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# Gender and the future of industrialization in a post-pandemic world

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# **Gender and the future of industrialization in a post-pandemic world**

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## **Abstract**

This background paper uses gender as a lens into assessing the social inclusion of both industrialization and globalization, as well as the impacts of the COVID-19 pandemic and prospects for building forward better. It provides a theoretical and empirical overview of women's industrial employment in the context of development since the early 1990s, highlighting women's increasing exclusion from industrial sector employment even as their participation in paid employment has increased. Using pandemic-contemporary, gender-disaggregated data from UNIDO, the ILO and World Bank Enterprise Surveys, the paper then reviews changes in labour force participation, employment rates, industrial job growth, and changes in employment among manufacturing firms. We find that women's labour-force participation and employment have fallen farther and are slower to recover than men's, offering the troubling possibility of the longer-term reversal of gains in gender equality in the labour market. Despite women's concentration in trade-related manufacturing industries, which have been harder hit than other industries by the pandemic, we find that these industries have been less impacted in terms of women's employment losses when compared to the economy as a whole. At the same time, within manufacturing, women face greater risks of job loss than men, particularly in firms where women constitute a majority of the full-time workforce. In light of these findings, the paper concludes with recommendations for gender-inclusive industrial policy.

**Keywords:** Gender, industrialization, pandemic employment, social inclusion

## 1 Introduction

Industrialization is a central driver of the structural transformation and productivity growth that support growth and development. Most countries that have achieved high-income status in the modern era have done so by undergoing a shift in production and resources from traditional sectors to modern manufacturing (UNCTAD, 2016). Relative to agriculture and services, the industrial sector has the strongest forward and backward linkages throughout the economy, with more opportunities for capital accumulation, acquiring new technology and achieving economies of both scale and scope (Braunstein, 2019). Modern manufacturing is seemingly freer from constraints like institutions, policies or geography, offering the possibility of convergence to the frontier of technology driven by substantial and sustained labour productivity growth (Rodrik, 2013). Not all of the benefits accrue on the supply side. Increasing employment opportunities in manufacturing offer higher-productivity and higher-paying employment relative to traditional sectors, broadening access to the benefits of development while establishing a foundation for the growth of domestic aggregate demand (Braunstein, 2019).

Globalization and the growth of international trade have offered important pathways for speeding up the industrialization process. Access to larger markets enables both economies of scale and scope, capturing gains beyond what domestic consumer incomes can support. Similarly, access to global technologies, foreign exchange and global value chains (GVCs) further facilitates these processes. These mechanisms underlie the promise and prominence of export-led industrialization—and the trade in manufactures that drives it—as a development strategy (UNCTAD, 2016).

Because of the connection between exporting manufactures and women’s employment, particularly in the more labour-intensive early stages of export-led industrialization, gender offers a useful lens into the social inclusion of both industrialization and globalization, as well as for assessing the gendered impacts of the COVID-19 pandemic and prospects for building forward better. We take up these issues in this background paper.

To establish a framework for the analysis—particularly for readers not as familiar with applying a gendered lens to questions of industrialization and development—the paper begins with a short overview of how development economists and practitioners have thought about sex and gender, and how different approaches affect the sorts of questions investigators ask and answer. Section 3 presents an empirical overview of women’s industrial employment in the context of development since the early 1990s, highlighting women’s increasing exclusion from industrial sector employment even as their participation in paid employment has increased. Section 4 then

reviews pandemic-contemporary, gender-disaggregated data, covering labour force participation, employment rates, industrial job growth and changes in employment among manufacturing firms. We find that women's labour-force participation and employment have fallen farther and are slower to recover than men's, offering the troubling possibility of the longer-term reversal of gains in gender equality in the labour market. Despite women's concentration in trade-related manufacturing industries, which have been harder hit than other industries by the pandemic, we find that these industries have been less impacted in terms of women's employment losses when compared to the economy as a whole. At the same time, within manufacturing, women face greater risks of job loss than men, particularly in firms where women constitute a majority of the full-time workforce. In light of these findings, Section 5 presents a discussion of gender-aware policies implemented in response to the pandemic that specifically support women's engagement with paid work, highlighting a diverse set of 18 countries as representative of more general trends. Section 6 concludes with recommendations for gender-inclusive industrial policy.

## **2 Gender and industrialization in development thought: Efficiency and equity**

Gender equality has been a prominent part of development thought since economist Ester Boserup published her now famous book *Woman's Role in Economic Development* in 1970. For the first time, an economist claimed that not only did economic development treat women differently than men, but that so-called modernization threatened to marginalize women and make them worse off (Benería, 2001). Influenced by Boserup's work, in the early 1970s a number of women development professionals coined the term "women in development" (WID) to advocate for policies and programmes that drew women into modernization, including by increasing women's labour-force participation in newly industrializing sectors (Braunstein, 2011). This is the first appearance of the so-called "efficiency argument" for gender equality, based on the contention that women are an untapped resource whose inclusion in industrialization will spur faster growth and development (Moser, 1993).

This perspective paralleled the rising dominance of neoclassical economics in the late 1980s. Neoclassical approaches emphasized policy-induced price distortions and imperfect markets as the major obstacles to development, providing the theoretical logic for the push towards liberalization and privatization that characterized the structural adjustment policies of the 1980s. These perspectives complemented WID's emerging focus on challenging discrimination in labour, credit and land markets—making markets less imperfect so that women's inclusion in them would benefit women themselves as well as their economic contributions. Other supply-side interventions like gender equality in health and education were advocated as a way to enable



women to live up to their full economic potential, becoming a central feature of global advocacy for gender equality (Braunstein, 2011).

What later came to be known as “gender and development” (GAD) also emerged in the 1980s as a critical response to the WID-type emphasis on women’s inclusion in markets and modernization as a solution to gender inequality. The GAD approach emphasized gender as a social construction that specified how one’s sex determined one’s role in both production and reproduction, with consequences for the distribution of power between women and men (Benería, 2001). Instead of focusing on exclusion from markets, GAD treats gender as emerging from the social relations between women and men, their social construction, and how women have been systematically subordinated in this relationship (Moser, 1993). GAD approaches ask why and how women and men are assigned to different roles, how these roles are reflected in broader social institutions like labour markets, the state and the household, and what the consequences are for development and development policy effectiveness (Braunstein, 2011).

One can see these WID/GAD tensions in international development dialogues today. Institutions like the World Bank promote the efficiency of gender equality (for example, “gender equality as smart economics”), targeting women’s inclusion in labour, product, financial and asset markets as a pathway to individual empowerment and, eventually, social equality. By contrast, a number of United Nations organizations like UN Women and United Nations Development Programme (UNDP) have been more focused on addressing how gender is embedded in economic and social relations and structures that reproduce existing hierarchies, partly by promoting gender norms (rules about appropriate behaviour) and stereotypes (generalizations about the behaviour of group members) that are internalized by individuals (UNDP, 2020; UN Women, 2015). The targets that underlie Sustainable Goal 5 (“Achieve gender equality and empower all women and girls”)—including recognizing and valuing unpaid care work, ensuring women’s access to sexual and reproductive health and rights, and eliminating all forms of violence against women—are all examples of this systemic or structural perspective, one that necessitates moving beyond women’s inclusion in markets to achieve gender equality.

### **3 Women’s employment, structural transformation and industrialization: The pre-pandemic landscape**

It is with this background in mind that we can use gender as a lens into the social inclusion of industrialization and structural transformation. This will lay the groundwork for considering how the pandemic has affected these dynamics, and what the prospects are for charting a sustainable and more inclusive path forward.

Over the past few decades, globalization and trade liberalization have been associated with the nearly universal increase in women’s participation in manufacturing employment across labour-abundant, high-growth, semi-industrialized countries (Berik and Rodgers, 2009; Barrientos and Evers, 2013; Standing, 1989; 1999; World Bank and WTO, 2020). This is particularly true for more labour-intensive manufacturing industries, where labour costs are a central part of international competitiveness. Employers in labour-intensive export industries prefer to hire women, both because women’s wages are typically lower than men’s and because employers perceive women to be more productive in these types of jobs (Elson and Pearson, 1981). In these senses, gender inequality has played an important part in export-led industrialization strategies. Gender wage gaps raise competitiveness (and profits) by helping to keep prices low (Seguino, 2000). Women’s lower wages can thus play the same role as exchange rate depreciation in raising export competitiveness, giving rise to what some scholars have termed the “feminization of foreign exchange earnings” (Samarasinghe, 1998; Seguino, 2010).

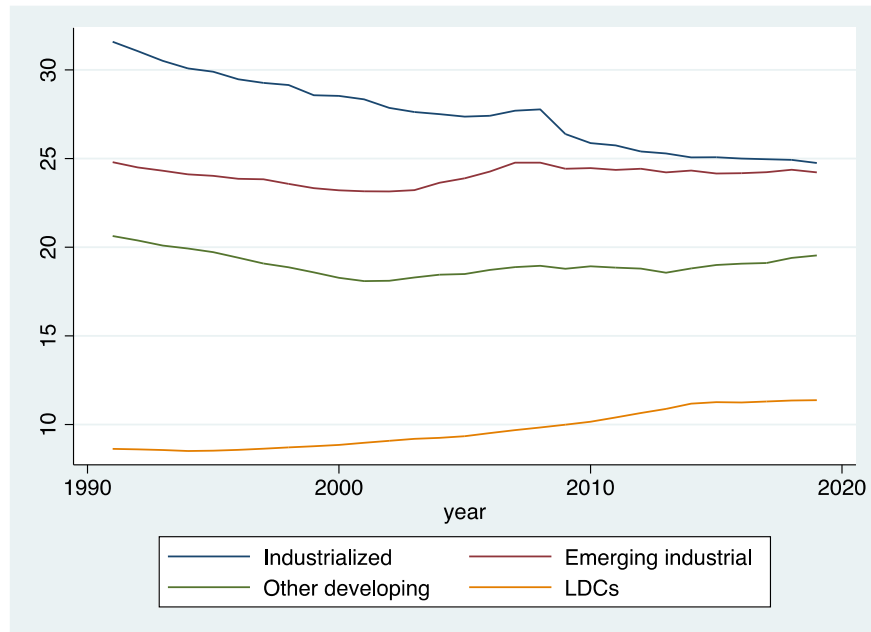
Women’s rising participation in modern manufacturing also plays a more direct role in productivity-enhancing structural change. As women shift from traditional production activities—much of them unpaid—to paid work, market GDP rises. Women’s shift into higher productivity and paying work is also associated with lower fertility and greater savings and investments in human capital, with positive externalities for growth, the so-called “demographic gift” (Bloom and Williamson, 1997). Both of these factors support efficiency arguments for gender equality.

Despite how they reflect and reinforce the traditional gender norms that underlie gender inequality, modern industrial-sector jobs are generally much better jobs than those available in the agricultural or traditional service sectors, for both women and men. The higher productivity of the industrial sector means that pay is also likely to be higher than in other sectors. Though this is clearly the case relative to agricultural work, it is important to remember that the services sector is very diverse, with high-wage categories like public administration coupled with lots of low-wage and informal work, particularly in developing countries. Lower-productivity service sectors like community, social and personal services and trade, restaurants and hotels—service sectors

where women are more concentrated—are also much lower productivity and lower paying than manufacturing (Seguino and Braunstein, 2019; UNCTAD, 2016). Relative to agriculture and services, industrial-sector work is less likely to be informal, conducted on one’s own account, or contributing family work, with less volatility and better access to social insurance (ILO, 2009; 2018).

However, there has been a decline in the availability of industrial work across most regions in the world, as illustrated in Figure 1, which presents trends in industrial employment as a share of total employment by level of industrial development since 1991. While the decline in the industrialized economy group is understandable because of its late industrialization stage, the emerging industrial economies group’s industrial employment share has been essentially flat over the past three decades. Shares in other developing economies have declined, and those for least developed countries (LDCs) increased somewhat but are still quite low at around 12 percent. Figure 2 highlights trends in industrial employment shares for the subset of emerging industrial, other developing and less-developed countries by geographic region (a group hereafter referred to as “emerging industrial and developing economies”). We see here that the only geographic region that has experienced the expansion in industrial-employment shares traditionally associated with structural transformation is Asia and the Pacific. Industrial-employment shares have declined about four percentage points in Latin America and the Caribbean and have stagnated at extremely low levels in Africa.

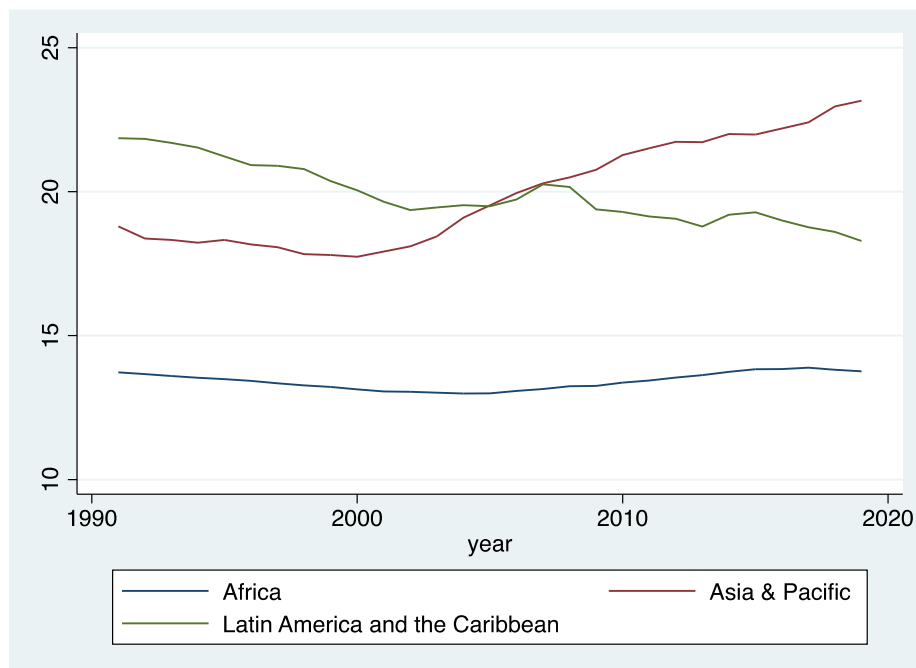
**Figure 1: Industrial employment as a share of total employment, by level of industrial development, 1991-2019 (percent)**



*Source:* Author's calculations based on ILO modelled data drawn from the World Bank's *World Development Indicators* (WDI) database (accessed March 2021).

*Note:* Industrial development groups conform to UNIDO (2021b) country classification. LDCs = least developed countries.

**Figure 2: Industrial employment as a share of total employment for emerging industrial and developing economies, by geographic region, 1991-2019 (percent)**

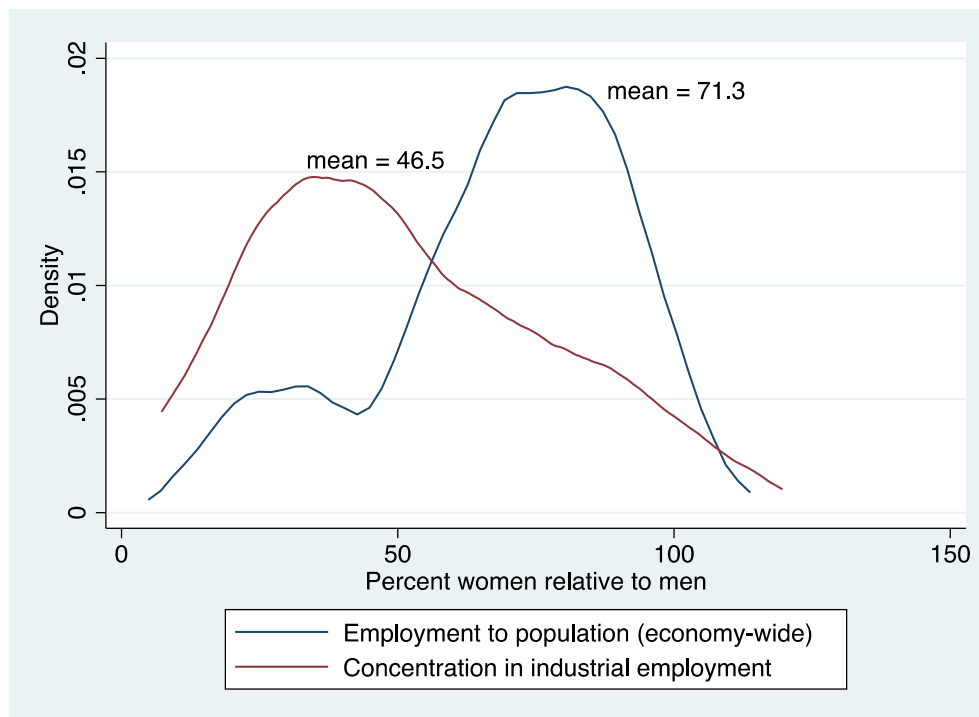


*Source:* Author's calculations based on ILO modelled data drawn from the World Bank's *World Development Indicators* (WDI) database (accessed March 2021).

*Note:* Industrial development groups conform to UNIDO (2021) country classification. Developing economies include both other developing economies and LDCs. LDCs = least developed economies.

These declines in industrial-employment shares have occurred as women have increased their labour-force participation across much of the world. Despite the relative quality of industrial-sector jobs, women are disproportionately excluded from them. Figure 3 provides a snapshot of this gender segregation among emerging industrial and developing economies in 2019. It illustrates a kernel density function for two measures: (1) women’s employment-to-population ratio relative to men’s for the entire economy, and (2) the share of industrial sector jobs in women’s total employment relative to the same share for men. We refer to the latter measure as “women’s relative concentration in industrial employment,” indicating the importance of the industrial sector as a source of employment for women relative to its importance for men. The kernel density functions show the distribution or frequency of countries for the two measures, and be thought of as a smoothed histogram. The mean for women’s employment relative to men, 71.3 percent, is not only higher than women’s relative concentration in industrial employment at 46.5 percent, but the entire curve illustrating the former is mostly situated outside of and to the right of the industrial employment curve.

