<sup>3</sup> For instance, a burgeoning body of work suggests that reduction in the wage gap can reduce the incidence of violence against women, one of the most palpable manifestations of gender inequality (Aizer 2010, Perova et al 2021).

While the size of the earnings gap varies across regions, its persistence in the last decade emerges as a global trend (see Figure 1). The highest average gap, as a percentage of men's monthly earnings, is noted in South Asia. Sub-Saharan Africa has witnessed the smallest decline in the earnings gap since 2011.<sup>4</sup> Notably, most of this gap stems from the private sector. The wage gap in the public sector, which accounts for 45 percent of all formal employment in low-income countries ([World Bank 2018](#)) is around 10 percent (ILOSTAT, 2015–2019).<sup>5</sup>



<sup>1</sup>Per data from the [Women, Business, and Law](#), 94 of 190 countries had a law on equal pay for men and women, as of 2020. This has increased from 21 out of 190 countries in 1991.

<sup>2</sup>This estimate was calculated in 2014, based on data from 141 countries, accounting for more than 95 percent of the world's population. Total wealth includes natural capital (such as agricultural land, forest, oil, gas and minerals), produced capital (for e.g., infrastructure, machinery, factories, or buildings), human capital (i.e., well-educated and productive labor force), and net foreign assets.

<sup>3</sup>This thematic policy note acknowledges the difference between “wage” and “earnings” and uses these terms distinctly. Notably, the gender gap in earnings could stem from differences in wages (per hour) as well as number of hours worked. This note pays greater attention to the difference in wages, but other thematic policy notes in [the series](#), i.e., (i) Increasing Female Labor Force Participation and (ii) Tackling Unpaid Care in Accelerating Equality, shed more light on difference in working hours.

<sup>4</sup>Limited data from 2021 makes it difficult to draw conclusions on the impact of Covid 19 on the earnings gap.

<sup>5</sup>Author's calculation based on difference in monthly earnings between men and women working in the public administration and defense and compulsory social security sector, as defined in the ILOSTAT database (2015–2019).

**FIGURE 1. GENDER GAP IN MONTHLY EARNINGS  
(2017 PURCHASING POWER PARITY, IN USD MILLIONS)<sup>6</sup>**



Source: ILOSTAT

Multiple factors contribute to the gender gap in earnings, including occupational sorting, women's under-representation in leadership, skill and education gaps, and intermittent labor supply (i.e., fewer working hours and part-time employment due to care and household responsibilities that disproportionately fall on women) (ILO 2019). Restrictive social norms that curtail women's participation and advancement in the workforce can reinforce barriers. At the same time, there is a certain portion of the earnings gap that may be unexplained or unobserved (Chowdhury et al 2018, ILO 2019). Thus, an interplay of several observable and unobservable factors can drive the earnings gaps between men and women over their lifetimes.

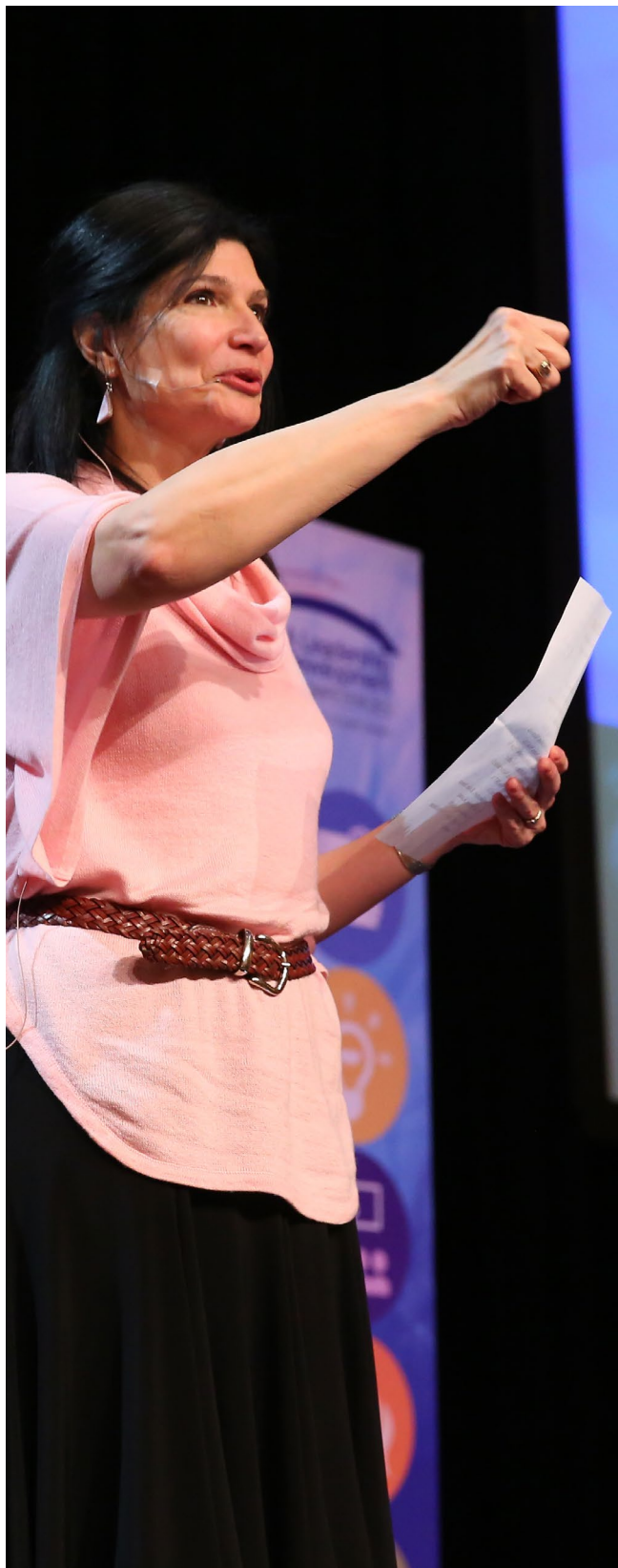
This thematic policy note narrows its focus on four key factors: gender gaps in skills, gender-based occupational segregation, under-representation of women in leadership, and gender biases in the workplace.<sup>7</sup> These factors are not mutually exclusive and are likely to interact with one another. The first part of this note draws on scholarly evidence to identify what works (and what does not work) in closing the gender gap in earnings.<sup>8</sup> It also highlights examples of World Bank Group operational projects that seek to boost women's earnings and quality of work.<sup>9</sup> The second part of this note presents key recommendations that reflect scholarly evidence and lessons from the World Bank Group's operational response.

<sup>6</sup> Data for years 2020 onwards was not available from many countries; as a result, average earnings are only presented through 2019–2020. Consequently, this data does not allow conclusions to be drawn on the impact of the COVID-19 crisis on the earnings gap.

<sup>7</sup> Additional drivers, such as difference in working hours and time out of the workforce due to care responsibilities, are discussed in the thematic policy note *Tackling Unpaid Care in Accelerating Equality* [Forthcoming].

<sup>8</sup> This note focuses on evidence from wage-employment and self-employment activities in the non-agriculture sector with greater emphasis on the former. Related thematic policy notes in [the series](#), i.e., *WHAT WORKS IN SUPPORTING WOMEN-LED BUSINESSES?* and another note on gender Gaps in the agriculture sector, including ownership of land, focus on entrepreneurial and agriculture activities, respectively.

<sup>9</sup> The cited examples are in no way an exhaustive list of projects that seek to close gender gaps in earnings. Projects were selected from success stories submitted by World Bank colleagues for the forthcoming Retrospective report on *Gender Equality in Development* and from searches of the World Bank's internal Gender Development Policy Operation (DPO) dashboard and the Gender Tag dashboard. These databases were searched using the following keywords: earnings, wage-gap, occupational segregation, socio-emotional learning, vocational training, and other related terms. Projects that were closed or ongoing with mid-term review were prioritized to showcase key results.



A multitude of factors drive gender gaps in earnings. This section examines interventions that address four key drivers of these gaps. First are interventions that can close gender gaps in skills and training to enable women to take on high-skill jobs. Second are programs aimed at enabling women to cross over into high-value sectors that are usually male-dominated.<sup>10</sup> Third are interventions that can help women advance in the workforce, break through the glass ceiling, and take on leadership positions. Finally, the fourth group of interventions addresses conscious or unconscious biases that women may face in the labor market. Based on the body of scholarly evidence and operational experience, each type of intervention is rated in the following manner:

- **Effective** indicates that there is more than one causal impact study demonstrating the effectiveness of the approach across contexts.
- **Emerging** refers to an approach for which there is only one piece of causal evidence or a strong body of descriptive evidence.
- **Less promising** indicates that there is some causal evidence that demonstrates the intervention has limited or negligible impact.

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<sup>10</sup> The first two categories are closely related. The first category focuses on interventions that can increase women's earnings by upgrading women's skills to meet changing demands of the labor markets rather than by addressing occupational segregation. The second category reviews a broader set of programs, including skill training that can help women enter sectors and jobs that are male dominated.



While there has been notable improvement in girls' educational attainment, both in absolute and relative terms (the gender parity index for youth literacy, for example, increased from 0.94 in 2010 to 0.97 in 2020), these gains have not translated to improvement in economic opportunities for women.<sup>11</sup> One possible factor driving this gap is limited access to training in job-relevant skills that could enhance women's employability in an ever-evolving labor market. This includes both hard skills (i.e., technical skills and vocational training) and soft skills (i.e., socio-emotional skills).

**Training in soft skills:** A growing body of work demonstrates that training in **socio-emotional skills**, such as personal initiative, negotiation, and communication, can increase women's long-term earnings (Gertler et al 2014)<sup>12</sup> and

entrepreneurial profits (Campos et al 2017). Recent evidence from the Dominican Republic demonstrates that training in non-cognitive, soft skills enabled women to find higher paying jobs faster. This effect was sustained even 3.5 years after the program, with women reporting higher job satisfaction, self-esteem, and improved expectations for future success (Acevedo et al 2020).<sup>13</sup> The initial level of soft skills is also predictive of future promotions and success among women employees (Uckat 2020), a finding that reiterates the value of non-cognitive skills throughout the career cycle.