**Figure 3: Distribution of women’s to men’s economy-wide employment rates and shares of industrial-sector jobs, emerging industrial and developing economies, 2019**

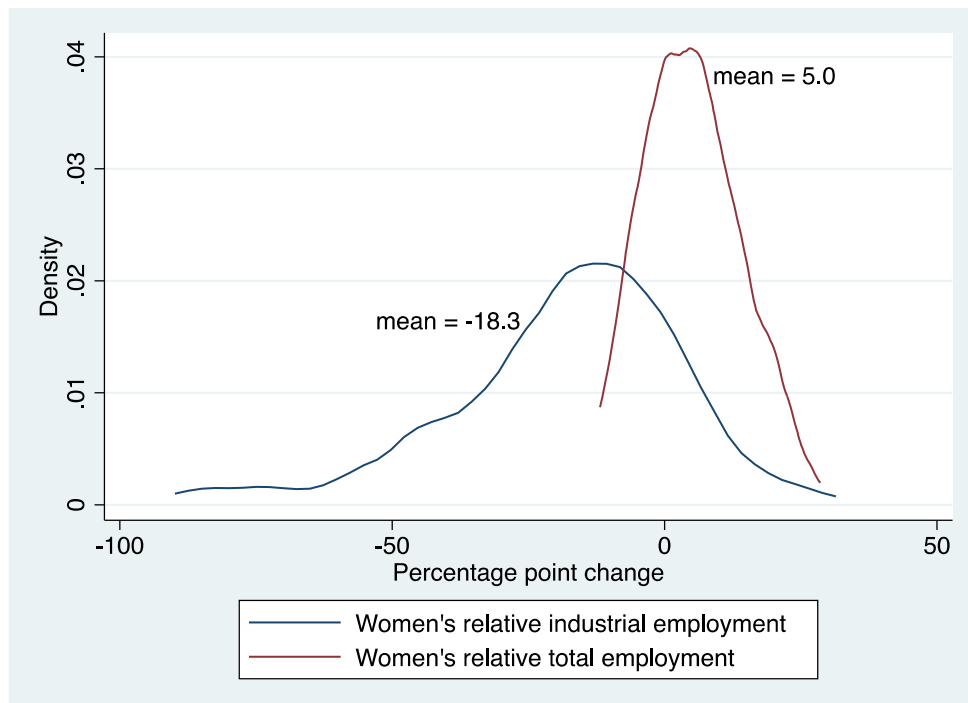


*Source:* Author’s calculations based on ILO modelled data drawn from the WDI database (accessed March 2021).

*Note:* Industrial development groups conform to UNIDO (2021) country classification. Developing economies include both other developing economies and LDCs.

Table 1 details changes over time (between 1991 and 2019) in the two measures by level of industrial development and geographic region. Almost all regions have experienced increases in women's employment relative to men's over the past three decades, with the largest gains in Southern Africa, across emerging and developing America, and within the industrialized economy group. However, women's relative concentration in industrial employment has nearly universally declined, especially among the strong export performers in Northern Africa, East Asia, and Central America. Figure 4 presents another set of functions that illustrate the distribution or density of these changes for emerging and developing economies, with the mean gain in women's employment rates relative to men's over the period equal to 5.0 percentage points, compared to a 18.3 percentage point average loss in women's relative concentration in industrial employment. Note how the two curves relate to the zero value on the horizontal axis, with the vast majority of countries falling on the negative side for women's relative concentration in industrial employment, while at the same time experiencing increases in women's relative employment overall. The result is that, as women have increased their employment participation in emerging industrial and developing economies, they have faced increased rates of gender segregation and exclusion from industrial-sector work.

**Figure 4: Change in women's concentration in industrial employment and total employment in emerging industrial and developing economies, 1991-2019**



*Source:* Author's calculations based on ILO modelled data drawn from the WDI database (accessed March 2021).

*Note:* Industrial development groups conform to UNIDO (2021b) country classification. Developing economies include both other developing economies and LDCs.

**Table 1: Women's relative employment rate and concentration in industrial employment by level of industrial development and region, 1991 and 2019 (percent)**

	Women's relative employment-to-population rate			Women's relative concentration in industrial employment		
	1991	2019	PP change	1991	2019	PP change
<b>Emerging industrial and developing economies</b>						
<i><b>Africa</b></i>						
Northern Africa	27.9	31.2	3.3	85.2	55.0	-30.2
Southern Africa	62.3	79.7	17.3	73.5	55.7	-17.8
Eastern Africa	82.8	85.5	2.6	52.2	38.7	-13.5
Western Africa	74.3	80.6	6.3	77.4	63.8	-13.6
Middle Africa	84.2	83.1	-1.1	44.7	45.2	0.5
<i><b>America</b></i>						
South America	58.7	70.3	11.6	60.8	39.2	-21.6
Central America	44.8	58.4	13.6	99.3	63.8	-35.5
Caribbean	58.8	71.3	12.5	56.0	32.2	-23.8
<i><b>Asia</b></i>						
Southern Asia	37.6	43.3	5.7	79.5	68.5	-11.0
Eastern Asia	84.0	79.4	-4.7	97.7	63.5	-34.3
Western Asia	42.0	45.5	3.5	59.9	34.5	-25.4
South-Eastern Asia	78.0	77.2	-0.8	98.6	71.8	-26.8
Central Asia	67.8	65.7	-2.2	62.8	51.1	-11.7

	Women's relative employment-to-population rate			Women's relative concentration in industrial employment		
	1991	2019	PP change	1991	2019	PP change
<i>Europe</i>	72.7	73.2	0.5	63.5	53.5	-10.0
<b>Industrialized economies</b>	66.1	78.3	12.2	50.7	33.9	-16.7

*Source:* Author calculations based on ILO modelled data downloaded from WDI database.

*Note:* Groups conform to UNIDO (2021) country classification (*Europe* refers to European countries in the emerging industrial and developing economy group; other European countries are in the industrialized economy group). Women's relative employment-to-population ratio equals women's employment rate divided by men's employment rate. Women's relative concentration in industrial employment equals women's industrial employment as a share of women's total employment divided by men's industrial employment as a share of men's total employment. PP = percentage point.



Why this decline in women’s relative access to industrial-sector work? One reason has to do with the impact of technological change and the rising capital-intensity of production. Although employers around the world prefer to hire women for labour-intensive manufacturing, a wide variety of studies show that women tend to lose these jobs as industries upgrade (Kucera and Tejani, 2014; Tejani and Milberg, 2016; Seguino and Braunstein, 2019).<sup>1</sup> Labour costs are less important in capital-intensive industries, and gender norms and stereotypes about the types of work women and men do come into play on both the demand and supply sides of the labour market. These results are consistent with the stylized finding that trade is generally associated with an increase in the relative returns to skilled labour (UNCTAD, 2016), implying an increase in the relative demand for the sorts of jobs and workers that are identified as more skilled, that is, those that are more likely to be associated with men.

In addition to changing the gender-typing of jobs, technological change has lowered the employment intensity of industrialization and manufacturing overall. Combined with the increasing pace of globalization and the associated expansion in the global labour supply by many countries with similar comparative advantages, these changes have been associated with premature deindustrialization or stalled industrialization across a number of emerging industrial and developing economies (Felipe et al., 2019; Rodrik, 2016; UNCTAD, 2016). Manufacturing exporters in Asia have managed to better sustain both industrialization and its employment benefits, but other developing regions have not fared nearly as well (see Figure 2). And as industrial-sector work has gotten scarcer, women across the world have become increasingly excluded from it (see Table 1). This gendered exclusion reflects how economic structures and institutions are “bearers of gender,” both reflecting and reinforcing gender inequality.

#### **4 Gender in the labour market during the pandemic**

In this section, we consider how these employment patterns and structures were affected by the COVID-19 pandemic, paying particular attention to women in industry in emerging industrial and developing economies wherever possible. It helps to begin by delineating labour-demand versus supply-side factors. We start with the emerging literature on women’s pandemic-era labour-market outcomes, and then turn to our own investigation of the most recent data, covering International Labour Organization (ILO) short-term labour-force surveys, World Bank Enterprise COVID-19 follow-up surveys and United Nations Industrial Development Organization (UNIDO) follow-up surveys in successive sub-sections.

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<sup>1</sup> Evidence on women’s higher risk of automation is consistent with these gender-differentiated effects of technology (Brussevich et al., 2018).

Starting with labour demand, gender segregation by industry and occupation drive the gender distribution of job losses brought about by the pandemic. These gendered effects are the result of lockdowns, closures, disruptions to trade and global supply chains, and the collapse of consumer spending, and how these consequences are distributed across different gender-typed industries and activities. Globally, women are concentrated in the sectors hardest hit by lockdowns and closures, including manufacturing; accommodation and food service; retail and hospitality; and real estate, business and administrative activities. Together, these industries employ 40 percent of women, versus 36.6 percent of men. There is important regional variation in the gender concentration of exposure to pandemic-related employment effects, with women's employment shares in hard-hit sectors as high as 58.9 percent in Central America, 48.5 percent in Southeast Asia, 45.5 percent in South America, and 54.3 percent in the Caribbean (ECLAC 2021; ILO 2020a).

Focusing on manufacturing, with supply-chain disruptions and the slowdown in global trade in 2020, women working in export-oriented production were at particularly high risk of job loss or cuts in hours. It is difficult to engage in remote work in these industries, and factory shutdowns in Bangladesh, Cambodia and Viet Nam, where women make up 60-80 percent of the workforce in industries like apparel, illustrate the implications of the sudden stops that unfolded (World Bank and WTO 2020). These patterns echo those that manifested in developing countries in prior global crises, where women's higher employment shares in manufacturing manifested as greater job losses among women than men (Seck et al., 2021). We will see additional evidence of this in the data presented below.

Informal, small-enterprise (fewer than 10 employees) and self-employment constitute the majority of total employment in low- and middle-income countries, and women rely on these sectors much more so than men (ILO, 2020c). Women are also over-represented in informal industries more exposed to closure and declining demand, with 42 percent of women in informal work concentrated in higher-risk industries compared to 32 percent of men in informal work (ILO 2020b). The problem is not just gender segregation across different types of industries more or less exposed to closure and demand shocks. Small informal firms and own-account workers are always the most vulnerable to economic shocks (ILO, 2020a).

Emerging country-specific studies on the gender differential effects of the pandemic confirm these hypotheses. Rapid gender assessment surveys by UN Women of eleven countries in Asia and the Pacific indicated that women were experiencing greater losses in jobs and working hours than men as a result of the pandemic (Seck et al., 2021). Research in the Republic of Korea also found women's job losses to be greater (Ham, 2021). In India, men experienced more job loss

than women, a result of women being more highly concentrated than men in agriculture, a sector less affected by lockdowns. Controlling for wage employment, however, women in India were more likely to lose their jobs than men (Desai et al., 2021).

The gender distribution of job loss is not just a reflection of gender segregation in the labour market. It can also result from gender discrimination in deciding who to let go when demand declines. Gender norms and stereotypes contribute to employers seeing women as more marginal workers, more likely to be secondary earners for household income, and thus easier to lay off when sales decline. Data from the World Values Survey support this contention. When asked whether they agree with the statement “when jobs are scarce, men have more right to a job than women,” agreement rates among most developing countries are high (ranging between 30 and 60 percent) and fairly stable over the past few decades, with the exception of Latin America, where they have declined significantly as women’s labour force participation has increased (Klasen, 2020; Seguino, 2007). When facing economic duress and an increasing scarcity of jobs, women are likely to be the first fired or otherwise squeezed to accommodate changes in labour demand (Seguino and Braunstein, 2019).

Countering this increased likelihood of job loss is women’s concentration in frontline essential work throughout the world. Women constitute more than 70 percent of health and social workers globally (ILO, 2020c). In all countries, almost all institutional long-term care for older persons and those living with disabilities is provided by women (UN Women, 2019). The majority of this frontline work is low-paid service-sector work: hands-on, direct care-giving in either an institutional or home setting, cleaning, deliver, or food preparation. Though at the global level, women and men contract the virus at similar rates (this varies by country, however), the sort of frontline essential work that women do has been associated with much higher rates of COVID-19 infection than men in frontline work (Magda et al., 2021; UN Women, 2020).

Turning to factors of labour supply, the most important element to consider is women’s disproportionate responsibility for unpaid care work. Globally, women do three times as much unpaid care and domestic work than men do (UN Women, 2019). Though these inequalities in the distribution of unpaid care work are global, the differences are larger for developing countries. And when paid and unpaid work are combined, women work longer hours overall than men (UN Women, 2019). The increased need for unpaid care induced by the pandemic, through things like school and childcare closures, the need to care for the sick and problems at long-term care facilities necessitating transfers home, has disproportionately fallen on women. A growing body of research from around the world shows that women’s unpaid work time has increased much

more than men's during the pandemic (Craig and Churchill, 2021; İlkaracan and Memiş, 2021; Seck et al., 2021; UN Women 2020; Zamarro and Prados, 2021).<sup>2</sup>

In addition to women bearing a disproportionate share of the care costs of the crisis, one of the worrying results of these patterns is women's consequent withdrawal from the paid labour force. There is here a possibility for "labour market scarring," where short-term withdrawals lead to longer-term reversals in the progress that has been made on gender inequality in the labour market. For instance, rural-to-urban Chinese women migrants have been more likely to remain in their rural hometowns and not return to urban paid work after lockdowns (Song et al., 2021). ECLAC estimates that the COVID-19-related economic contraction represents a loss of more than 10 years of progress on women's labour force participation in the region (ECLAC, 2021). This is a very concerning prospect, both for gender equality and the contributions that women's participation in paid work can make to growth and development.

#### **4.1 Aggregate patterns from the ILO's short-term labour force statistics**

We now turn to a direct investigation of extant data to evaluate these patterns, starting with gender-disaggregated patterns of labour-force participation and employment rates, and then moving into data on job loss in industry and manufacturing. Table 2, Table 3 and Table 4 are drawn from the ILO's annual labour-force statistics. The tables list two groups for which we have 2020 data that can be compared to pre-pandemic 2019: (1) 30 emerging industrial and developing economies, and (2) 39 industrialized economies. Economies vary slightly across tables as not all data is collected by all economies.

Table 2 details labour-force participation rates among the population aged 15 and older for women and men. The first two columns list 2019 and 2020 labour-force participation rates respectively and then the third column the percentage change between the two years. At the bottom of each economy group is the average for that group. In the emerging and developing economy group, labour-force participation declined in nearly every case for both women and men, with women's percent decline exceeding men's in most economies as well. The average (median) loss in labour-force participation between 2019 and 2020 was 6.1 (5.7) percent for women and 4.1 (4.2) percent for men. Women's percentage losses were nearly or more than double that of men's in Bolivia, Colombia, Costa Rica, the Dominican Republic, Georgia, Paraguay and Turkey. Turning towards

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<sup>2</sup> And though men have been taking on more unpaid household work, particularly in terms of caring for children, research shows that this participation is often concentrated in the more enjoyable parts of domestic work (for example, playing with children). There is no evidence that household gender roles have been transformed in any substantial or long-term way (İlkaracan and Memiş, 2021; Seck et al., 2021; Craig and Churchill, 2021).

the industrialized economy group, the magnitude of participation loss is both smaller and more gender equal, with an average loss in labour-force participation of 1.0 percent for both women and men. Chile is a notable outlier among the industrialized economy group, with declines in labour-force participation closer to its emerging and developing neighbours in Latin America.

Taking up the issue of labour-force participation in gender-relative terms, the far-right set of columns of Table 2 displays an estimate of the percentage point change in women's labour-force participation rates relative to men's over the 2019-2020 period. The average (median) percentage point loss for the emerging and developing economy group is 1.5 (1.2), a substantial increase in gender differences in market labour-force participation over just the one year. Comparing annual to quarterly data (not shown in the table), there are signs of recovery for both women and men, though women's labour-force participation fell further and is recovering more slowly than men's. The precise reasons for these gender differences—for instance the extent to which women's ongoing and disproportionate responsibilities for care, or whether women's traditional industries such as hospitality and retail are more slowly recovering—require further study. We get some suggestive indicators below.