Furthermore, a compelling body of evidence demonstrates that **community-based safe space programs**, which impart socio-emotional and life skills training to women in the early stages of life (i.e., childhood and adolescence), have a



<sup>11</sup> Gender parity index for youth literacy rate is ratio of women to men aged 15–24 who can read and write a short simple statement about their everyday life ([Gender Data Portal. Literacy Rate, Gender Parity Index \(Youth Ages 15–24\)](#))

<sup>12</sup> Gertler et al (2014) presents evidence from a long-term follow-up study (20 years) conducted in Jamaica that demonstrates exposure to socio-emotional skills in early childhood can lead to a substantial long-term increase in earnings (42 percent).

<sup>13</sup> However, the results were starkly different for men in the treatment group. While the training also helped the men receive higher paying job offers and revise their expectations of upward success, this led to men reporting increased likelihood of turning down high wage offers (possibly due to increase in reservation wages). Thereafter, in the medium-run, men reported lower self-esteem and deterioration in future jobs prospects.

## BOX 1. EMPOWERING ADOLESCENT GIRLS IN UGANDA

The Supporting Children's Opportunities through Protection and Empowerment (SCOPE) project (P161704) sought to break the vicious cycle of low participation in skilled jobs and high fertility among adolescent girls in Uganda by kick-starting human capital accumulation along two dimensions. It simultaneously provided "hard" vocational skills to enable adolescent girls to start small-scale income-generating activities and "soft" life skills to enable girls to make more informed choices about sex, reproduction, and marriage.

A key component of the program was the delivery mechanism through adolescent development clubs, structured on BRAC's Empowerment and Livelihoods for Adolescents model. These clubs were designed as safe spaces for girls to learn and socialize, and as an opportunity to reach girls who were not enrolled in schools. An impact assessment of the SCOPE program found that by the end, the annual earnings of participants increased threefold (by \$50 in 2008 prices.) This increase largely took the form of earnings from self-employment. Adolescent girls who participated in the program were 3.6 percentage points more likely to have some earnings from self-employment, a 79 percent increase above the baseline. Self-employment earnings for participants increased by more than six times.

positive effect on their earnings as well as their control over their earned income (see Box 1). For example, Bandiera et al (2020) investigate the effect of the Empowerment and Livelihoods of Adolescents program in Uganda and find that girls who participated in the program were 62 percent more likely to engage in self-employment activities and that their earnings tripled from the baseline level. Similarly, Adoho et al (2014) provide causal evidence demonstrating that the Economic Empowerment Adolescent Girls and Young Women (EPAG) project in Liberia led to a 47 percent increase in employment and an 80 percent increase in earnings. As jobs transform, the demand for nonroutine cognitive and socio-behavioral skills is rising

**Training in hard skills:** Evidence from recent systematic reviews suggest that the impact of **technical and vocational education and training programs** on women's earnings is small, close to 5.5 percent, and statistically insignificant (McKenzie 2017, Chinen et al 2018). However, there is evidence of heterogeneity in effect size based on the design of the training program. The results suggest that vocational training programs that include a gender focus, life skills training, or an internship have a larger effect on earnings than programs that do not include such components.

For example, a vocational training program in Colombia, which also had a key focus on developing human capital of disadvantaged youth, provided additional cash transfer to women with children and marketed the program among firms providing internships. The program resulted in an increase in women's earnings by 20 percent in short run and 18 percent in the long run due to increased employment, productivity, and access to better jobs (Attanasio et al 2011, Attanasio et al 2017).

The impact of **business skills training** on entrepreneurial profits and sales is also muted, i.e., a 5–10 percent increase, which is too small for most experiments to detect (McKenzie and Woodruff 2014; McKenzie 2021). A related body of work that examines the impact of active labor market policies (ALMPs), including training, indicates that these programs are effective at increasing women's labor force participation but do not have a discernible effect on earnings (Todd 2012). One plausible explanation is that most ALMPs reduce search times, which reduces the likelihood of individuals waiting for higher-wage opportunities.



Analysis conducted for the [World Bank's World Development Report 2012](#) shows that occupational segregation accounts for 10–50 percent of the gender wage gap.<sup>14</sup> Similarly, a large part of the gender profit gap among entrepreneurs can also be explained by sectoral segregation (Goldstein et al 2019; Campos et al 2015; Chowdhury et al 2018). Women tend to sort into different sectors than men, and the sectors dominated by women tend to be low-value, with limited scope for growth and promotion. Such sorting may occur due to lack of appropriate skills and education needed for high-value jobs, information asymmetries, limited access to role models and social networks to break into male-dominated sectors, restrictive social norms, capital constraints, and time poverty, which may force women to accept lower-paying jobs with better non-monetary characteristics, such as paid leave, shorter and flexible hours, and health and social insurance (Hicks et al 2016, Campos et al 2015, Alibhai et al 2017, Chowdhury et al 2018, Cucagna et al 2020).

Apart from the sectoral segregation of work, the scholarship points to a gendered division of labor by job formality and contract type. According to [UN Women \(2015–16\)](#), 95 percent of women working in South Asia, 89 percent in Sub-Saharan Africa, and 59 percent in Latin America and Caribbean are engaged in the informal sector. The incidence of informality may be higher among women for many reasons, including the need for flexible and/or reduced work hours to accommodate mounting care and household responsibilities over their lifecycle.<sup>15</sup> Working in the informal sector leaves women with low earnings as well as limited non-monetary benefits and labor law protections. This results in a widening of the gender gap in lifetime earnings.

Further, gender wage gaps in the informal sector are notably higher than that in the formal sector. For instance, in Sub-Saharan Africa, the gender wage gap in the informal sector is 28 percent, far higher than the 6 percent seen in the



<sup>14</sup> This analysis (p. 206, WDR 2012) includes data from 33 low and middle-income countries and 14 high-income countries.

<sup>15</sup> Incidence of informality displays a U-shape pattern with respect to age, i.e., it is larger among younger and older workers, and this pattern reveals itself for both men and women (See Ulyssea 2020 for a useful review of informality).



formal sector (UN Women 2016). Limited data and evidence on the informal economy impedes greater understanding of what works to enhance opportunities, pay, and working conditions for informal employees.

**Skill development and training:** Nearly one in five unemployed young women in Sub-Saharan Africa reported they cannot pursue their preferred career paths because the entry requirements exceed their education and training (ILO 2019). Providing sector-specific vocational training to women is shown to reduce occupational segregation (Ñopo et al 2008, Campos et al 2015, Croke et al 2022).

Recent experimental evidence from Nigeria shows that **job training** increased the likelihood of participants switching to the information and communications technology (ICT)

sector and the business, processing, and outsourcing sector by 26 percent (Croke et al 2022), as detailed in Box 2. This effect was higher among women, especially among those who were implicitly biased against women with professional attributes. Similarly, quasi-experimental evidence from a vocational training program in Peru shows that occupational segregation fell by 30 percent and women's earnings increased by 93 percent (Ñopo et al 2008). Descriptive work from Mexico also suggests that cognitive skills, acquired through additional years of education or training, are strongly associated with the likelihood of women crossing over into male-dominated sectors (Cucagna et al 2020).

## BOX 2. DEVELOPING DIGITAL SKILLS IN NIGERIA

The Assessment of Core Competency for Employability in the Service Sector (ACCESS) program (P118398) aims to equip recent university graduates in Nigeria with skills and certifications to work in the ICT sector. It offers classroom-based training, access to a web-based employment network and an ICT job fair, and the opportunity to receive ICT certification. An impact evaluation of the program found that two years after the training, participants had a 1.7 percentage point higher likelihood of being employed in the ICT sector, marking a 26 percent increase in employment in the sector (Croke et al 2022). The impact of the program on sectoral switching was stronger among women who initially held biases against women's professionalism, inducing their movement into a male-dominated sector. After the training, these women were three times more likely to find an ICT-enabled service job than unbiased women, though low level of women's employment in the ICT sector meant that even unbiased women increased their employment in the sector (by 119 percent) following the training.

## BOX 3. TRAINING WOMEN AIR TRAFFIC CONTROLLERS IN GRENADA

In Grenada, women are less likely to work in traditionally male-dominated sectors, such as the aviation industry. Barriers to women's advancement in aviation include gender role stereotypes, reproductive and caregiving responsibilities, and lack of skills and training. To overcome these challenges, the Grenada Caribbean Regional Air Transport Connectivity project (P172951) seeks to strengthen civil aviation and airport management capacity through training, human resources policy improvement, and targeted strategies to address gender stereotypes. One project component focuses on addressing barriers to women's employment in the aviation sector to inform the development of a Gender Action Plan aimed at increasing the share of women air traffic controllers and security staff. To this end, the project supports the full training requirements of new women recruits, including the costs of sending them to specialized and accredited international training programs. These interventions have led to the share of women air traffic controllers rising from zero to 20 percent in March 2022, relative to a target of 30 percent by June 2026.

Shifting to high-skill sectors can help close the earnings gap. For example, in the Philippines, the daily wage for men in low-skill jobs is more than 50 percent higher than that for women; however, in high-skill occupations, the daily wage is around 20 percent higher for women than men (Belghith et al 2021). Drawing from such evidence and data, the World Bank has an ongoing project in Grenada that seeks to increase women's participation in the aviation industry through specialized training (see Box 3). In Vietnam, World Bank technical assistance has informed the Labor Code to improve gender equality in the labor market, and a development policy operation (DPO) is promoting access to childcare services for families living near industrial park areas (see Box 4).