Table 2: Level and percentage change in labour-force participation rate, by gender and industrial group, 2020 vs. 2019

	Women's labour-force participation rate, 15+			Men's labour-force participation rate, 15+			Women-to-Men		
	Level		Change	Level		Change	Level		PP change
	2019	2020	2019-2020	2019	2020	2019-2020	2019	2020	2019-2020
<i>Emerging industrial and developing economies</i>									
Argentina	50.3	46.8	-6.9%	71.4	66.4	-7.0%	70.4	70.5	0.08
Bolivia	61.0	59.6	-2.3%	81.0	80.5	-0.7%	75.3	74.1	-1.19
Bosnia and Herzegovina	32.8	32.7	-0.3%	51.1	53.1	3.9%	64.1	61.6	-2.58
Botswana	56.5	56.5	0.0%	64.6	65.6	1.7%	87.6	86.1	-1.43
Brazil	53.6	48.0	-10.5%	72.6	67.8	-6.6%	73.9	70.8	-3.12
Colombia	56.0	50.3	-10.2%	79.7	75.9	-4.7%	70.3	66.2	-4.05
Costa Rica	50.4	46.4	-7.8%	74.2	71.0	-4.4%	67.9	65.4	-2.48
Croatia	45.2	44.7	-1.1%	57.6	58.0	0.7%	78.5	77.1	-1.38
Cyprus	57.5	56.6	-1.5%	68.9	69.3	0.6%	83.4	81.7	-1.74
Dominican Republic	52.8	47.7	-9.7%	78.5	74.1	-5.6%	67.2	64.3	-2.90
Ecuador	54.5	48.4	-11.2%	78.4	72.3	-7.7%	69.6	67.0	-2.59
El Salvador	46.3	43.5	-6.1%	78.0	73.5	-5.8%	59.4	59.2	-0.15
Georgia	54.5	40.4	-25.8%	72.6	62.0	-14.6%	75.1	65.2	-9.88
Greece	44.4	43.5	-2.0%	60.1	59.1	-1.7%	74.0	73.7	-0.29
Indonesia	53.9	53.2	-1.4%	82.5	81.6	-1.1%	65.4	65.2	-0.15
Mexico	44.7	40.9	-8.5%	77.2	71.6	-7.2%	58.0	57.1	-0.82

	Women's labour-force participation rate, 15+			Men's labour-force participation rate, 15+			Women-to-Men		
	Level		Change	Level		Change	Level		PP change
	2019	2020	2019-2020	2019	2020	2019-2020	2019	2020	2019-2020
<i>Emerging industrial and developing economies</i>									
Moldova, Republic of	38.2	36.1	-5.3%	47.0	45.1	-4.0%	81.3	80.2	-1.12
Mongolia	53.4	51.8	-3.0%	68.3	66.8	-2.3%	78.2	77.6	-0.60
Montenegro	49.9	46.4	-7.0%	65.2	60.6	-7.1%	76.5	76.6	0.08
North Macedonia	44.9	41.8	-6.9%	66.1	63.1	-4.6%	68.0	66.3	-1.69
Panama	53.3	53.2	-0.2%	77.2	74.0	-4.1%	69.0	71.8	2.83
Paraguay	60.4	57.3	-5.1%	84.7	83.4	-1.5%	71.2	68.6	-2.60
Peru	70.0	56.9	-18.7%	84.8	73.7	-13.1%	82.6	77.2	-5.38
Philippines	46.4	42.5	-8.4%	72.4	66.9	-7.6%	64.2	63.6	-0.53
Romania	45.6	45.3	-0.5%	65.4	65.4	0.1%	69.7	69.3	-0.42
Serbia	47.1	46.5	-1.3%	62.7	61.9	-1.2%	75.1	75.1	-0.01
South Africa	48.5	44.1	-9.1%	62.5	57.4	-8.1%	77.6	76.7	-0.87
Thailand	59.0	59.2	0.3%	75.5	75.4	-0.1%	78.2	78.5	0.31
Turkey	34.3	30.8	-10.1%	72.0	68.2	-5.3%	47.7	45.2	-2.43
Uruguay	55.9	54.7	-2.1%	71.5	69.2	-3.3%	78.1	79.1	0.92
<i>Developing average</i>	<i>50.7</i>	<i>47.5</i>	<i>-6.1%</i>	<i>70.8</i>	<i>67.8</i>	<i>-4.1%</i>	<i>71.9</i>	<i>70.4</i>	<i>-1.54</i>

		Women's labour-force participation rate, 15+			Men's labour-force participation rate, 15+			Women-to-Men		
		Level		Change	Level		Change	Level		PP change
		2019	2020	2019-2020	2019	2020	2019-2020	2019	2020	2019-2020
<i>Industrialized economies</i>										
Australia		61.0	60.2	-1.2%	71.1	70.0	-1.5%	85.7	86.0	0.25
Austria		56.0	55.6	-0.6%	67.0	66.2	-1.3%	83.6	84.1	0.53
Belgium		49.8	49.3	-1.0%	59.1	58.5	-1.1%	84.3	84.4	0.07
Bulgaria		50.3	49.2	-2.2%	63.4	62.5	-1.5%	79.3	78.8	-0.51
Canada		61.5	59.5	-3.1%	70.1	68.7	-2.1%	87.7	86.7	-0.96
Chile		49.4	44.6	-9.8%	70.0	66.5	-5.1%	70.6	67.0	-3.54
Czechia		52.6	51.8	-1.5%	68.5	68.1	-0.6%	76.7	76.1	-0.68
Denmark		58.0	57.8	-0.4%	66.9	66.4	-0.7%	86.7	87.0	0.25
Estonia		57.6	57.6	-0.1%	70.6	70.6	0.0%	81.6	81.5	-0.08
Finland		55.8	55.3	-1.0%	63.2	63.0	-0.4%	88.3	87.7	-0.52
France		51.3	50.6	-1.2%	59.7	58.8	-1.4%	85.9	86.1	0.18
Germany		56.6	56.8	0.4%	67.4	66.5	-1.3%	83.9	85.4	1.52
Hong Kong, China		55.0	54.2	-1.5%	67.5	66.2	-1.9%	81.5	81.8	0.35
Hungary		48.8	48.5	-0.5%	66.4	66.3	-0.3%	73.4	73.2	-0.19
Iceland		77.4	75.0	-3.1%	84.9	82.7	-2.5%	91.2	90.7	-0.51
Ireland		56.3	55.1	-2.0%	68.7	67.4	-1.9%	81.9	81.8	-0.15
Israel		59.6	58.2	-2.3%	67.6	65.5	-3.1%	88.1	88.8	0.72



	Women's labour-force participation rate, 15+			Men's labour-force participation rate, 15+			Women-to-Men		
	Level		Change	Level		Change	Level		PP change
	2019	2020	2019-2020	2019	2020	2019-2020	2019	2020	2019-2020
Italy	41.3	39.8	-3.4%	59.2	57.8	-2.3%	69.7	68.9	-0.82
Japan	53.3	53.2	-0.2%	71.4	71.4	0.0%	74.6	74.5	-0.14
Korea, Republic of	53.9	53.2	-1.2%	73.6	72.8	-1.2%	73.2	73.1	-0.06
Latvia	55.7	56.0	0.6%	68.0	68.6	0.8%	81.9	81.7	-0.15
Lithuania	57.3	57.3	0.1%	67.8	68.8	1.4%	84.4	83.3	-1.10
Luxembourg	55.8	57.0	2.1%	65.4	64.6	-1.3%	85.3	88.3	2.99
Macau, China	66.7	66.8	0.1%	74.6	74.9	0.4%	89.4	89.2	-0.22
Malta	51.3	52.9	3.2%	71.1	71.1	0.0%	72.1	74.4	2.33
Netherlands	59.8	59.9	0.1%	69.9	69.3	-0.8%	85.6	86.4	0.78
New Zealand	65.8	65.2	-1.0%	75.4	75.5	0.0%	87.3	86.4	-0.87
Norway	62.1	62.0	-0.2%	66.1	65.6	-0.9%	93.9	94.6	0.65
Poland	48.2	47.9	-0.5%	65.0	65.1	0.1%	74.1	73.6	-0.47
Portugal	54.8	53.6	-2.1%	64.4	63.1	-2.0%	85.1	85.0	-0.07
Russian Federation	55.3	55.1	-0.3%	70.6	70.1	-0.7%	78.4	78.7	0.29
Singapore	61.1	61.2	0.1%	75.4	75.4	0.0%	81.1	81.1	0.08
Slovakia	52.3	51.9	-0.7%	67.6	66.7	-1.4%	77.4	77.9	0.52
Slovenia	53.2	53.2	-0.1%	63.0	62.4	-0.9%	84.5	85.3	0.72
Spain	52.7	51.6	-2.0%	63.4	62.1	-2.1%	83.1	83.2	0.08
Sweden	71.0	70.4	-0.9%	75.6	76.1	0.6%	94.0	92.5	-1.46

	Women's labour-force participation rate, 15+			Men's labour-force participation rate, 15+			Women-to-Men		
	Level		Change	Level		Change	Level		PP change
	2019	2020	2019-2020	2019	2020	2019-2020	2019	2020	2019-2020
Switzerland	63.0	62.5	-0.7%	73.7	73.4	-0.4%	85.5	85.2	-0.34
Taiwan, China	51.4	51.4	0.0%	67.3	67.2	-0.1%	76.3	76.5	0.14
United States	57.4	56.2	-2.1%	69.2	67.7	-2.2%	83.1	83.1	0.01
<b><i>Industrialized average</i></b>	<b><i>56.4</i></b>	<b><i>55.8</i></b>	<b><i>-1.0%</i></b>	<b><i>68.5</i></b>	<b><i>67.8</i></b>	<b><i>-1.0%</i></b>	<b><i>82.3</i></b>	<b><i>82.3</i></b>	<b><i>-0.01</i></b>

*Source:* Author's calculations based on labour-force statistics from ILOSTAT. Accessed September, 2021.

*Note:* Industrial development groups conform to UNIDO (2021) country classification. PP change refers to percentage point change, otherwise the change is percent.

Table 3 lists employment-to-population ratios for those aged 15 years and older by gender and is organized along the same lines as Table 2, with annual 2019-2020 percentage changes and a set of columns on the far right that lists the ratio of women's employment rates relative to men's over the same period. We consider employment rates rather than unemployment because unemployment data in developing countries can be misleading, as workers are more likely to turn to traditional self-employment activities or unpaid subsistence work than remain unemployed while they search for wage work (Feng et al., 2018).

Employment rates declined further than labour-force participation for both women and men, in line with an expected increase in unemployment. Employment rates declined more for women than for men, with the emerging industrial and developing economy average change in women's employment rates equal to -7.8 percent compared to -5.6 percent for men (the medians are -7.3 and -4.9 percent for women and men, respectively). Similar to labour-force participation, employment rates in the industrialized economy group declined a lot less, perhaps reflecting the employment-preserving fiscal measures undertaken by many European governments (versus for instance the United States, where pandemic measures were delivered largely as unemployment insurance and recorded employment rate losses were higher). Again, despite being in the industrialized economy group, employment-rate losses in Chile are much more in line with other South American countries in the emerging industrial economy and developing country group, suggesting that its pandemic experience has been more like its geographic neighbours despite its level industrial development.

Table 3: Level and percentage change in employment-to-population rate, by gender and industrial group, 2020 vs. 2019

	Women's employment-to population- ratio, 15+			Men's employment-to population- ratio, 15+			Women-to-Men		
	Level	Change		Level	Change		Level	PP change	
	2019	2020	2019-2020	2019	2020	2019-2020	2019	2020	2019-2020
<i>Emerging industrial and developing economies</i>									
Argentina	44.9	41.0	-8.7%	64.9	59.2	-8.7%	69.3	69.2	-0.01
Bolivia	58.3	53.8	-7.8%	78.3	75.3	-3.8%	74.5	71.4	-3.06
Bosnia and Herzegovina	26.6	27.0	1.4%	44.1	45.8	3.7%	60.3	59.0	-1.33
Botswana	43.3	42.0	-2.8%	50.6	49.7	-1.6%	85.6	84.5	-1.04
Brazil	46.1	40.3	-12.5%	65.2	59.7	-8.3%	70.7	67.5	-3.17
Colombia	48.9	40.7	-16.7%	73.4	66.6	-9.2%	66.6	61.1	-5.48
Costa Rica	42.8	35.9	-16.1%	67.4	61.0	-9.5%	63.5	58.9	-4.65
Croatia	42.0	41.3	-1.5%	54.0	53.6	-0.7%	77.6	77.0	-0.65
Cyprus	52.9	52.3	-1.1%	64.6	64.0	-0.8%	81.9	81.6	-0.25
Dominican Republic	47.8	43.4	-9.1%	75.3	71.0	-5.7%	63.4	61.1	-2.32
Ecuador	52.0	44.9	-13.7%	75.8	68.5	-9.7%	68.6	65.5	-3.09
El Salvador	44.3	43.5	-1.8%	74.9	73.4	-2.0%	59.1	59.2	0.09
Georgia	49.0	33.9	-30.8%	63.3	49.5	-21.8%	77.4	68.5	-8.91
Greece	34.9	34.9	0.1%	51.7	51.1	-1.2%	67.5	68.4	0.85
Indonesia	52.1	51.2	-1.8%	79.4	77.8	-2.0%	65.7	65.8	0.13
Mexico	43.1	39.2	-9.0%	74.5	68.3	-8.4%	57.9	57.5	-0.43

	Women's employment-to population- ratio, 15+			Men's employment-to population- ratio, 15+			Women-to-Men		
	Level	Change		Level	Change		Level	PP change	
	2019	2020	2019-2020	2019	2020	2019-2020	2019	2020	2019-2020
<i>Emerging industrial and developing economies</i>									
Moldova, Republic of	36.5	35.0	-4.3%	44.2	43.1	-2.5%	82.6	81.1	-1.49
Mongolia	48.7	48.3	-0.7%	60.8	61.9	1.9%	80.1	78.1	-2.01
Montenegro	42.1	37.9	-9.9%	55.7	50.0	-10.2%	75.6	75.8	0.21
North Macedonia	36.7	34.7	-5.3%	55.2	52.1	-5.6%	66.4	66.6	0.23
Panama	50.2	40.1	-20.2%	74.1	64.0	-13.7%	67.7	62.6	-5.07
Paraguay	55.4	51.6	-6.8%	80.2	78.5	-2.0%	69.0	65.7	-3.37
Peru	67.4	52.9	-21.5%	82.2	67.9	-17.3%	82.0	77.9	-4.12
Philippines	45.2	41.4	-8.5%	70.9	65.3	-7.9%	63.8	63.4	-0.41
Romania	44.0	43.2	-1.8%	62.5	62.0	-0.9%	70.4	69.7	-0.65
Serbia	41.9	42.1	0.6%	56.5	56.6	0.0%	74.1	74.5	0.42
South Africa	33.7	30.4	-9.8%	45.8	41.5	-9.3%	73.7	73.3	-0.41
Thailand	58.6	58.5	-0.1%	75.0	74.6	-0.5%	78.1	78.5	0.36
Turkey	28.7	26.3	-8.4%	63.1	59.8	-5.3%	45.5	43.9	-1.52
Uruguay	49.9	47.9	-4.0%	66.3	63.2	-4.6%	75.3	75.8	0.49
<i>Developing average</i>	<i>45.6</i>	<i>41.9</i>	<i>-7.8%</i>	<i>65.0</i>	<i>61.2</i>	<i>-5.6%</i>	<i>70.5</i>	<i>68.8</i>	<i>-1.69</i>

	Women's employment-to population- ratio, 15+			Men's employment-to population-ratio, 15+			Women-to-Men		
	Level		Change	Level		Change	Level		PP change
	2019	2020	2019-2020	2019	2020	2019-2020	2019	2020	2019-2020
<i>Industrialized economies</i>									
Australia	57.9	56.4	-2.5%	67.4	65.5	-2.9%	85.8	86.2	0.35
Austria	53.6	52.7	-1.5%	63.9	62.5	-2.2%	83.8	84.3	0.53
Belgium	47.4	46.7	-1.4%	55.7	55.1	-1.1%	85.0	84.7	-0.29
Bulgaria	48.3	46.9	-3.1%	60.5	59.1	-2.4%	79.8	79.3	-0.52
Canada	58.2	53.9	-7.4%	65.9	62.1	-5.7%	88.4	86.8	-1.56
Chile	45.5	39.5	-13.2%	65.3	59.2	-9.4%	69.6	66.7	-2.90
Czechia	51.3	50.3	-2.1%	67.4	66.6	-1.1%	76.2	75.5	-0.73
Denmark	54.9	54.3	-1.2%	63.7	62.9	-1.3%	86.3	86.4	0.08
Estonia	54.9	53.8	-2.0%	67.8	65.7	-3.1%	81.0	81.9	0.89
Finland	52.4	51.1	-2.3%	58.7	57.9	-1.3%	89.2	88.2	-0.97
France	47.0	46.6	-0.8%	54.6	54.1	-1.0%	86.0	86.2	0.16
Germany	55.0	54.9	-0.2%	65.1	63.7	-2.1%	84.5	86.1	1.60
Hong Kong, China	53.7	51.6	-3.9%	65.1	61.6	-5.3%	82.6	83.8	1.20
Hungary	47.1	46.3	-1.6%	64.2	63.6	-1.0%	73.3	72.9	-0.42
Iceland	75.0	71.0	-5.3%	81.6	78.1	-4.3%	91.9	91.0	-0.88
Ireland	53.6	52.0	-3.0%	65.1	63.6	-2.3%	82.3	81.7	-0.61
Israel	57.2	55.8	-2.5%	65.1	62.6	-3.9%	87.9	89.2	1.30

	Women's employment-to population- ratio, 15+			Men's employment-to population-ratio, 15+			Women-to-Men		
	Level		Change	Level		Change	Level		PP change
	2019	2020	2019-2020	2019	2020	2019-2020	2019	2020	2019-2020
Italy	36.7	35.8	-2.5%	53.8	53.0	-1.5%	68.2	67.6	-0.63
Japan	52.2	51.8	-0.7%	69.7	69.3	-0.5%	74.9	74.8	-0.11
Korea, Republic of	51.9	51.1	-1.7%	70.8	69.9	-1.2%	73.4	73.0	-0.34
Latvia	52.7	52.1	-1.1%	63.1	62.3	-1.3%	83.4	83.6	0.14
Lithuania	54.1	52.9	-2.2%	63.1	62.4	-1.0%	85.8	84.8	-1.03
Luxembourg	52.7	53.0	0.6%	61.7	60.3	-2.3%	85.5	88.0	2.52
Malta	49.2	50.6	2.8%	68.7	68.1	-0.9%	71.6	74.3	2.70
Netherlands	57.8	57.5	-0.5%	67.5	66.8	-1.1%	85.6	86.2	0.53
New Zealand	62.9	61.9	-1.5%	72.5	72.2	-0.4%	86.7	85.7	-0.97
Norway	60.0	59.4	-0.9%	63.5	62.5	-1.6%	94.5	95.1	0.66
Poland	46.4	46.3	-0.2%	63.0	63.1	0.0%	73.6	73.4	-0.19
Portugal	50.9	49.8	-2.0%	60.7	59.0	-2.8%	83.9	84.5	0.67
Russian Federation	52.9	52.1	-1.6%	67.3	66.1	-1.8%	78.7	78.8	0.13
Singapore	58.3	57.7	-1.0%	72.5	71.7	-1.1%	80.5	80.5	0.04
Slovakia	49.2	48.3	-1.9%	63.8	62.4	-2.2%	77.1	77.3	0.25
Slovenia	50.6	50.2	-0.8%	60.4	59.6	-1.4%	83.7	84.2	0.45
Spain	44.3	42.6	-3.7%	55.5	53.5	-3.7%	79.7	79.7	0.02
Sweden	66.1	64.6	-2.3%	70.5	69.8	-1.1%	93.7	92.5	-1.20
Switzerland	60.0	59.4	-1.0%	70.6	70.0	-0.9%	85.0	84.9	-0.11

	Women's employment-to population-ratio, 15+			Men's employment-to population-ratio, 15+			Women-to-Men		
	Level		Change	Level		Change	Level		PP change
	2019	2020	2019-2020	2019	2020	2019-2020	2019	2020	2019-2020
Taiwan, China	49.6	49.5	-0.1%	64.8	64.6	-0.2%	76.5	76.6	0.06
United States	55.4	51.5	-7.0%	66.6	62.4	-6.3%	83.1	82.6	-0.59
<b><i>Industrialized average</i></b>	<b><i>53.3</i></b>	<b><i>52.2</i></b>	<b><i>-2.2%</i></b>	<b><i>64.9</i></b>	<b><i>63.5</i></b>	<b><i>-2.2%</i></b>	<b><i>82.1</i></b>	<b><i>82.1</i></b>	<b><i>0.01</i></b>

*Source:* Author's calculations based on labour-force statistics from ILOSTAT. Accessed September 2021.