Providing **financial incentives**, such as loan repayment assistance for women studying science, technology, engineering, and mathematics (STEM), can help boost uptake and completion of technical training for jobs in male-dominated sectors (Yang and Grauer 2016). **Innovative pedagogical practices**, such as museum visits, coding camps, contests, and professional development programs, are more effective than traditional classroom techniques in cultivating young girls' interest in STEM and dispelling stereotypes on who can pursue STEM (Dabney et al 2012; Jirout and Newcombe 2015). Apart from closing the earnings gap, training in STEM and other technical skills can open pathways to new, high-quality jobs for women, especially as economies undergo structural transformation and a green transition.

**Information on labor market returns:** Providing information on economic opportunities and sector-specific returns has been shown to increase women's participation in high-value, male-dominated jobs (Jensen 2012; Campos et al 2015). This is also demonstrated by new, experimental evidence from the Republic of Congo, which shows that providing **information on trade-specific earnings** to women increased their likelihood of applying to traditionally male-dominated jobs by 29 percent (Gassier, Rounet and Traore 2022). This effect is larger among women who have prior technical knowledge or experience, or have access to male role models, demonstrating that pairing interventions to overcome multiple constraints can facilitate cross over and help close the gender gap in earnings.

Additional suggestive evidence indicates that **edutainment programs** aimed at providing information on sector-specific opportunities and earning potential can get young women interested in entrepreneurship and business (Bjorvatn et al 2020). Providing labor market information and career guidance at more fundamental stages of life, such as high school, can help young men and women make more informed career choices (Buchhave et al 2020). **Job-fairs** also hold promise in improving women's perception of their job prospects and increasing the monthly minimum wage they are willing to accept (Beam 2016).<sup>16</sup>

Further, providing **information on returns to vocational education** can also cultivate women's interest and participation in traditionally male-dominated trades (Hicks et al 2016). This is akin to the findings seen in the

#### BOX 4. STRENGTHENING GENDER EQUITY IN VIETNAM'S LABOR CODE

One of the objectives of the Vietnam Women's Economic Empowerment Program (P163147) is to support the Government of Vietnam in strengthening policies that address emerging challenges to women's economic empowerment. The World Bank supported the reform of the Labor Code to remove job restrictions for women, informed by a series of analysis on gender disparities in the labor market, demographic and economic trends, and goals. It also created a training program for parliamentarians and government officials to build capacity on assessing gender in laws going forward. Vietnam's new Labor Code came into force in January 2021. Thirteen of the 19 recommendations that the World Bank made were adopted in full or in part, which has led to a decrease in the gender pension age gap, opened 70 occupations for women that were formerly restricted, and shifted care service provision and responsibilities from women exclusively to both men and women employees.

<sup>16</sup> Notably, Beam (2016) finds contrary results for men, i.e., increased attendance in job-fair decreases men's perceived likelihood of success on the job market, indicating that men and women tend to over- and under-estimate their prospects (at baseline), respectively.

broader literature around education, which reveal that providing information on returns to education and training can increase enrollment in schools (Jensen 2010, Nguyen 2008). At the same time, sharing **information on relative academic performance** is shown to reduce the gender gap in the uptake of STEM courses (Owen 2022). This effect may be muted for courses where women are in the minority

(Ramirez-Espinoza 2022) and in instances where women have strong, self-defeating beliefs about their own abilities (Bobba and Frisancho 2020).

**Social networks and mentorship:** Increased access and exposure to mentors, is found to be a key determinant for women crossing over into high-value (and male-dominated) sectors (Goldstein, et al 2019, Alibhai et al

## BOX 5. LEVERAGING NETWORKS TO EXPAND WOMEN'S PARTICIPATION IN SOUTH ASIA'S ENERGY SECTOR

The South Asia Women in Power Sector Professional Network ([WePOWER](#)) is a vibrant voluntary coalition of 33 (and counting) South Asian electricity utilities and energy sector stakeholders working toward increasing women's representation in the energy sector workforce and leadership. The World Bank South Asia Gender and Energy (SAGE) facility serves as the interim secretariat for WePOWER, which is supported by the South Asia Regional Trade Facilitation Program (SARTFP) and the Energy Sector Management Assistance Program (ESMAP). WePOWER promotes normative change for girls to pursue careers in STEM and facilitates internships that provide hands-on energy sector experience through targeted training and mentorship. The network also advocates for policy changes to make workplaces friendlier for women. Similar initiatives are now underway in other regions, including Europe, Central Asia, and the Middle East and North Africa, which recently launched RENEW-MENA. From 2019–2022, WePOWER partners:

- Implemented 2,700+ activities for approximately 68,000 women beneficiaries/participants in South Asia, including students, interns, young professionals, engineers, and returning mothers.
- Hired 560 women professionals and recruited 1,325 women interns in technical roles
- Held over 140 STEM outreach workshops for approximately 25,000 female students
- Held over 600 personal and professional development workshops attended by approximately 25,000 women participants.
- Built around 350 women-friendly facilities/services, such as daycare centers and separate prayer rooms.

2017, Cucagna et al 2020). For example, evidence from a mixed-methods study in Uganda suggests that women entrepreneurs with male mentors were up to 22 percent more likely to own businesses in male-dominated sectors, such as metalworking, electricals, and carpentry (Campos et al 2015). At the same time, there is compelling evidence that exposure to women mentors and peers during education and training inculcates a sense of belonging among women trainees and increases their willingness to pursue careers in male-dominated sectors (Carrell, Page, and West 2010; Porter and Serra 2020; Ramirez-Espinoza 2022). Adding to this knowledge base are promising results

from the WePOWER initiative in South Asia, which seeks to facilitate women's participation in the power and energy sector, a space that has been dominated by men (see Box 5). Overall, most causal evidence comes from high-income countries and more work is needed from developing country contexts.

**Addressing social norms:** Several pieces of descriptive evidence indicate that restrictive social norms constrain women's entry into male-dominated sectors across all types of employment, including, agriculture, wage employment, and entrepreneurship (Das et al 2021, Campos et al 2015,



World Bank 2022). For example, qualitative findings from Vietnam demonstrate that **parental or family advice has a strong influence on career choices, especially for women and girls**, and that parents heavily weigh their daughters' child-bearing future when selecting a field of study or envisioning a potential future job (Buchhave et al 2020). Such perceptions on job suitability are strongly influenced by norms around gender roles.

There is limited evidence on how to positively affect norms and facilitate women's cross over into high-value sectors. The study from Nigeria described above (Croke, Goldstein, and Holla 2022) is one of the few studies that provides causal evidence in this regard. With a focus on the **job training**, it finds that women who were implicitly biased against associating women with professional attributes were twice as likely to switch into the ICT sector than unbiased women, suggesting that training alongside **adequate socialization into historically male-dominated sectors** can overcome self-defeating social norms.

At the same time, a growing body of work from multiple contexts shows that **edutainment programs and behavioral interventions**, including those that target parents, partners, and other family members, can have a positive impact on attitudes relating to fertility (La Ferrara, Chong, and Duryea 2012), HIV-testing (Banerjee, La Ferrara, and Orozco 2019), women's work outside the home (Bursztyn et al 2018), and broader gender roles (Dhar, Jain and Jayachandran 2022).

Building on this work, designing interventions that are explicitly targeted at engaging household and community members and changing norms relating to women's work and type of work could meaningfully address occupational segregation and help close the gender gap in earnings.



Globally, only 32 percent of leadership positions (i.e., senior and middle management) in government, large enterprises, and institutions are occupied by women. This proportion is highest in Latin America (38 percent) and lowest in South Asia (17 percent).<sup>17</sup> Under-representation of women in leadership and gender differences in promotion rates is one of the primary drivers of the gender wage gap and the long-term earnings gap (Bertrand, Goldin, and Katz 2010; Manning and Swaffield 2008; Goldin, Kerr, Olivetti, and Barth 2017).<sup>18</sup> The gap in promotion rates can explain approximately 70 percent of the gap in wage growth by age 45 (Bronson and Thoursie 2019).

**Training and mentorship for career progression:** Programs aimed at advancing women's careers via targeted training and mentorship hold promise in boosting women's earnings through increased promotion rates (Uckat and Woodruff 2022) or improved performance (Macchiavello et al 2020). Evidence from a quasi-experimental study of the garment industry in Bangladesh shows that a promotion program, i.e., training aimed at advancing women's careers, increased promotion rates. Training in soft skills, such as confidence and leadership, was particularly helpful for women in taking on new managerial positions (Uckat and Woodruff 2020). A related body of work also demonstrates that face-to-face social interactions in the workplace are a key factor for career progression and could explain one-third of the gender gap in promotions (Cullen and Perez-Truglia 2019).

Lifting more women into leadership can also have notable **positive spillover effects**. For example, in the Bangladesh program, women working under a woman beneficiary of the promotion program also experienced improvements in bargaining power both in the workplace and within the household. This suggests that such programs can address inequities for a much larger share of women than the few who may ever attain a managerial position (Uckat 2022). Evidence from high-income contexts, such as Italy and Germany, also shows that having women in leadership can narrow the gender gap in promotions (Kunze and Miller 2017) and improve firm productivity via optimizing allocation of women workers across tasks (Flabbi et al 2018). In this light, the World Bank Group has implemented

programs to develop and communicate the business case for greater gender inclusivity in leadership positions among private sector firms, especially in sectors that are characterized by low representation of women (see Box 6).

**Quotas for women's representation in senior management:** While there is a documented positive relationship between gender-balanced leadership and women's labor market outcomes (including reductions in the gender earnings gap) at the firm level (Cohen and Huffman 2007, Cardoso and Winter-Ebmer 2010, Flabbi et al 2019, Gagliarducci and Paserman 2015), there is little evidence on a causal link between the two.