*Note:* Industrial development groups conform to UNIDO (2021) country classification. PP change refers to percentage point change, otherwise the change is percent.



In a context where women have been increasing their employment participation relative to men (see Table 1 and Figure 4), the decline in women's involvement in paid work as a result of the pandemic is extremely concerning. Looking at the far-right column of Table 3, women's relative employment rates have declined an average of 1.7 percentage points among emerging industrial and developing economies in the sample during the course of the pandemic. To get a sense of magnitude, compare this loss to the mean gain in women's relative employment of 5.0 percentage points illustrated in Figure 4, which accrued over nearly 30 years. If the trend is not reversed, this then amounts to a loss of 34 percent, or about 10 years of progress on gender equality in employment.

Table 4 narrows the focus to industrial-sector employment, showing the 2019-2020 percentage change in industrial employment (simply, the number of industrial-sector jobs) for women and men in the first set of columns. To help understand the magnitude of these changes, the right set of columns lists industrial employment as a share of total employment in 2019 and 2020 for women and for men, as well as the ratio of this share (the latter is women's relative concentration in industrial employment, the same series detailed in Table 1 and illustrated in Figure 3). For emerging industrial and developing economies, the magnitudes of industrial-employment losses are similar to those for employment rates for women and slightly higher for men. For women, at least, there does not seem to be a disproportionate loss in industrial jobs in the aggregate for this sample of countries. This outcome is somewhat surprising given that manufacturing has been identified as a hard-hit sector early in the pandemic, particularly in light manufacturing where women's industrial employment tends to be concentrated. In line with other results, the percentage loss in industrial employment for the industrialized economy group is lower than for emerging and developing economies, with some notable exceptions, like Hong Kong SAR, China, the United States and New Zealand, where job losses are higher.

Table 4: Level and percentage change in industrial employment, by gender and industrial group, 2020 vs. 2019

	Change in industrial employment		Industrial employment as share of total employment					
	Women	Men	Women		Men		Women/Men	
	2019-2020		2019	2020	2019	2020	2019	2020
<i>Emerging industrial and developing economies</i>								
Argentina	-17.5%	-11.1%	7.1%	6.5%	30.1%	29.6%	23.6%	22.0%
Azerbaijan	2.1%	4.7%	8.6%	8.7%	27.9%	28.1%	31.0%	31.1%
Bolivia	-19.6%	-14.7%	8.7%	8.2%	40.6%	38.5%	21.4%	21.4%
Bosnia and Herzegovina	-4.7%	-7.7%	21.8%	21.2%	48.7%	46.4%	44.7%	45.7%
Botswana	14.6%	-3.0%	6.6%	7.6%	20.1%	20.1%	32.9%	37.9%
Brazil	-9.8%	-9.1%	9.2%	9.2%	27.5%	27.3%	33.4%	33.8%
Colombia	-13.7%	-8.2%	13.4%	13.8%	29.2%	30.0%	46.0%	46.2%
Costa Rica	-7.8%	-12.4%	8.5%	9.2%	24.9%	24.1%	34.2%	38.1%
Croatia	-4.2%	1.5%	17.2%	16.6%	39.8%	41.1%	43.2%	40.5%
Cyprus	-5.6%	6.3%	7.6%	7.2%	29.7%	31.6%	25.6%	22.6%
Dominican Republic	-0.1%	-3.0%	10.9%	12.0%	24.2%	25.3%	45.2%	47.3%
Ecuador	-26.9%	-18.5%	11.4%	10.3%	28.8%	27.3%	39.6%	37.6%
El Salvador	3.0%	-5.6%	17.0%	19.0%	30.7%	30.4%	55.5%	62.6%
Georgia	-3.5%	0.8%	9.4%	9.4%	31.7%	31.5%	29.8%	29.7%
Greece	-0.4%	-5.6%	9.2%	9.1%	24.2%	23.2%	37.8%	39.4%

	Change in industrial employment		Industrial employment as share of total employment					
	Women	Men	Women		Men		Women/Men	
	2019-2020		2019	2020	2019	2020	2019	2020
Indonesia	-6.8%	-5.0%	22.0%	21.1%	39.0%	38.1%	56.5%	55.4%
Mexico	0.1%	-10.0%	18.0%	18.6%	34.7%	33.3%	52.0%	56.0%
Moldova, Republic of	-3.1%	-6.4%	17.2%	17.5%	28.7%	27.6%	59.9%	63.2%
Mongolia	-7.8%	-5.3%	18.8%	16.4%	41.5%	40.0%	45.4%	41.0%
Montenegro	-35.4%	-10.1%	8.8%	6.4%	26.9%	27.1%	32.7%	23.7%
North Macedonia	-3.7%	-2.2%	30.8%	30.2%	39.6%	39.3%	77.8%	76.9%
Panama	-30.1%	-34.9%	5.6%	4.9%	25.3%	21.8%	22.3%	22.5%
Paraguay	-0.4%	0.8%	7.3%	7.9%	31.8%	33.8%	22.9%	23.4%
Peru	-30.6%	-25.0%	10.0%	9.4%	32.2%	29.7%	31.1%	31.5%
Philippines	-11.7%	-10.0%	12.3%	12.0%	35.8%	35.3%	34.4%	34.2%
Romania	-6.1%	-2.4%	26.6%	25.4%	43.9%	43.3%	60.6%	58.6%
Serbia	-0.1%	2.3%	23.6%	23.4%	42.9%	43.5%	55.0%	53.9%
South Africa	-9.8%	-15.6%	12.0%	11.8%	30.8%	28.4%	39.1%	41.7%
Thailand	-2.0%	-0.5%	30.5%	29.9%	40.8%	40.8%	74.6%	73.4%
Turkey	-2.0%	-0.4%	19.9%	20.3%	36.3%	36.9%	55.0%	54.9%
<i>Developing average</i>	-8.1%	-7.0%	14.3%	14.1%	32.9%	32.4%	42.1%	42.2%

	Change in industrial employment		Industrial employment as share of total employment					
	Women	Men	Women		Men		Women/Men	
	2019-2020		2019	2020	2019	2020	2019	2020
<i>Industrialized economies</i>								
Austria	-2.4%	-2.2%	12.7%	12.5%	40.6%	40.3%	31.2%	31.1%
Belgium	-1.7%	-3.7%	8.6%	8.6%	32.7%	31.9%	26.4%	26.9%
Bulgaria	-2.2%	-2.0%	23.6%	24.0%	39.0%	39.6%	60.5%	60.6%
Canada	-3.2%	-5.3%	8.8%	9.2%	30.1%	29.8%	29.4%	30.7%
Chile	-1.7%	-8.1%	8.5%	8.9%	32.5%	30.3%	26.3%	29.3%
Czechia	-1.9%	-0.8%	25.7%	25.8%	50.0%	49.9%	51.3%	51.6%
Denmark	2.0%	-0.7%	8.9%	9.2%	27.7%	27.9%	32.2%	32.9%
Estonia	-6.0%	0.7%	17.6%	16.8%	41.1%	42.4%	42.8%	39.6%
Finland	4.3%	-1.5%	9.1%	9.6%	35.1%	35.0%	25.9%	27.5%
France	-3.9%	-2.5%	9.7%	9.4%	31.1%	30.5%	31.2%	30.9%
Germany	-1.9%	-1.0%	14.5%	14.5%	40.6%	41.1%	35.6%	35.3%
Hong Kong, China	-4.1%	-8.2%	4.3%	4.3%	20.4%	19.9%	20.9%	21.4%
Hungary	-3.7%	-2.6%	20.9%	20.7%	44.0%	43.8%	47.4%	47.2%
Iceland	2.6%	1.6%	7.1%	7.6%	25.9%	27.2%	27.5%	27.8%
Ireland	3.3%	-0.5%	9.0%	9.5%	28.1%	28.0%	31.9%	33.8%
Italy	0.7%	-0.3%	14.2%	14.6%	39.5%	40.0%	35.9%	36.5%
Japan	-1.6%	-0.9%	13.9%	13.8%	32.8%	32.6%	42.4%	42.2%

	Change in industrial employment		Industrial employment as share of total employment					
	Women	Men	Women		Men		Women/Men	
	2019-2020		2019	2020	2019	2020	2019	2020
Korea, Republic of	-1.1%	0.9%	14.9%	14.8%	39.0%	39.6%	38.1%	37.4%
Latvia	9.1%	-5.5%	12.3%	13.8%	36.9%	36.1%	33.3%	38.3%
Lithuania	-4.3%	-1.4%	17.2%	17.0%	35.8%	35.4%	48.2%	48.0%
Luxembourg	-4.3%	-1.8%	4.0%	3.8%	15.8%	15.7%	25.5%	23.9%
Malta	-0.1%	0.1%	9.0%	8.6%	24.7%	24.5%	36.5%	35.3%
Netherlands	1.1%	-2.7%	5.9%	6.0%	23.0%	22.6%	25.7%	26.6%
New Zealand	-18.8%	-7.0%	8.7%	9.8%	28.7%	33.8%	30.4%	29.0%
Norway	2.6%	-0.7%	7.0%	7.2%	31.2%	31.0%	22.3%	23.1%
Poland	-2.1%	-2.4%	19.7%	19.3%	49.9%	49.3%	39.4%	39.2%
Portugal	3.1%	-2.9%	16.1%	16.8%	36.7%	36.5%	44.0%	46.2%
Russian Federation	-3.3%	-2.5%	15.6%	15.4%	38.9%	38.6%	40.3%	39.9%
Singapore	0.7%	-1.7%	10.6%	10.9%	19.0%	19.0%	55.8%	57.2%
Slovakia	3.2%	-2.5%	21.3%	22.4%	48.6%	48.4%	43.9%	46.2%
Slovenia	-6.7%	2.5%	21.6%	20.4%	49.2%	49.3%	43.9%	41.3%
Spain	-1.4%	-3.1%	9.7%	9.9%	31.0%	31.1%	31.4%	32.0%
Sweden	-0.2%	-3.3%	7.1%	7.2%	29.1%	28.3%	24.4%	25.5%

	Change in industrial employment		Industrial employment as share of total employment					
	Women	Men	Women		Men		Women/Men	
	2019-2020		2019	2020	2019	2020	2019	2020
Switzerland	-1.5%	-0.7%	9.9%	9.8%	30.3%	30.2%	32.8%	32.5%
United States	-6.6%	-7.2%	9.0%	9.1%	29.2%	28.8%	30.9%	31.4%
<b><i>Industrialized average</i></b>	-1.5%	-2.3%	12.5%	12.6%	33.9%	34.0%	35.6%	36.0%

*Source:* Author's calculations based on labour-force statistics from ILOSTAT. Accessed September 2021.

*Note:* Industrial development groups conform to UNIDO (2021) country classification.

As a comparison, Table 5 lists percentage changes in services-sector employment along the same lines as Table 4 for industrial employment. It is worth noting that the services sector is where the majority of both women and men work, though concentration in services is higher for women. Focusing on the emerging industrial and developing economy group, women on average lost proportionately more service-sector jobs than men, with an average job loss of 6.6 percent for women and 5.5 percent for men. This compares to an 8.1 percent average employment loss for women in industry versus a 7.0 percent loss for men (Table 4). In both the industrial and services sectors, women's proportional job loss is higher than men's, though the gender gap in the rate of job loss is the same (1.1 percentage points). Patterns are similar in the industrialized economy group, with services showing higher average job loss for women (-2.8 percent) than men (-1.9 percent) between 2019 and 2020, though women's employment losses are lower in industry than services for the industrialized group as well.

Table 5: Level and percentage change in services employment, by gender and industrial group, 2020 vs. 2019

	Change in services employment		Services employment as share of total employment					
	Women	Men	Women		Men		Women/Men	
	2019-2020		2019	2020	2019	2020	2019	2020
<i>Emerging industrial and developing economies</i>								
Argentina	-9.3%	-9.1%	92.7%	93.4%	69.5%	69.9%	133.4%	133.6%
Azerbaijan	1.0%	2.8%	89.4%	89.3%	68.0%	67.3%	131.5%	132.6%
Bolivia	-12.7%	-8.3%	88.1%	90.5%	54.3%	55.2%	162.3%	164.1%
Bosnia and Herzegovina	-0.8%	2.4%	76.6%	77.5%	47.1%	49.8%	162.6%	155.7%
Botswana	-0.5%	-3.2%	90.7%	90.4%	68.4%	68.2%	132.7%	132.6%
Brazil	-10.4%	-8.4%	89.5%	89.4%	63.3%	63.5%	141.5%	140.9%
Colombia	-17.2%	-13.6%	83.4%	82.5%	53.6%	51.9%	155.5%	159.1%
Costa Rica	-15.6%	-9.6%	87.7%	86.7%	57.9%	57.9%	151.6%	149.7%
Croatia	-1.1%	-4.0%	81.6%	81.6%	56.3%	54.9%	144.9%	148.5%
Cyprus	0.8%	-2.8%	91.6%	92.0%	68.5%	66.8%	133.7%	137.8%
Dominican Republic	-9.9%	-7.5%	88.4%	87.3%	69.5%	69.4%	127.1%	125.9%
Ecuador	-17.9%	-15.3%	80.0%	80.9%	44.7%	44.1%	178.8%	183.6%
El Salvador	-10.0%	-3.7%	79.9%	78.0%	51.6%	52.2%	154.7%	149.4%
Georgia	-3.7%	-0.5%	89.7%	88.6%	65.6%	64.2%	136.8%	138.1%
Greece	0.1%	0.5%	89.8%	90.0%	73.2%	74.6%	122.7%	120.6%



	Change in services employment		Services employment as share of total employment					
	Women	Men	Women		Men		Women/Men	
	2019-2020		2019	2020	2019	2020	2019	2020
Indonesia	-2.3%	-2.9%	66.5%	66.8%	46.5%	46.4%	142.9%	143.8%
Mexico	-3.5%	-3.2%	78.4%	78.1%	52.3%	54.0%	149.8%	144.7%
Moldova, Republic of	-5.1%	-2.0%	77.0%	76.8%	57.6%	58.1%	133.8%	132.1%
Mongolia	9.1%	0.4%	80.0%	82.6%	55.6%	56.9%	143.9%	145.1%
Montenegro	-12.3%	-12.1%	90.1%	89.3%	71.6%	70.5%	125.8%	126.8%
North Macedonia	-1.0%	-0.6%	67.9%	68.4%	56.6%	57.0%	120.0%	120.0%
Panama	-18.9%	-21.3%	93.3%	93.8%	64.6%	67.0%	144.6%	140.0%
Paraguay	-8.9%	-8.5%	91.5%	90.6%	59.7%	57.6%	153.3%	157.4%
Peru	-27.8%	-19.3%	82.1%	79.8%	53.9%	53.5%	152.3%	149.1%
Philippines	-9.4%	-7.8%	81.9%	82.2%	48.7%	49.2%	168.0%	167.3%
Romania	0.2%	0.3%	72.0%	73.3%	51.7%	52.4%	139.2%	139.9%
Serbia	1.2%	1.5%	74.9%	75.3%	53.1%	53.4%	141.1%	141.0%
South Africa	-8.0%	-4.9%	83.8%	84.0%	62.0%	64.4%	135.3%	130.4%
Thailand	1.0%	0.1%	61.2%	61.9%	48.2%	48.4%	126.8%	127.9%
Turkey	-3.8%	-4.0%	76.5%	76.4%	61.2%	60.0%	125.1%	127.3%
<i>Developing average</i>	-6.6%	-5.5%	82.5%	82.6%	58.5%	58.6%	142.4%	142.2%