In countries that have passed quotas for women's representation in board membership, such as Norway and Italy, analyses find that increasing the proportion of women on boards or in management alone was not sufficient to reduce the gender wage gap or raise the wages of non-managerial women (Flabbi et al 2019, Bertrand et al 2019, Maida and Weber 2022). Further, evidence from Norway demonstrates that the quota led to younger and less experienced boards, increases in leverage and acquisitions, and deterioration of firms' operating performance (Ahern and Dittmar 2012) as well as increases in relative labor costs and reductions in firm profits (Matsa and Miller 2013). There is some evidence that the story may be different in the public sector. A comparative study in Poland finds that while there was no correlation in the private sector, a higher proportion of women managers was associated with a lower degree of firm-level gender wage inequality in the public sector (Magda and Cukrowska-Torzewska 2019).

In general, much of the evidence to date has come from high-income countries, and it is not yet clear how applicable these findings are to developing country contexts. Overall, evidence from this growing body of work indicates that women's representation in leadership is critical to improving gender equality outcomes, but imposing quotas (an intervention on the demand-side) may not be the most effective way of achieving the desired results. Enabling women to take on leadership positions via specialized training and mentorship and other gender-sensitive policies hold promise.

<sup>17</sup> Source: International Labor Organization, ILOSTAT database, [SL.EMPSMGT.FE.ZS](#)

<sup>18</sup> Please see [World Bank Group Gender Thematic Policy Note Series](#) on Increasing Women's Representation in Business Leadership for additional data, evidence, and insights on women's leadership

## BOX 6. INCREASING WOMEN IN LEADERSHIP THROUGH GENDER-SMART APPROACHES

[The IFC's Women's Employment Program](#) helps clients understand the business case for gender equality and inclusion within the workplace. It assesses recruitment and retention, pay equity, access to career advancement and training, family-friendly workplace policies and practices, gender-based violence, and workplace culture to provide clients with a report highlighting key gender gaps and recommendations for improvement. As an early adopter, one IFC client established their gender baseline and subsequently implemented changes to improve gender equity in the workplace in 2019. By 2021, the representation of women on their board increased from 11 percent to 20 percent; retention of women after maternity leave increased from 93 percent to 100 percent, and the number of promotions awarded to women increased from 41 percent to 58 percent. Alongside this program, IFC has supported various clients in obtaining the [EDGE Gender Certification](#) to ensure diversity, equity and inclusion in the workplace.

To create the business case for gender diversity in private health care leadership, IFC launched the [Women's Leadership in Private Health Care Global Working Group](#) in September 2020. The initiative brought together CEOs and Human Resource directors representing 17 health care companies in a community of practice dedicated to identifying and addressing the barriers to women's leadership in the sector as identified in IFC's [report on Women's Leadership in Private Health Care](#). Several working group members have begun implementing gender-smart measures in their organizations and the IFC team is implementing a communications plan to highlight working group members' achievements and the outcomes of the initiative.

The World Bank's [EqualAqua](#) is a collaborative platform for water institutions. The platform hosts the most extensive global database on gender in water jobs, with data from more than 160 water institutions. Client institutions working with Equal Aqua have committed to a wide range of interventions to advance gender diversity, including providing leadership training to women employees, establishing gender-balanced succession plans, hiring more women engineers, attracting women through internships and scholarships, and establishing on-site childcare facilities and lactation rooms. More than 40 World Bank Water Global Practice lending operations have used Equal Aqua tools and approaches to inform project design, including setting targets for women's representation in leadership roles. Other Equal Aqua results include the following:

- The median share of women managers in participating utilities increased from 16.7 percent in 2020 to 20 percent in 2022, despite the slowdown from the COVID-19 pandemic.
- The percent of women directors on utility boards jumped from 16 percent to 24 percent over a two-year period.
- The share of women managers increased by 5 percentage points and the share of women engineers increased from 8 percent to 12 percent in two years.



Gender biases in the workplace—from managers, subordinates, or clients—are well documented (MacNell 2015, Macchiavello et al 2020, Abel 2022, Ayalew et al 2021, Hengel 2022). These biases, whether taste-based or statistical, can contribute toward gender differences in starting salaries, performance evaluations, and promotion rates— all of which may directly contribute to the gender gap in earnings (Becker 1995; Bohren et al 2019, Mengel et al 2018).

**Concealing gender information:** Anonymizing applications and concealing the gender of candidates can help circumvent biases employers may hold and reduce gender differences in hiring and starting salary offers (Goldin and Rouse 2000, Rinne 2018, Åslund and Skans 2012). However, it is shown to work only in settings with high discrimination and is likely to simply postpone discrimination to later stages of the hiring process (Rinne 2018). Further, recruiters may still use implicit signals and cues to infer gender identity, reintroducing the possibility of bias (Foley and Williamson 2018). Most evidence from this body of work comes from developed countries, so the extent to which this strategy could be effective in developing countries may depend on the level of formality of labor markets.