	Change in services employment		Services employment as share of total employment					
	Women	Men	Women		Men		Women/Men	
	2019-2020		2019	2020	2019	2020	2019	2020
<i>Industrialized economies</i>								
Austria	-1.1%	-1.2%	86.6%	86.7%	58.3%	58.5%	148.4%	148.0%
Belgium	-1.0%	-0.1%	91.2%	91.2%	66.9%	67.7%	136.3%	134.8%
Bulgaria	-4.3%	-4.4%	73.4%	73.0%	54.6%	54.1%	134.5%	135.0%
Canada	-7.1%	-4.1%	90.5%	90.2%	68.9%	69.2%	131.3%	130.4%
Chile	-5.5%	5.3%	87.0%	87.1%	56.5%	60.4%	154.1%	144.2%
Czechia	-2.2%	-0.4%	72.7%	72.7%	47.0%	47.1%	154.7%	154.5%
Denmark	-1.1%	-1.4%	90.1%	89.9%	69.9%	69.8%	128.8%	128.8%
Estonia	-0.6%	-3.9%	81.1%	81.9%	55.3%	54.5%	146.6%	150.4%
Finland	-2.4%	-1.0%	89.9%	89.1%	62.8%	62.9%	143.1%	141.6%
France	-0.7%	0.7%	88.3%	88.6%	65.5%	66.4%	134.7%	133.3%
Germany	-2.6%	-3.4%	85.0%	84.7%	58.5%	57.7%	145.3%	146.8%
Hong Kong, China	-4.4%	-5.1%	89.8%	89.6%	62.8%	63.2%	143.0%	141.7%
Hungary	-2.7%	-2.3%	77.1%	77.2%	51.0%	51.0%	151.1%	151.5%
Iceland	-4.1%	-3.5%	92.1%	91.3%	68.8%	68.6%	134.0%	133.1%
Ireland	-2.8%	-0.1%	90.2%	89.7%	69.5%	69.7%	129.8%	128.7%
Italy	-2.6%	-2.4%	84.3%	83.9%	56.8%	56.2%	148.4%	149.2%
Japan	0.0%	0.4%	83.1%	83.6%	64.5%	65.0%	128.9%	128.7%
Korea, Republic of	-0.4%	-1.5%	84.5%	84.6%	60.4%	59.8%	139.9%	141.5%

	Change in services employment		Services employment as share of total employment					
	Women	Men	Women		Men		Women/Men	
	2019-2020		2019	2020	2019	2020	2019	2020
Latvia	-4.3%	-0.9%	84.8%	83.6%	55.4%	56.7%	153.0%	147.4%
Lithuania	-2.2%	2.7%	80.9%	81.3%	58.6%	60.3%	138.0%	134.9%
Luxembourg	2.6%	-0.8%	90.7%	90.9%	77.6%	78.3%	116.8%	116.1%
Malta	4.9%	0.9%	90.6%	91.1%	74.7%	74.7%	121.3%	121.9%
Netherlands	-1.8%	-1.1%	82.6%	81.5%	64.9%	64.8%	127.4%	125.8%
New Zealand	-31.1%	-23.1%	87.5%	83.5%	63.6%	61.9%	137.6%	134.9%
Norway	-0.5%	0.0%	92.3%	92.0%	66.9%	66.9%	138.0%	137.5%
Poland	-0.2%	0.1%	78.8%	79.1%	47.4%	48.0%	166.4%	164.7%
Portugal	-2.2%	-1.8%	82.8%	82.1%	60.6%	61.0%	136.6%	134.6%
Russian Federation	-1.8%	-1.9%	82.0%	82.0%	55.0%	55.1%	149.0%	148.9%
Singapore	-1.7%	-1.6%	88.6%	88.5%	79.5%	79.5%	111.4%	111.4%
Slovakia	-2.9%	-2.0%	77.5%	76.5%	47.8%	47.9%	162.2%	159.7%
Slovenia	1.0%	2.4%	77.1%	78.5%	49.2%	49.2%	156.7%	159.5%
Spain	-3.5%	-3.7%	89.0%	88.8%	64.5%	64.3%	137.9%	138.0%
Sweden	-2.5%	0.0%	92.0%	91.6%	69.5%	70.0%	132.4%	130.9%
Switzerland	0.2%	-0.2%	87.6%	87.8%	67.2%	67.3%	130.4%	130.6%
United States	-7.0%	-5.4%	90.4%	90.4%	69.4%	69.8%	130.3%	129.5%
<b>Industrialized average</b>	-2.8%	-1.9%	85.5%	85.3%	62.0%	62.2%	139.4%	138.5%

*Source:* Author's calculations based on labour-force statistics from ILOSTAT. Accessed September 2021. *Note:* Industrial development groups conform to UNIDO (2021) country classification.

## **4.2 Insights from manufacturing and services firms using the follow-up to the World Bank Enterprise Survey COVID-19**

Table 6 enables a more detailed look within the manufacturing sector. It is based on firm-level data drawn from the COVID-19 follow-up surveys conducted as part of the World Bank Enterprise Survey, which targets formal-sector firms with more than five employees. We have data on up to two rounds of follow-up surveys, with the first round taking place in June-August 2020 and second rounds in early 2021.<sup>3</sup>

Because enterprises are only categorized by broad economic sector (such as manufacturing, retail and other types of services), we instead disaggregate manufacturing into two categories: all manufacturing firms versus those where women constitute more than half of full-time permanent workers (so the latter is a subset of the former). Due to gender segregation and the sorting of women and men into different industries (the more gender disaggregated the industry, the more gender segregated it tends to be), manufacturing firms that primarily employ women are likely to structurally differ from the general firm population in terms of factors like labour intensity, size and the likelihood of exporting. Survey weights are applied to firm responses, so they are nationally representative, and the list of surveyed countries is provided in the table notes. Note that the industrialized economy group is concentrated among recent European Union member states and Southern Europe; it thus provides a potentially more meaningful comparison than the ILO-based tables, where the industrialized economy group is dominated by wealthier countries.

Starting at the top of Table 6, the first three rows of each country/firm set list the average number of full-time permanent workers per firm, including the total and the number of women and men, for December 2019 and then the most recent survey round. The percentage change in workers across the two periods is calculated based on these averages and takes into account workers who were laid off, quit or furloughed. The next three rows include: the average percentage change in sales recorded from the most recent survey round (we only have data on this change, not sales levels); the share of direct and indirect exports to total sales; and the share of the sample that permanently closed during the pandemic. The last row includes the share of workers in that subcategory relative to the entire sample of workers, which includes manufacturing and services firms. The last column lists the elasticity of employment with respect to sales, calculated as the percentage change in total, women and men workers relative to the percentage change in sales.

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<sup>3</sup> At the time of our analysis, only about 15 percent of observations were drawn from the second-wave survey. Restricting the calculations to first-round surveys does not significantly change the results in these tables, though including just the small sample of second-round surveys understandably does. Given that the calculations are based on relative percentage changes, we feel it is most appropriate to combine the most recent survey rounds.

**Table 6: Pandemic effects on manufacturing firms, by gender and industrial group, World Bank Enterprise Survey**

	<b>Dec 2019 mean</b>	<b>Recent mean</b>	<b>Change</b>	<b>Elasticity</b>
<b>INDUSTRIALIZED ECONOMIES</b>				
<b>All manufacturing firms</b>				
Total workers	33.9	25.4	-25.1%	1.17
Women workers	12.0	8.9	-26.1%	1.22
Men workers	21.9	16.5	-24.6%	1.15
Women's share of workers	35.5%	35.0%	-1.3%	
Sales			-21.4%	
Exports/sales		11.6%		
Permanently closed		3.7%		
Share of sample workers		41.3%		
<b>Manufacturing firms with predominantly women employees</b>				
Total workers	31.3	22.7	-27.5%	1.14
Women workers	22.8	16.3	-28.5%	1.18
Men workers	8.5	6.4	-24.8%	1.03
Women's share of workers	72.8%	71.8%	-1.4%	
Sales			-24.1%	
Exports/sales		18.3%		
Permanently closed		7.4%		
Share of sample workers		6.5%		
<b>EMERGING INDUSTRIAL AND DEVELOPING ECONOMIES</b>				
<b>All manufacturing firms</b>				
Total workers	65.2	52.0	-20.2%	0.80
Women workers	26.1	20.7	-20.6%	0.82
Men workers	39.1	31.3	-19.9%	0.79
Women's share of workers	40.0%	39.8%	-0.5%	
Sales			-25.1%	
Exports/sales		16.4%		
Permanently closed		4.3%		
Share of sample workers		37.9%		

<b>Manufacturing firms with predominantly women employees</b>				
Total workers	58.9	47.8	-18.9%	0.65
Women workers	42.9	32.5	-24.2%	0.84
Men workers	16.0	15.2	-4.7%	0.16
Women's share of workers	72.9%	68.1%	-6.5%	
Sales			-29.0%	
Exports/sales		17.7%		
Permanently closed		10.4%		
Share of sample workers		7.3%		

*Source:* Authors' calculations based on COVID-19 follow-up surveys to the World Bank Enterprise Surveys<sup>4</sup>.

*Note:* *Predominantly women firms* are those where more than 50% of workers are women. Country groups include: Industrialized economies: Belarus, Czech Republic, Estonia, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Russian Federation, Slovakia, Slovenia. Emerging industrial and developing economies: Albania, Bosnia and Herzegovina, Bulgaria, Chad, Croatia, Cyprus, El Salvador, Georgia, Greece, Guatemala, Guinea, Honduras, Jordan, Kazakhstan, Lebanon, Mongolia, Montenegro, Morocco, Mozambique, Nicaragua, Niger, North Macedonia, Republic of Moldova, Romania, Serbia, Togo, Zambia, Zimbabwe.

Starting by looking down the column of changes in workers and sales, all groups of manufacturing firms have experienced significant losses in every category, with one exception: men in predominantly female firms in emerging industrial and developing economies who experienced an average 4.7 percent decline in manufacturing employment compared to double-digit losses in all other employment categories. Job-loss percentages are highest in the industrial economies group, with concomitantly higher employment elasticities. Emerging industrial and developing economies experienced higher percentage losses in sales, averaging a 25.1 percent sales loss compared to 21.4 for industrialized economies.

Comparing firms with a predominantly female full-time workforce to the general sample, exports as a share of sales are higher in predominantly female firms than the manufacturing sector as whole, in line with expectations about the closer connection between women's manufacturing employment and trade. Women-dominated firms have also been much more likely to permanently close, with more than double the closure rate of manufacturing firms in general across both groups. The magnitude of this difference is particularly large in emerging industrial and developing economies, where 10.4 percent of manufacturing firms permanently closed compared to 4.3 percent of the full sample.

<sup>4</sup> <https://www.enterprisesurveys.org/en/enterprisesurveys>

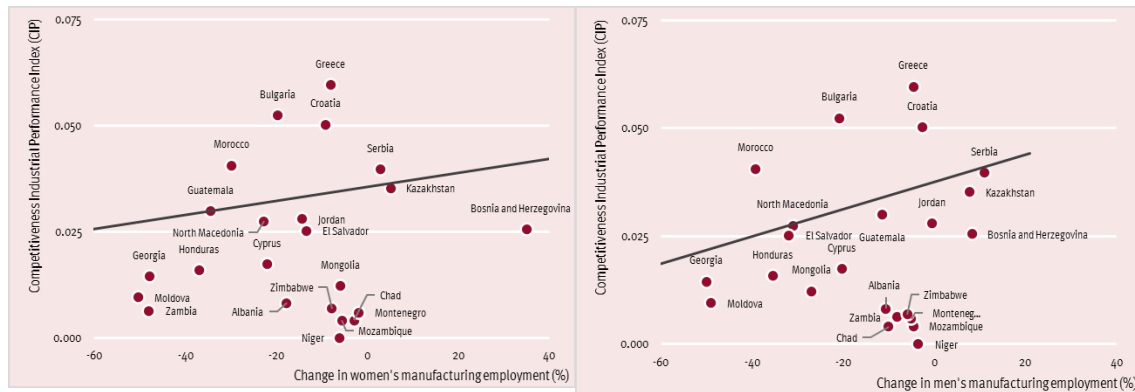
Turning finally to the elasticity results (all of which, it is important to note, illustrate elasticity on the downside, that is, when sales decline), these are substantially higher for the industrialized economy group than for the emerging industrial and developing economy group. For all manufacturing firms, for every 1.0 percent decline in sales, full-time jobs declined by 0.80 and 1.17 percent for the developing and industrialized economy groups, respectively. The higher elasticity for industrialized economies is perhaps related to the availability of publicly-provided social welfare supports such as unemployment insurance that made downsizing a more likely short-term strategy, though much more work and better data are necessary to sort this out. Looking at gender-specific elasticities across country groups, women are more likely to lose employment as a result of declines in sales than men. For industrialized economies, the gender gap in employment elasticity (calculated as women's employment elasticity minus men's employment elasticity) is 0.07; for emerging industrial and developing economies, it is 0.03.

Focusing on manufacturing firms where the majority of full-time workers are women, elasticities for women are higher than those for men, and the gender elasticity gap is larger in these firms than in the firm population at large. This is true for all country groups. The gender gap (women–men) in elasticities among predominantly female firms is 0.15 and 0.68 for the developing and industrialized economy groups respectively; for all firms, the corresponding elasticity gaps are 0.07 and 0.03. Taken together, the higher elasticities that women workers experience in predominantly female firms, and the larger gender gap in elasticities in these firms, are consistent with the nature and pattern of gender bias documented in past economic crises. Gender segregation in the labour market means that where individuals work affects the likelihood that they lose employment. And gender norms and stereotypes affect the distribution of economic distress as job scarcity increases. That these gender differences are so much more pronounced in predominantly female firms is a strong indicator of these dynamics.

At this point it is interesting to ask whether there are systematic differences in job loss based on industrial competitiveness. Figure 5 explores this possibility by including two scatter plots, one for women and one for men that illustrate UNIDO's Competitiveness Industrial Performance Index (CIP) in 2018 relative to the percentage change in manufacturing employment by country recorded in the World Bank Enterprise Survey (WBES). The relationship between these two variables is weakly positive for both women and men, with a correlation coefficient of 0.08 for women and 0.13 for men. Only the emerging industrial and developing economy group is included in Figure 5 because the industrialized economy group demonstrated a very different relationship between CIP and percentage changes in manufacturing employment, with a correlation coefficient of -0.35 for women and -0.58 for men, indicating that weaker industrial

competitiveness is associated with lower employment losses. This could be related to the role of exporting in the CIP, or the capital intensity of production. Regardless, it would be important to understand these relationships better if we use the CIP to better understand resilience in the face of demand shocks.

**Figure 5: Competitiveness Industrial Performance Index (CIP) and losses in manufacturing employment by gender, selected countries, 2018**



Source: Country figures from WBES, referenced CIP from UNIDO data for 2018.

Taking another approach to comparison, Table 7 and Table 8 present the elasticity calculations for retail and non-retail services firms, respectively, surveyed by the WBES. The latter category is much larger, representing close to half of the sample's workers, and includes construction, wholesale, hotels, restaurants, transport, storage, communications and information technology. Similar to manufacturing, women in female-dominated services industries face a higher risk of unemployment than men and women in services as a whole, adding to the point that gender desegregation is likely to benefit women workers by lowering their vulnerability to employment losses. Compared to manufacturing, all sorts of services firms experienced comparatively larger sales losses with one exception. Retail firms with predominantly women employees in emerging industrial and developing economies had an average sales loss of 24.4 percent, while the same category for manufacturing experienced an average 29.0 percent loss in sales (see Table 6). Continuing with the comparison to manufacturing in Table 6, both retail and non-retail services had generally lower employment elasticities than firms in the manufacturing sector, for both women and men. However, the services sector also experienced larger losses in sales, resulting in similar proportional employment losses across manufacturing and sales, and higher absolute job losses in sales than manufacturing. This proportional comparability between manufacturing and services is consistent with the ILO surveys discussed in section 4.1, where job losses for women were on the whole higher than for men, but percentage losses were similar in services and in industry.



**Table 7: Pandemic effects on retail firms, by gender and industrial group, World Bank Enterprise Survey**

	<b>Dec 2019 mean</b>	<b>Recent mean</b>	<b>Change</b>	<b>Elasticity</b>
<b>INDUSTRIALIZED ECONOMIES</b>				
<b>All retail firms</b>				
Total workers	14.3	11.1	-22.0%	0.97
Women workers	8.2	6.2	-24.8%	1.10
Men workers	6.1	5.0	-18.1%	0.80
Women's share of workers	57.6%	55.5%	-3.6%	
Sales			-22.6%	
Exports/sales		2.6%		
Permanently closed		7.5%		
Share of sample workers		10.9%		
<b>Retail firms with predominantly women employees</b>				
Total workers	15.8	12.2	-23.1%	0.93
Women workers	12.6	9.4	-25.0%	1.00
Men workers	3.3	2.8	-15.7%	0.63
Women's share of workers	79.3%	77.4%	-2.5%	
Sales			-24.9%	
Exports/sales		1.6%		
Permanently closed		11.4%		
Share of sample workers		4.5%		
<b>EMERGING INDUSTRIAL AND DEVELOPING COUNTRIES</b>				
<b>All retail firms</b>				
Total workers	30.3	24.1	-20.5%	0.75
Women workers	15.8	12.7	-19.2%	0.70
Men workers	14.6	11.4	-22.0%	0.80
Women's share of workers	51.9%	52.8%	1.7%	
Sales			-27.4%	
Exports/sales		1.9%		
Permanently closed		7.1%		
Share of sample workers		15.6%		

<b>Retail firms with predominantly women employees</b>				
Total workers	36.4	28.2	-22.5%	0.92
Women workers	25.8	19.7	-23.8%	0.98
Men workers	10.6	8.5	-19.4%	0.79
Women's share of workers	71.0%	69.8%	-1.7%	
Sales			-24.4%	
Exports/sales		1.9%		
Permanently closed		13.6%		
Share of sample workers		5.3%		

*Source:* Authors' calculations based on COVID-19 follow-up surveys to the World Bank Enterprise Surveys.