**Credible signaling:** Differential acceptability of men and women leaders is well documented in developing countries, both in the public sector and the private sector (Hardy and Kagy 2018, BenYishay et al 2020). If subordinates do not comply and cooperate with women leaders, the effectiveness of women's leadership is substantially reduced, adversely impacting their promotion rates and earnings. A burgeoning body of work shows that **providing information on supervisors' ability** can help alleviate gender discrimination from subordinates. For example, new experimental evidence from Ethiopia shows that sharing information about managers' competence

increased employees' adherence to women leaders by 12 percentage points, while it had no detectable effect for men leaders. This indicates that credible signaling can help address statistical discrimination (Ayalew et al 2021), but more evidence is needed from other contexts.

**Promoting pay transparency:** Research from high-income countries shows that mandating pay transparency can help close the gender pay gap, while also increasing the number of women being hired and promoted to senior positions (Baker et al 2019, Castilla 2015). Pay transparency legislation in Denmark led to a decrease in the gender pay gap by 2 percentage points (Bennedsen et al 2019). Reported improvement in pay gaps was higher among firms with men managers who had more daughters than sons and in firms that had higher baseline disparity. Similarly, a public sector salary disclosure law in Canada reduced the gender pay gap by 20–40 percent (Baker et al 2019). This early evidence creates a promising case for wider adoption of pay transparency to reduce gender wage gaps across contexts.

**Protecting data on salary history:** The requirement for jobs seekers to disclose salary history can reinforce lower salaries, especially among women facing historically lower wages. This requirement also puts women in a challenging position when negotiating for more compensation. Evidence, mostly from the United States, indicates that salary history bans can reduce gender pay gaps; however, the effect varies based on the type of sector (i.e., public, or private) and the stage of the jobseeker's career. Most impacts were confined to individuals who switched jobs following the ban (Hansen and McNicolas 2020, Sinha 2019, Bessen et al 2020). More research is needed on this topic to derive conclusive inferences.



The interventions examined in this literature and operational review are summarized in Table 1 based on their effectiveness. Taken together, they point to the following recommendations for policy makers, private sector entities, and other development partners working toward greater gender equity in the workforce.

**TABLE 1. SUMMARY POLICY MATRIX**

Degree of Effectiveness	Intervention Type
Effective	Training in soft skills Sector-specific training to address occupational segregation Information on labor market returns Pay transparency laws
Promising	Building social networks Addressing social norms Training and mentorship for career progression Concealing gender information during hiring Credible signaling of competence Protecting data on salary history
Less Promising	Vocational or business skills training that does not include a gender focus Quotas for women's representation in leadership

- Design gender-smart programs that address multiple constraints:** Considering women face a multitude of constraints in the labor market and these constraints often interact with one another, it is pertinent to design interventions that address more than one barrier. For instance, the above evidence review demonstrates that training programs can help with closing the skills gap, addressing occupational segregation, and improving women's representation in leadership. However, it is often more difficult for women to access and complete these programs, due to family responsibilities, movement restrictions, and gender norms (Cho and Honorati 2013). Thus, programs that integrate gender-smart design aspects, such as childcare service, and hold training in accessible and safe locations can boost women's participation (World Bank 2020; Attanasio, Kugler, and Meghir 2011). At the same time, evidence from across contexts suggests that programs that include training in both soft and hard skills, i.e., addressing multiple skill gaps, can have a transformative impact on women's earnings (Lang and Seither 2022, Acevedo et al 2020, Campos et al 2017, Cucagna et al 2020).
- Engage role models:** Engaging role models in training and mentorship programs can help break down biases and socialize the benefits of women working in male-dominated sectors (Jensen 2010; Nguyen 2013; Carrell, Page, and West 2010; Porter and Serra 2020). Similarly, creating opportunities for peer mentorship shows promise in reducing gender gaps in promotion.
- Target specific contexts and groups:** Considering there is no universal definition of which sectors are male-dominated and which are not and given that there is substantial variation in gender gaps in earnings across countries, it is pertinent to develop context-specific policy solutions to address challenges imposed by occupational segregation. At the same time, providing targeted support to vulnerable groups who may face more and more binding constraints, such as women





with disabilities, single mothers, and sexual and gender minorities, is vital for inclusive development (Buchhave et al 2020). This may include facilitating access to vocational training centers, transport, childcare services, providing flexible working hours, and other forms of support needed by vulnerable groups.

4. **Engage parents, partners, and other family members:** Both scholarly and anecdotal evidence indicates that women and girls do not make decisions alone. Other household members, such as parents, parents-in-law, and intimate partners as well as community and religious leaders, can play a vital role in enforcing gender norms and are important stakeholders in women's employment decisions. Therefore, it is pertinent to design interventions that also target household and

community members to positively impact attitudes, beliefs and norms relating to women's and type of work could meaningfully address gender-based occupational segregation, among other impacts, and help close the gender gap in earnings.

5. **Strengthen data and close knowledge gaps:** Progress on closing gender gaps in earnings and providing women high-value, good-quality jobs will require active participation and commitment from the private sector, industry lobbies, and governments. Devising effective, scalable solutions will also require good quality data on women's economic participation in different types of jobs, especially for informal and part-time employment, and for women from vulnerable and minority groups (Datta and Kotikula 2017).



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