*Note:* *Predominantly women firms* are those where more than 50% of workers are women. Country groups include: Industrialized economies: Belarus, Czech Republic, Estonia, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Russian Federation, Slovakia, Slovenia. Emerging industrial and developing economies: Albania, Bosnia and Herzegovina, Bulgaria, Chad, Croatia, Cyprus, El Salvador, Georgia, Greece, Guatemala, Guinea, Honduras, Jordan, Kazakhstan, Lebanon, Mongolia, Montenegro, Morocco, Mozambique, Nicaragua, Niger, North Macedonia, Republic of Moldova, Romania, Serbia, Togo, Zambia, Zimbabwe.

**Table 8: Pandemic effects on non-retail services firms, by gender and industrial group, World Bank Enterprise Survey**

	<b>Dec 2019 mean</b>	<b>Recent mean</b>	<b>Change</b>	<b>Elasticity</b>
<b>INDUSTRIALIZED ECONOMIES</b>				
<b>Non-retail services firms</b>				
Total workers	18.8	14.5	-23.0%	0.89
Women workers	5.5	4.3	-22.3%	0.86
Men workers	13.3	10.2	-23.3%	0.90
Women's share of workers	29.4%	29.6%	0.9%	
Sales			-25.9%	
Exports/sales		3.3%		
Permanently closed		6.0%		
Share of sample workers		47.9%		
<b>Non-retail firms with predominantly women employees</b>				
Total workers	14.5	11.6	-20.0%	0.66
Women workers	10.3	7.8	-24.7%	0.82
Men workers	4.2	3.8	-8.3%	0.27
Women's share of workers	71.1%	66.9%	-5.9%	
Sales			-30.1%	
Exports/sales		2.9%		
Permanently closed		12.5%		
Share of sample workers		4.8%		
<b>EMERGING INDUSTRIAL AND DEVELOPING COUNTRIES</b>				
<b>Non-retail services firms</b>				
Total workers	30.3	24.8	-18.3%	0.57
Women workers	9.2	7.8	-15.3%	0.48
Men workers	21.1	16.9	-19.6%	0.61
Women's share of workers	30.5%	31.6%	3.7%	
Sales			-32.1%	
Exports/sales		8.7%		
Permanently closed		6.8%		
Share of sample workers		46.5%		

<b>Non-retail firms with predominantly women employees</b>				
Total workers	22.9	18.3	-20.1%	0.47
Women workers	15.9	11.6	-26.7%	0.62
Men workers	7.1	6.7	-5.2%	0.12
Women's share of workers	69.2%	63.5%	-8.3%	
Sales			-42.8%	
Exports/sales		5.1%		
Permanently closed		22.2%		
Share of sample workers		4.1%		

*Source:* Authors' calculations based on COVID-19 follow-up surveys to the World Bank Enterprise Surveys.

*Note:* *Predominantly women firms* are those where more than 50% of workers are women. Non-retail services include construction, wholesale, hotels, restaurants, transport, storage, communications and IT. Country groups include: Industrialized economies: Belarus, Czech Republic, Estonia, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Russian Federation, Slovakia, Slovenia. Emerging industrial and developing economies: Albania, Bosnia and Herzegovina, Bulgaria, Chad, Croatia, Cyprus, El Salvador, Georgia, Greece, Guatemala, Guinea, Honduras, Jordan, Kazakhstan, Lebanon, Mongolia, Montenegro, Morocco, Mozambique, Nicaragua, Niger, North Macedonia, Republic of Moldova, Romania, Serbia, Togo, Zambia, Zimbabwe.

It is important to note that these elasticities reflect both changes in labour demand and supply, a combination of employers making decisions about who and how many workers to retain in response to sales losses, as well as workers themselves making decisions about whether to quit, for instance to fulfil increased care demands at home. We do have data on the gender of workers who quit—and, comparing them to their shares of the workforce, women workers were either just as or less likely to quit as their workforce share in emerging industrial and developing economies across all types of manufacturing firms. Therefore, the gender differences in elasticities we pick up are not likely due to differences in labour-supply behaviour between women and men in these country groups. In the industrialized economy group, however, women have a greater likelihood of quitting than their share in the workforce, so these results are likely to be more strongly driven by differences in gendered behaviour on the supply side.

#### **4.3 Insights from manufacturing firms using the UNIDO COVID-19 follow-up survey**

UNIDO also administered a pandemic survey to assess the impact of COVID-19 on firms. Table 9 and Table 10 present an analysis of this survey similar to that undertaken for the WBES to the extent possible and include only manufacturing firms for which we have data on women's share of total workers, women's share of laid-off workers and the percentage change in sales. Unlike

the WBES, which recorded workers who were laid off, furloughed or quit, the UNIDO survey only asks about workers who were laid off, though the latter includes temporary as well as permanent workers. Also, the UNIDO surveys are not weighted, so aggregation simply averages firm observations. The distribution of observations by level of industrial development and economy is in the notes to Table 9.

Starting with Table 9 and comparing with Table 6 for the WBES results—although the mean firm size is larger in the UNIDO than in the WBES data—estimated percentage changes in employment and elasticity are of similar magnitudes for overlapping country groups. For instance, for the emerging industrial and developing economy group, the elasticity of women’s employment in response to changes in sales is 0.82 versus 0.73 for the WBES and UNIDO surveys respectively, and 0.79 versus 0.68 for men. Percentage employment losses are also similar in this group, with women’s share of workers in manufacturing firms declining 1.2 percent among firms surveyed by UNIDO and 0.5 percent among WBES surveyed firms.

**Table 9: Pandemic effects on manufacturing firms, by gender and industrial group, UNIDO COVID-19 Firm-level Survey**

	<b>End of 2019 mean</b>	<b>Mean workers laid off</b>	<b>Change</b>	<b>Elasticity</b>
<b>ALL COUNTRIES</b>				
Total workers	283.3	62.7	-22.1%	0.70
Women workers	100.7	23.2	-23.1%	0.73
Men workers	182.6	39.5	-21.6%	0.68
Women's share of workers	35.5%	37.0%	-1.2%	
Sales			-31.8%	
Observations	1055			
<b>EMERGING INDUSTRIAL ECONOMIES</b>				
Total workers	223.5	44.8	-20.0%	0.75
Women workers	80.4	19.9	-24.7%	0.92
Men workers	143.1	25.0	-17.4%	0.65
Women's share of workers	36.0%	44.3%	-5.8%	
Sales			-26.9%	
Observations	594			
<b>OTHER DEVELOPING ECONOMIES AND LDCS</b>				
Total workers	360.3	85.8	-23.8%	0.63
Women workers	126.8	27.6	-21.7%	0.57
Men workers	233.5	58.3	-24.9%	0.66
Women's share of workers	0.4	0.3	2.7%	
Sales			-38.1%	
Observations	461			

*Source:* UNIDO COVID-19 Firm level Survey ([https://www.unido.org/covid19\\_surveys](https://www.unido.org/covid19_surveys)).

*Note:* Calculations include only firms for which we have data on women's share of workers in the total, women's share of workers laid off, and the percentage change in sales. Countries included are listed below by level of industrial development, with the number of firm observations in parentheses. Note that the emerging industrial economy group includes Malaysia, which is typically categorized as an industrialized economy. LDCs = least developed countries. Country groups include: Emerging industrial economies: Argentina (6), Brazil (103), China (73), India (179), Indonesia (16), Malaysia (4), Mauritius (39), Peru (22), South Africa (23), Thailand (9), Tunisia (60), Viet Nam (28). Other developing economies and LDCs: Afghanistan (48), Bangladesh (54), Bolivia (50), Côte d'Ivoire (39), Democratic Rep of the Congo (7), Ecuador (19), Kenya (50), Lao People's Dem Rep (15), Mongolia (64), Pakistan (62), Rwanda (23), Zambia (27)

Once economy groups are disaggregated into emerging industrial economies versus other developing economies and LDCs, the results are less clear. Women's employment elasticity is much higher in the emerging industrial economy group (0.92) than in the developing economy group (0.57), though men's is about the same (0.65 and 0.66, respectively). Note that women's employment elasticity is also lower than men's for the developing economy group (0.57 for women versus 0.66 for men), the only instance where women are advantaged among all the manufacturing firm calculations. Digging into the data to understand why, this result is primarily driven by firms in Bangladesh and Kenya. For Bangladesh, men were laid off at higher rates than women in the following industries: food; wood; computer, electronic and optical products; machinery and equipment; furniture; and other manufacturing. For Kenya, the list is slightly different: beverages; textiles; leather; paper; fabricated metals; machinery and equipment; furniture; and other manufacturing. Given the lack of survey weights, it is difficult to assess the extent to which these patterns are representative of either industry or national trends, and neither Bangladesh nor Kenya are included in the WBES to compare. Generally, we are more confident in the more aggregate country group results because of the greater number of observations across a diversity of industries and country contexts, which are less likely to suffer systematic bias or be driven by outliers, as evidenced by the consistency of the aggregate group with the WBES data.

Turning to Table 10, which first separates results for permanent and temporary workers in the top two sets of rows, and then disaggregates the group into industries classified as robust versus vulnerable in the bottom two sets of rows, the results are in line with what might be expected given gendered patterns uncovered in other data. The elasticity of employment with respect to sales for temporary workers (1.08) is about double that of those for permanent workers (0.56). This pattern holds up for both women and men, though women's employment elasticity is higher than men's for both types of workers and the gender gap is much larger for temporary (0.44) than for permanent (0.15) workers. Women also constitute a larger percentage share of temporary (51.0) than permanent (34.7) workers. For both women and men, then, temporary worker status is associated with a higher risk of being laid off in response to a decline in sales, but women are more likely to be temporary workers than men and face a higher risk of layoffs than men.

**Table 10: Pandemic effects on manufacturing firms by gender, worker type and industry resilience, UNIDO COVID-19 Firm level Survey**

	End of 2019 mean	Mean workers laid off	Change	Elasticity
<b>PERMANENT WORKERS</b>				
Total workers	210.7	37.4	-17.7%	0.56
Women workers	73.2	15.3	-20.9%	0.66
Men workers	137.5	22.1	-16.1%	0.51
Women's share of workers	34.7%	40.8%	-3.8%	
Sales			-31.8%	
Observations	1055			
<b>TEMPORARY WORKERS</b>				
Total workers	74.2	25.3	-34.2%	1.08
Women workers	37.9	15.5	-41.0%	1.29
Men workers	36.3	9.8	-27.0%	0.85
Women's share of workers	51.0%	61.3%	-10.4%	
Sales			-31.8%	
Observations	1055			
<b>ROBUST INDUSTRIES</b>				
Total workers	306.8	51.3	-16.7%	0.60
Women workers	119.3	20.1	-16.9%	0.60
Men workers	187.5	31.2	-16.6%	0.59
Women's share of workers	38.9%	39.2%	-0.2%	
Sales			-28.0%	
Observations	448			
<b>VULNERABLE INDUSTRIES</b>				
Total workers	265.9	71.1	-26.8%	0.77
Women workers	86.9	25.5	-29.3%	0.85
Men workers	179.0	45.6	-25.5%	0.74
Women's share of workers	32.7%	35.9%	-3.5%	
Sales			-34.6%	
Observations	607			

Source: UNIDO COVID-19 Firm level Survey ([https://www.unido.org/covid19\\_surveys](https://www.unido.org/covid19_surveys)).

Note: Calculations include only firms for which we have data on women's share of workers in the total, women's share of workers laid off, and the percentage change in sales. *Robust* and *vulnerable* workers taken from UNIDO (2021a) classification of manufacturing industries.



As detailed in the bottom two sets of rows in Table 10, robust industries experienced an average of a 28.0 percent decline in sales, while vulnerable industries experienced a 34.6 percent decline. At the same time, layoffs were fewer for both women and men in robust industries, making for lower employment elasticities overall: 0.60 in robust industries versus 0.77 in vulnerable industries. A gender gap in elasticity, with women's being higher than men's, prevails in both sorts of industries, but the gap is larger in vulnerable industries (0.11) than in robust industries (0.01). One way to consider the net result is in terms of changes in women's share of manufacturing workers due to pandemic layoffs: -0.2 percent for robust industries and -3.5 percent for vulnerable industries.<sup>5</sup>

Table 11 lists the same calculations as Tables 9 and 10 for a disaggregated set of industries. The results are interesting, but it is difficult to draw much out of them thematically since the sample sizes for most are small (as evidenced if one reads down the *Obs* column, which gives the observation count by each industry). Considering only those with more than 55 firm observations, the elasticity of women's employment relative to sales is higher than men's in food, textiles, wearing apparel and leather, but it is lower in fabricated metal, machinery and equipment and other manufacturing. These results suggest that there are likely systematic differences by industry that more aggregate analyses mask, even if the overall trend is one where women face higher layoff risks than men. The bottom of Table 11 also includes non-manufacturing industries, where services-sector firms number 116 observations. This is a mixed group, as evidenced by women's low average 33.7 percent share of workers (it is typically closer to half or more). The resulting estimated elasticities are somewhat higher than those from the WBES, which are detailed in Tables 7 and 8, though we do not have enough data to venture a hypothesis as to why.

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<sup>5</sup> The logic of these results suggests perhaps that subdividing emerging industrial and developing economies by level of industrial development, as in the bottom two-thirds of Table 9, splits the sample in ways that makes it difficult to distinguish signal from noise.

**Table 11: Pandemic effects by gender and industry, UNIDO COVID-19 Firm level Survey**

		End of 2019 mean		Change due to layoffs					Elasticity		
	<i>Obs</i>	<i>Total workers</i>	<i>Women's share</i>	<i>Total workers</i>	<i>Women</i>	<i>Men</i>	<i>Women's share</i>	<i>Sales change</i>	<i>Total</i>	<i>Women</i>	<i>Men</i>
<i>Manufacturing industry</i>											
Food	196	284.6	35.2%	-10.9%	-12.7%	-9.9%	-2.1%	-28.4%	0.38	0.45	0.35
Beverages	36	447.5	35.7%	-15.6%	-16.1%	-15.2%	-0.7%	-36.9%	0.42	0.44	0.41
Textiles	71	584.6	15.5%	-29.9%	-46.3%	-26.8%	-23.4%	-31.2%	0.96	1.49	0.86
Wearing apparel	71	240.8	59.9%	-46.8%	-53.5%	-36.8%	-12.6%	-47.2%	0.99	1.13	0.78
Leather	63	218.4	40.0%	-33.7%	-49.2%	-23.4%	-23.3%	-44.5%	0.76	1.10	0.53
Wood	27	436.5	77.4%	-16.1%	-6.3%	-49.5%	11.6%	-36.4%	0.44	0.17	1.36
Paper	34	264.8	21.0%	-19.8%	-23.8%	-18.7%	-5.0%	-34.8%	0.57	0.68	0.54
Printing and recorded media	17	60.5	20.9%	-25.4%	-20.2%	-26.7%	6.9%	-35.4%	0.72	0.57	0.76
Coke and refined petroleum	2	1195.0	15.2%	-52.6%	-54.0%	-52.3%	-3.1%	-65.0%	0.81	0.83	0.80
Chemicals	47	450.4	39.0%	-16.0%	-15.6%	-16.2%	0.4%	-22.5%	0.71	0.69	0.72
Pharmaceuticals	31	158.0	39.8%	-20.2%	-27.0%	-15.7%	-8.5%	-16.3%	1.24	1.66	0.97
Rubber and plastics	42	171.3	23.2%	-21.0%	-18.4%	-21.8%	3.3%	-25.1%	0.84	0.73	0.87
Other non-metallic mineral pro.	12	178.8	28.9%	-15.4%	-16.5%	-15.0%	-1.3%	-23.9%	0.64	0.69	0.63
Basic metals	8	54.5	19.4%	-39.2%	-35.7%	-40.1%	5.8%	-33.8%	1.16	1.06	1.19
Fabricated metal	81	128.1	17.7%	-20.9%	-16.2%	-21.9%	6.0%	-26.7%	0.78	0.60	0.82
Computer, electronic and optical	24	960.9	61.2%	-18.5%	-16.9%	-21.1%	2.0%	-18.2%	1.02	0.93	1.16
Electrical equipment	44	101.0	31.5%	-27.8%	-29.7%	-26.9%	-2.6%	-33.3%	0.83	0.89	0.81

Machinery and equipment	71	268.6	32.6%	-27.6%	-23.3%	-29.6%	5.8%	-32.9%	0.84	0.71	0.90
Motor vehicles	13	460.8	22.1%	-21.2%	-25.9%	-19.9%	-5.9%	-34.5%	0.61	0.75	0.57
Other transport equipment	10	184.0	12.9%	-18.0%	-20.3%	-17.7%	-2.8%	-9.2%	1.96	2.21	1.92
Furniture	27	197.1	34.3%	-13.3%	-9.5%	-15.4%	4.4%	-37.1%	0.36	0.26	0.41
Medical and dental instruments	14	131.3	38.0%	-23.2%	-15.9%	-27.7%	9.5%	-18.4%	1.26	0.86	1.50
Other manufacturing	97	219.0	31.2%	-21.5%	-16.8%	-23.6%	6.0%	-34.9%	0.62	0.48	0.68
Repair and installation of machinery and equipment	16	83.3	14.7%	-55.1%	-23.1%	-60.6%	71.4%	-37.9%	1.45	0.61	1.60
<i>Non-manufacturing industries</i>											
Agriculture	26	74.8	44.8%	-16.1%	-12.6%	-19.0%	4.2%	-28.6%	0.6	0.4	0.7
Mining	9	75.7	10.9%	-37.7%	-33.4%	-38.3%	7.0%	-26.1%	1.4	1.3	1.5
Utilities	5	36.6	21.8%	-47.5%	-63.7%	-43.0%	-30.8%	-49.2%	1.0	1.3	0.9
Construction	41	267.8	19.3%	-22.9%	-15.9%	-24.6%	9.0%	-33.0%	0.7	0.5	0.7
Services	116	395.1	33.7%	-40.0%	-41.0%	-39.4%	-1.7%	-44.9%	0.9	0.9	0.9

Source: UNIDO COVID-19 Firm level Survey ([https://www.unido.org/covid19\\_surveys](https://www.unido.org/covid19_surveys)). Note: Firm observations included only for those which we have data on women's share of workers in the total, women's share of workers laid off, and the percentage change in sales.

## 4.4 Summary

By way of a summary overview, our findings on gender differences in labour-force participation and employment rates confirm preliminary, country-specific work in the emerging literature that women are experiencing relatively greater labour-market losses than men as a result of the pandemic. Though there are indications of recovery, both women's labour-force participation and employment rates have fallen farther and recovered more slowly than men's. And not all of this difference can be attributed to women's responsibility for unpaid care work. A closer look at industrial and manufacturing employment suggests that, although these sectors are not appreciably more volatile for women than other sectors, there is evidence that women face disproportionate risks of being laid off in industry, particularly in manufacturing firms where women constitute a majority of the full-time workforce, and among industries classified as vulnerable as well as among temporary workers.

As we covered multiple surveys in this section, some with varying results, the following list summarizes the key highlights of the discussion. All highlights refer to the emerging industrial and developing economy group unless otherwise noted.

### 4.4.1 ILO Annual Labour Force Statistics

***Women's labour-force participation fell further than men's.*** Though quarterly data indicate that there are signs of recovery, women's labour-force participation fell further and is recovering more slowly than men's. This amounts to an average -1.5 percentage point change in women's labour-force participation relative to men's, a substantial increase in the gendered labour-force participation gap.

***If they do not recover, women's declining employment rates show serious signs of reversing a decade of progress in closing the gender gap in employment.*** Women's employment rates have declined more than men's during the pandemic, leading to large losses in women's employment relative to men's. To get a sense of magnitude, note that between 1991 and 2019, women's employment rate relative to men's increased an average of 5.0 percentage points. Over the course of 2020 for the countries on which we have data, it declined an average of 1.7 percentage points, from 70.5 to 68.8 percent. If this trend is not reversed, it amounts to a loss of one-third in women's employment rate relative to men's, or about 10 years of progress on gender equality in employment.

***Women experience greater percentage employment losses than men in both industry and services, though the rate of job loss is slightly higher in industry than services for both women and men.*** However, the difference in job loss rates between industry and services is higher for men than for women, suggesting greater employment protection for men in the women-dominated services sector than in the men-dominated industrial sector.

#### **4.4.2 World Bank Enterprise Surveys**

***Among manufacturing firms, women experienced greater employment losses than men across all country groups, resulting in a higher elasticity of employment in response to changes in sales for women than for men.*** Among permanent, full-time workers in formal manufacturing firms, women are more likely to suffer employment losses than men, with average employment elasticities relative to sales of 0.82 for women and 0.79 for men. Among these sorts of firms with a predominantly female workforce, elasticities are higher and the gender gap larger than for firms as a whole, with elasticities of 0.84 for women and 0.16 for men. One result is that women's share of manufacturing workers has declined across all categories: for all manufacturing firms, by -1.3 percent in industrialized economies and -0.5 percent in emerging industrial and developing economies; for predominantly female firms, by -1.4 percent in industrialized economies and -6.5 percent in emerging industrial and developing economies.

***Service-sector firms recorded lower elasticities but larger sales losses than manufacturing firms.*** Services-sector firms had lower elasticities than manufacturing for both women and men, but larger losses in sales, making for greater absolute employment losses in services than manufacturing. This difference is consistent with the ILO's annual sectoral data.

***Women in less female-dominated firms fared better in both manufacturing and services.*** As far as female-dominated service-sector firms are concerned, like manufacturing, women in these firms face a higher risk of job loss in response to declines in sales than women in services as a whole. Combined with the results on manufacturing, this suggests that gender desegregation within industries will lower women's vulnerability to unemployment in response to demand shocks.

#### **4.4.3 UNIDO COVID-19 Follow-Up Survey**

***Among both women and men, permanent workers were more protected from layoffs than temporary workers.*** The elasticity of employment with response to sales for temporary workers (1.08) is about double that for permanent workers (0.56). This pattern is consistent across women and men, but women face a higher risk of layoffs than men for both types of workers, and the gender gap in elasticity is much higher for temporary workers (0.44) than permanent workers

(0.15). Women are also more likely to be temporary workers than men, as evidenced by women's higher share of the temporary than the permanent workforce.

*Firms in robust industries experienced lower declines in sales than firms in vulnerable industries, and workers in robust industries were less likely to be laid off than workers in vulnerable industries.* As expected, firms in robust industries experienced lower average declines in sales and fewer layoffs than firms in vulnerable industries. At the same time, both women and men face a lower risk of layoffs in robust industries than they do in vulnerable industries (with elasticities of 0.60 versus 0.85 for women, and 0.59 versus 0.74 for men). Women's risk of layoffs in response to sales is thus higher than men's in both, with the gender gap in elasticities larger in vulnerable industries (0.11) than in robust industries (0.01).

## **5 Gendered policy responses to COVID-19**

UN Women and UNDP collaborated to create a COVID-19 Global Gender Response Tracker, a database of government responses to the pandemic that utilize a gender lens and/or target women and girls. Last updated on 21 March 2021, it provides a useful accounting of the scope and focus of policy responses, organized according to whether policies address social protection, the labour market, fiscal and other economic measures, or violence against women.<sup>6</sup> With over 3,000 policy interventions included, the list is comprehensive but difficult to represent in a summarized way. Instead, we chose a set of 18 representative countries, six from each of the three developing regions of Africa, Asia and Latin America and the Caribbean, purposefully selecting a balanced mix of levels of industrial development. Among policy measures that targeted women's economic security or directly supported unpaid care, we then identified policies and programmes that expand or protect women's involvement in paid work, noting whether these also targeted a specific economic sector, such as women's participation in manufacturing. Table A1 in the Appendix presents the resulting list of policies by region and country. Policies that support women's involvement in paid work are enumerated individually. Other types of social assistance policies are summarized in italics to give readers a sense of the scope of other policy interventions; for some countries, this sort of social assistance is the only type of gender-aware pandemic policy implemented.

Among the countries surveyed, to the limited extent that particular sectors were targeted for support, agriculture and services (especially tourism, food services and domestic service) were much more common than manufacturing, which received specific mention in only two policy

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<sup>6</sup> UNDP-UNW-UPITT COVID-19 Global Gender Response Tracker Task Force Dataset. Living database, version 1 (22 March 22). Available at: <https://data.undp.org/gendertracker/>.

interventions targeting or benefiting women's paid work: one in China and a second in Bangladesh. In China, tax cuts and financial support for small- and medium-sized enterprises (SMEs) are described as easing cost pressures in services and manufacturing, important sectors for women. In Bangladesh, interest-free loans were made available to help support its export-oriented garment industries, a sector dominated by women. Chile instituted a training programme for women entrepreneurs who are current or potential exporters, with no sectoral priority identified. Along similar lines, other countries prioritized enhanced financing or education for women entrepreneurs: Egypt, Morocco, South Africa, Georgia, Chile (in addition to targeting women exporters), Guatemala and Mexico.

Understandably, most programmes focus on addressing the immediate health, nutrition and care needs of vulnerable individuals and households, as well as providing temporary assistance to firms and workers to get them through the economic challenges of the pandemic. However, half of our sample of 18 countries utilized gender-aware pandemic relief as a strategic opportunity, a way to strengthen and expand women's economic participation in the longer term. These include women-targeted financing, marketing, training and other supports for innovation in Egypt, Morocco, China, Georgia, Argentina, Chile, Guatemala and Mexico. Myanmar instituted an employment-generation programme that focused on building rural infrastructure to help support rural development, with substantial participation from women. Argentina's pandemic policies include strategic care planning and the development of federal care policies that, with the input and cooperation of local providers, users and policymakers, aim to ease women's care burdens and facilitate their economic participation. Though limited, these efforts are important examples of the opportunities presented by the challenge of building forward better in gender-responsive ways.

## **6 Building forward better**

Turning back to the broader terrain of gender and industrialization in a post-pandemic world, there is a real risk that progress on gender equality in the labour market—and the associated contributions that this progress has made to growth and development—will turn the short-term effects of the pandemic into long-term consequences. In terms of economic growth, these include not just the direct contributions of women's market participation. These consequences also include the indirect effects on the short-term maintenance and long-term investment in human capabilities that are associated with women's economic empowerment, with consequences for productivity growth (Braunstein, 2015). This challenge comes in the context of women's growing exclusion from the better jobs associated with industrial sector work, as detailed in Section 3. We see some evidence of these exclusionary dynamics in the emerging data on gender differences in

employment losses among manufacturing firms, where the gender gaps in employment elasticity with respect to sales are generally large and increasing in more predominantly female industries, or among temporary workers or in less resilient industries where women are often concentrated. Though these outcomes reflect gender systems and structures that existed prior to the pandemic, as policymakers look to build forward better, it is now more important than ever to ensure that solutions are gender-inclusive.

The review of gender-aware policy responses to the pandemic among emerging industrial and developing economies indicates that, among countries that have adopted policies aimed at supporting women's participation in paid work, very few include an explicit or strategic connection with manufacturing or industrialization. Given the immediate and substantial health and economic threats brought on by the pandemic, this is not surprising. But as we look towards building forward better and re-envisioning the goals of industrialization and structural transformation, there are three key principles that can help guide these efforts in ways that are more inclusive and economically sustainable.

***Bringing a gender-aware perspective to the employment challenges of increasing technological intensity and automation in industry.*** Technological change and increasing capital intensity have been associated with women's losing access to industrial sector jobs (Seguino and Braunstein, 2019; Kucera and Tejani, 2014; Tejani and Milberg, 2016). Recent research among OECD countries finds that across all occupations and industries, women perform more routine tasks than men, and are thus more exposed to risk of automation (Brussevich et al., 2018). With the COVID-19 virus likely to remain a factor for some years, some production processes will be seen as more risky or costly, inducing higher rates of automation in production (Stiglitz, 2020). These pressures work against the point that, for industrialization to contribute in a substantive and sustained way to structural transformation and development, it must have a strong link with employment generation. Otherwise, aggregate productivity growth will be dampened by labour resources remaining in low-productivity agriculture and traditional services. And few will gain access to the higher incomes and better-provisioned lives that higher-productivity activities bring. Without policies designed to ensure that women workers participate in the gains brought about by technological change or automation, they will be increasingly excluded from the benefits that these higher-productivity (and higher-paying) industrial-sector jobs create. Given women's higher achievements in education relative to men across much of the world, this challenge is less about skill-building than about addressing the gender norms and stereotypes that segregate women and men into different activities or industries—or that keep women and girls from seeing themselves as leaders, innovators or entrepreneurs.



***Increasing women's access to industrial sector work, particularly in the context of the targeted growth of "green jobs."*** This paper identified women's increasing exclusion from industrial sector jobs. A gender-inclusive approach to industrialization would include policies designed to help women access this better work. With increasing calls for Keynesian-type policies for green industrialization and growth, it is also important to apply a gender-aware lens to new job opportunities (Braunstein and Houston, 2016). Green jobs are projected to be more middle-skill jobs, that is, more knowledge- and skill-intensive than the jobs they replace (Chan and Lam, 2012). In developing countries, women are already concentrated among some of the lower value-added activities targeted for green transformation, such as waste management and recycling, where the work is informal, unstable and often hazardous. But formal waste management and recycling industries are highly formalized and automated in developed countries, as well as dominated by men (ILO, 2012; Samson, 2009). As noted in the discussion of the impact of technological change, given extant gender segregation in industry there is a risk that, unless approached with a focus on gender inclusion, women will be left out of these new opportunities.

***Identifying social infrastructure and investments in the care economy as part of industrial policy.*** As the health crisis of COVID-19 lead to a severe macroeconomic crisis across the world, it also challenged the reigning macroeconomic policy consensus that governments should largely stay out of the way of markets. Industrial policy is also now back on the table, as revealed in the implicit activism of the phrase "build forward better." The "better" part refers partly to reaching beyond recovery in a way that is more socially inclusive and ecologically sustainable, as well as more effective at delivering development. From this perspective, industrial policy is not just about manufacturing. Investing in the care work that it takes to educate children; care for the sick, elderly and disabled; and maintain an able-bodied workforce on a daily basis should be a central element of industrial policy. Care provisioning is essential for well-being, as well as for the production and maintenance of the labour force and productivity growth (Braunstein, 2015).

Ignoring this human dimension, and the special roles that women and girls play in providing care, implicitly presumes an unlimited supply of caring labour, and that this largely nonmarket production will seamlessly adjust to changing demands and structures in the market sector (Elson, 1995). This perspective not only ignores one of the main sources of gender inequality (women's disproportionate responsibility for care), it also can undermine the objectives of the policies themselves. On the latter point, consider the case of cutting public social spending on health as a way to contain fiscal deficits or reorient spending. Because health spending cuts do not induce changes in our physical capacities, the consequent fiscal savings are compensated either through additional spending from the private sector, or through unpaid caregiving by women and girls.

The latter is not costless. It can limit women's participation in paid work, as well as compromise girls' human capital investments, with negative externalities for future investments in children. Both factors lower labour-force participation and human capital investments and detract from growth and development in the immediate and longer-term, undermining the goals of fiscal spending cuts.

This negative feedback loop has been an important and persistent criticism of fiscal austerity measures that induce disinvestments in human capital and exacerbate gender inequality (Benería and Feldman, 1992; Elson, 1995; Ortiz and Cummins, 2013; Razavi, 2007; Seguino, 2020). It also underlies the nearly universal call among international development institutions to alleviate women's care burdens and support their greater participation in paid work. The economic case for doing so is clear. As the economic downturn associated with the pandemic saddled many developing countries with more debt than they can service, these issues of gender inequities and development costs embedded in fiscal austerity measures have become more important than ever (Ghosh, 2020).

Relatedly, public borrowing for investing in physical infrastructure like roads and bridges is rightly substantiated because it adds to the stock of capital and yields future returns, both directly in terms of increasing output, and indirectly in terms of increasing future productivity. Likewise, public spending on education, health and care services also increases current output—not only through raising aggregate demand but by also raising women's labour participation—as well as future labour productivity. However, spending on social infrastructure is classified as government consumption, not public investment. This severely limits the scope of social infrastructure financing.

From a cost-benefit perspective, investing in the care sector is also a more efficient generator of employment and eventual tax revenues than similar public investments in physical infrastructure sectors like construction (De Henau and Himmelweit, 2021). Country-level input-output simulations for South Africa, Turkey and the United States find that public spending on social infrastructure creates more employment than other types of fiscal spending, and more employment for women and low-income workers in particular (Antonopoulos and Kim, 2011; İlkaracan et al., 2015). To get a sense of magnitude, for a set of seven OECD countries, De Henau et al. (2016) simulate the relative impact of a spending increase of 2% of GDP on social versus physical infrastructure (proxied by construction). Social infrastructure spending generated between 2.4 and 6.1 percent increases in employment, versus half as much employment generation for the same spending on construction. Both women's and men's employment increase

more due to social infrastructure spending because of greater multiplier effects, but women's increases more than men's, thereby lowering the gender employment gap.

One of the important challenges in this approach to public spending and infrastructure is the low wages associated with care work. Despite their providing essential care work, care-sector jobs are often very low-paying, especially when they are dominated by women (Folbre et al., 2021). To address these issues, the ILO has called for "adequate" wage policies as an accelerator of the Sustainable Development Goals, including pay for essential care work (ILO, 2020c). Such wage policies can play an important role in industrial policy overall. But it does require a more expansive approach to industrial policy, one that moves beyond an exclusive focus on manufacturing. The COVID-19 pandemic and responses to build forward better provide an opening to do just that.

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## Appendix

**Table A1. Gender-aware pandemic policies directly supporting women's work participation: A global sample**

Country	Policy type	Policy description
<b>Africa</b>		
<b>Egypt/emerging industrial economy</b>	Wage subsidy and income replacement for self-employed	Medium, Small and Micro Enterprises agency has allocated a financing portfolio amounting to EGP5.4 billion to finance projects for women—in particular, in border and upper governorates through a strategy for the advancement of Egyptian women projects and young graduates, and it is expected that 216 thousand micro-projects will be implemented over five years and 250 thousand jobs and projects will be funded through banks and civil society organizations that cooperate with the agency.
	Activation measures and enterprise development	Ministry of Communication and Information Systems (ICT) launched a package of educational programmes for women to prepare them for labour market including new technological tools to help women in the areas of e-marketing and e-commerce to ensure they are empowered economically.
	Wage subsidy and income replacement for self-employed	The National Council for Women through its Women Business Development Center (WBDC) has connected with women from different governorates within its project (AL Mashghal) to produce masks that can be sold to the public, in accordance with the latest government decision that all citizens should wear masks in public spaces.
	Care services	Ministry of Social Solidary announced that nurseries resume their work with specific condition and precautionary measures.
	Social insurance	The Prime Minister issued Decree No. 719 of 2020, included the following measures. The number of employees in government authorities and bodies shall be reduced under the set of the precautionary measures taken by the government to prevent the spread of COVID-19. Pregnant women or those looking after one child or more of less than 12 years shall be granted an exceptional leave for as long as the decree remains in force, allowing all working mothers to be able to do their family duties without losing their jobs. Women employees looking after their children with disabilities shall be granted a leave pursuant to a circular—allowing mothers of

		children with disabilities to be able to take care of their children without losing their jobs.
	<i>Social assistance</i>	<i>Other programmes include women-targeted cash transfers and provisioning basic food supplies, but these do not directly support women's participation in paid work.</i>
<b>Ghana/other developing</b>	<i>Social assistance</i>	<i>One-cash transfer programme for daily wage earners instituted, targeted beneficiaries are 60% women. Not identified as supporting women's participation in paid work.</i>
<b>Morocco/other developing</b>	Wage subsidy and income replacement for self-employed	In the agricultural sector, the Ministry of Agriculture created a digital platform for the presentation and marketing of local products from women's cooperatives. In addition, these cooperatives have benefited from support in terms of logistics, product delivery and communication. In order to prepare for the de-confinement, the Ministry of Agriculture has set up a protocol concerning the procedures to be adopted at the level of farms and units for the valorization, packaging and processing of agricultural products.
	Wage subsidy and income replacement for self-employed	Measures have been taken to support very small and small and medium enterprises (VSEs/SMEs), including those headed by women, through the establishment of a guarantee mechanism, known as "Damane Oxygène", with the Central Guarantee Fund (Caisse Centrale de Garantie-CCG). This new guarantee product is aimed at mobilizing additional financing resources for enterprises whose cash flow is in difficulty due to a decline in their activities. Under this "Damane Oxygène" programme, 17,600 companies have benefited from an amount of €9.5 billion in loans. Damane Oxygène (ended on 31 Dec 2020) and transitioned into Damane relance (intended to end on 31 March 2021).
	Wage subsidy and income replacement for self-employed	The Ministry of Tourism, Handicrafts, Air Transport and Social and Solidarity Economy has put in place measures to facilitate the certification system for cooperatives to produce 30,000 reusable masks per day. 15 cooperatives have been certified with a total of 103 members, 100% of whom are women.
	<i>Social assistance</i>	<i>Hygiene kits and COVID-19 prevention kits distributed to vulnerable groups, including women. Not identified as supporting women's participation in paid work.</i>

<b>South Africa/ emerging industrial</b>	Equity injections: public-sector subsidies to businesses	Support to agriculture and food: the Department of Agriculture, Land Reform and Rural Development set aside ZAR1.2 billion to address the effects of the COVID-19 pandemic, support distressed small-holder farmers, and ensure sustainable food production. The programme will prioritize women, youth and disabled farmers, and funds will be delivered in the form of vouchers (small poultry, livestock, vegetable). ZAR400 million will be set aside for the Proactive Land Acquisition Strategy Programme, which allows for the state to buy farmland for redistribution. Also, food supply in the country will be monitored through “agricultural value chain tracker” to ensure any disruptions are addressed. During the first application period (8-22 April 2020), 55,000 applications are received and the second application pool will be expanded to include smallholder commercial farmers growing products like sugar cane and wool.
	Equity injections: public-sector subsidies to businesses	Debt relief fund for small, micro and medium enterprises (SMMEs) on existing debts and payments. To be eligible for assistance under the fund, the SMME must demonstrate a direct impact or potential impact of the COVID-19 pandemic on its business operations. Priority will be given to businesses owned by women, youth, and people with disabilities. The debt relief fund will also assist SMMEs in acquiring raw material and paying labour and other operational costs.
	Equity injections: public-sector subsidies to businesses	The South African Department of Agriculture, Land Reform, and Rural Development (DALRRD) set aside ZAR1.2 billion (\$64 million) to support distressed small-holder farmers during the COVID-19 pandemic. The programme will prioritize women, youth and disabled farmers and the funds will be delivered in the form of vouchers, though the details of the voucher programme have yet to be identified. ZAR400 million (\$21 million) will be set aside for the Proactive Land Acquisition Strategy Programme (PLAS), which allows for the state to buy farmland for redistribution. Out of 55,000 applications in April, 15,000 were approved, benefitting 5,494 women.
	Wage subsidy and income replacement for self-employed	The Minister of Tourism publicized a list of SMMEs that benefited from Tourism Relief Funding: ZAR200 million relief has been given to 4,000 business negatively affected by COVID-19. The funding supports SMMEs in the hospitality and tourism sector across all nine provinces and various tourism sub-sectors in the following categories: accommodation; hospitality and related services; and

		travel and related services. Preference will be given to SMMEs in rural areas and townships and those owned by women, young people and people with disabilities. The grant is capped at ZAR 50,000 and the funds are used for subsidizing fixed costs, operational costs, supplies and other pressure costs items. Businesses should not exceed a turnover of ZAR2.5 million per year and must guarantee employment for a minimum number of staff for three months and prove minimum wage compliance.
	<i>Social assistance</i>	<i>Food and menstrual health products distributed to low-income households.</i>
<b>Uganda/LDC</b>	<i>Social assistance</i>	<i>Cash transfers and food packages delivered to vulnerable households, targeting in some regions adolescent girls, mothers and children.</i>
<b>Zambia/LDC</b>	<i>Social assistance</i>	<i>New beneficiaries added to existing cash transfer programmes, includes informal economy workers, vulnerable children, and women-headed households with at least two children.</i>

Asia		
Bangladesh/LDC	Credit lines or additional liquidity by financial institutions	A rescue package of nearly \$3.54 billion will be available for industries and service sectors, while another \$2.53 billion is being set aside for small and medium-sized businesses at a concessional interest rate. More than half of the interest will be borne by the government to save industries and guard employment. The businesses will also be allowed lower interest rates for imported raw materials. A rise in the central bank's fund to \$5 billion from the current \$3.5 billion has been ordered. Earlier, the prime minister allocated a fund worth about \$590 million for Bangladesh's export-oriented garment industries, which are female-dominated sectors in the country. Owners will be allowed an interest-free loan from the scheme to keep their factories running.
	<i>Social assistance</i>	<i>Food aid that targets vulnerable households, included those headed by women.</i>
China/emerging industrial	Tax deferrals	<p>The Chinese government has rolled out 20 targeted incentives, including cutting value-added tax, consumption tax and corporate and individual income taxes, as well as waiving employers' payments to various social insurance schemes.</p> <p>The measures can be put into four categories: supporting prevention, control and treatment of the disease; ensuring material supplies; encouraging public donations; and clearing the way for the resumption of work and production. Some of the exemptions (VAT, corporate income) target specific medical services, catering and accommodation services, and sundry personal services (e.g. hairdressing, laundry) where women are overrepresented.</p>
	Tax cut/exemptions	The Chinese government has announced a series of tax cuts which would ease the burden for firms by 1.6 trillion yuan (about \$227.25 billion). In terms of financial support, China has offered 3.55 trillion yuan of low-cost capital to financial institutions via reserve requirement ratio cuts, re-lending, and re-discount quotas, according to the meeting. These measure have the objective of increasing the financial support for the real economy and SMEs, and ease the cost pressure for firms of the manufacturing and service industries, where women are overrepresented (manufacturing accounts for 23.3% of women's and 17.8% of men's employment). To promote the development of new business models and flexible employment,

		steps will be taken to strengthen guaranteed loans for start-ups and advance mass entrepreneurship and innovation.
	Care services	According to “Notice regarding the rescue and protection of children who lack supervision due to the impact of the new crown pneumonia epidemic” (11 February 2020) and “Notice of the State Council on the Joint Prevention and Control Mechanism for the Prevention and Control of the Novel Coronavirus Pneumonia Epidemic” (14 March 2020), the government will provide childcare support to children if their parents or other guardians are confirmed to be infected, suspected of infection or need to be isolated and observed, or if their parents or other guardians are unable to fully perform their duty of care and guardianship due to the needs of epidemic prevention and anti-epidemic work and other due to the impact of the epidemic. Similar services provided to older adults living alone with intensive care needs.
<b>Georgia/other developing</b>	Equity injections: public-sector subsidies to businesses	Six-month credit interest payments were co-funded for small hotels. The programme budget is GEI14 million. In Georgia, for every man working in the accommodation and services sector, there are 1.6 women.
	Tax cut/exemptions	On 13 March, it was declared that tourism-related businesses will be exempt from property and income taxes through the summer season. The tax break applies to 18,000 companies presently operating in Georgia, and more than 50,000 employees and will be worth about 100 million lari (\$36 million). An additional 300 million lari is expected to be dedicated to tourism-related infrastructure projects this year, as well as the restructuring of VAT returns. In Georgia, for every man working in the accommodation and services sector, there are 1.6 women.
	Wage subsidy and income replacement for self-employed	Women’s economic empowerment through small grants and economic programmes: To mitigate the socioeconomic effects of COVID-19, the Ministry of Economy and Sustainable Development has expanded economic support programmes, such as Enterprise Georgia. As a result, some pre-conditions and barriers to applying to the programme were eliminated that would allow

		more women to apply. Moreover, women-run businesses and women-applicants will receive extra points during the assessment.
	<i>Social assistance</i>	<i>Targeted measures mainstream gender in pension administration and pay-outs; food and hygiene kits distributed to vulnerable families.</i>
<b>India/emerging Industrial</b>	Social assistance	Increasing Mahatma Gandhi National Rural Employment (MGNREGA) wage rates from Rs180 INR to Rs202. This programme has a gender quota benefiting female beneficiaries.
	<i>Social assistance</i>	<i>Expansion of cash-transfer programs, many of which target and distribute directly to women.</i>
<b>Mongolia/other developing</b>	Reduced work time and telework	Changes in working hours under the Resolution No.11 of the National Emergency Commission of Mongolia dated 5 May 2020, the management of the state and local administrative organizations, enterprises and legal entities are instructed to take measures by providing the pregnant woman and a mother with child up to 12 years with conditions and opportunities for working from home and paid leave until 31 May 2020 in order to prevent the spread of COVID-19. Upon such instruction, every legal entity has been taking measures such as reducing or changing working hours and making working hours more flexible as well as giving women as well as other workers opportunities to work from home by amending their internal labour rules during the above mentioned period until now.
	Unemployment and job protection	Unemployment benefits: The Parliament of Mongolia adopted a new Law on Exemption from the social insurance and benefit from the unemployment insurance fund dated 9 April 2020. This law outlines a six-month period commencing from 1 April 2020 and ending on 1 October 2020 exemption of monthly social insurance contributions and personal income taxes to be paid by employees and employers, who are managing to keep their employees on payrolls despite difficulties in their operations and revenue drop, except the individuals: (i) employed by the state authorities; (ii) employed by the legal entities with state or local government ownership or the legal entities with state or local government shareholdings excluding the universities and colleges with state ownership;(iii) whose social insurance premiums are to be paid from the wages provided under the procurement funded from foreign countries' and international organizations' loan or aids; also, a monthly incentive of

		<p>MNT200,000 from the unemployment insurance fund for a period commencing from 1 April 2020 and ending on 1 July 2020 to each employee of a company whose revenue has dropped by more than 50 percent compared to the same period last year.</p> <p>Job position retaining: The Mongolian Parliament adopted the Law on COVID-19 prevention, fight, and mitigation of its socioeconomic impact on 29 April 2020 and under the Article 13.2.5 of the law, the legal entities are obliged to retain the job or position of the employee who is under quarantine and isolation regime.</p>
<b>Myanmar/LDC</b>	Social assistance	<p>The government is currently supporting 390,000 beneficiary households (42% female participants) in more than 2,500 villages under a cash-for-work (CfW) scheme to provide jobs for the unemployed. Villagers will be employed to build basic infrastructure in the villages in exchange for income. MMK10 million to be distributed to each village, benefiting around 120,000 households. To run from June to September 2020. MMK25 billion has been set aside for the programme, which is carried out by the Department of Rural Development, under the COVID-19 Economic Response Plan (CERP).</p>
	Social assistance	<p>The government will support farmers with less than 2 acres of land, women-led households with returning migrants, households of ethnic minority and households led by persons who are older than 45 of farmers through agriculture input e-vouchers worth 120,000 each benefiting more than 86,000 households.</p>
	<i>Social assistance</i>	<p><i>Expanded child cash transfer programmes and distributed emergency food rations.</i></p>



Latin America and the Caribbean		
Argentina/emerging industrial	Wage subsidy and income replacement for self-employed	Establishment of a support fund for tourist service providers (Fondo de Auxilio para Prestadores Turísticos). The Ministry of Tourism and Sports launched the third wave of their relief fund for tourist service providers, which gives priority to women and non-binary people who carry out such activities. This is a one-off payment of \$40,000 Argentine Pesos to support small, independent service providers offering complementary tourist services—such as guides, short-term excursions or instructors, among others—until tourism activities are normalized. In its first and second stages, the fund benefited around 4,000 providers.
	Activation measures and enterprise development	The National Program for Socio-productive Inclusion and Local Development, "Promote Work", aims to improve employability and the creation of new productive proposals through the completion of studies, job training and the certification of skills of people in situations of socioeconomic vulnerability. It includes the creation and strengthening of productive units to promote social inclusion and increased income. Beneficiaries who enter the formal job market—and if their income exceeds the minimum wage, vital and mobile—will remain in the programme during the first year of their employment. Beneficiaries of the "Make the Future" and "Community Productive Projects" programmes can access the programme. Through an agreement between the Ministry of Women, Gender and Diversity and the Ministry of Social Development, the inclusion of people in situations of gender-based violence is contemplated. In addition, the Ministry of Women monitors these cases to facilitate security and access to opportunities for women and LGBTI + people who enter the program.me
	Reduced work time and telework	Telework Law: Telework became regulated by law, including a clear gender perspective. Among other aspects, teleworkers who prove that they are responsible for persons under the age of 13, pregnant workers, disabled or older adults who require specific attention will have the right to schedules compatible with their care responsibilities, as well as to have interruptions in their workday.

	Social insurance	Paid leave for all workers, public and private, who have dependent children and must attend to care needs due to the emergency (until the declaration of quarantine on March 2020 when the leave was extended to all workers who are not in the excepted sectors: health, production, distribution and sale of food and hygiene items and pharmacy, among others).
	Care services	Strategic planning and development of federal care policies: As part of the “Campaña Nacional Cuidar en Igualdad: Necesidad, Derecho y Trabajo (National Campaign for Equal Care: Necessity, Rights, and Work),” the Ministry of Women and Gender Diversity is leveraging the spotlight COVID-19 put on women's care burdens to design comprehensive public care policies. This includes setting up an interministerial committee on care policies and undertaking local consultations (called local care parliaments) with care providers, users and policymakers. Local care parliaments aim to exchange experiences and forge local strategies on care and their social organization, assess local needs and demands and agree on joint actions that can ameliorate women's care burden. This includes technical and administrative teams of state agencies, civil society organizations, early education and community providers, unions, cooperatives.
	<i>Social assistance</i>	<i>Increased universal child and pregnancy allowances; emergency cash transfers to unemployed, informal workers and other affected workers (beneficiaries primarily women); paid leave for domestic workers; stipulation that telecom, internet and TV cannot be suspended for enrollees in social programs that target women; food support for vulnerable families.</i>
<b>Bolivia/other developing</b>	Labour regulatory adjustment	With support of the National Federation of Home Workers in Bolivia (Federación Nacional de Trabajadoras del Hogar de Bolivia) the Ministry of Work, Employment and Social Provision has disseminated information on the rights of salaries domestic workers and channels to wage complaints. This included emitting the Communication 26/2020 to address the alarming situation in the sector due to confinement.
	Social insurance	As part of revised paid leave requirements (Decreto Supremo 4196), Bolivia is permitting paid leave for workers with dependent children under 5 and who must meet care needs due to the

		emergency; and paid leave for all workers, public and private, that are suspected cases of having contracted COVID-19.
	<i>Social assistance</i>	<i>Additional cash transfers to vulnerable households, targeting, among other groups, mothers with young children. Paid leave for pregnant women.</i>
<b>Chile/industrialized</b>	Activation measures and enterprise development	Decree No. 31 of 2020 establishes a subsidy to encourage the return of workers with a suspended contract under the Employment Protection Law and the hiring of new people in companies financing part of their salaries. The subsidy has two lines of subsidies: the "return" line (Regresa) and the "hire" line (Contrata) and is delivered for up to 6 months. In the "hire" line, the amount of the subsidy is equivalent to 50% of the gross monthly remuneration with a ceiling of up to CLP 250,000 (\$320), for each new additional worker hired with respect to the payroll of workers of the company reported as of July 2020. For young people between 18 and 23 years old, women and people with disabilities, the subsidy is equivalent to 60% of the gross monthly remuneration with an upper limit of CLP 270,000 (\$345). In the "return" line, the subsidy of CLP 60,000 per month (\$204) per worker applies to contracts with a gross monthly remuneration equal to or less than three minimum monthly wages (CLP 961,500) at the time of application.
	Activation measures and enterprise development	Provision of virtual trainings to promote women's export entrepreneurship. Training on commercial logistics and business perspectives in the current situation are carried out for women who are exporters or those with an exportable offer who participate in ProChile's activities. Among the trainings carried out, the workshops on "Export Logistics for Women Entrepreneurs" and "Women Entrepreneurs of the Wine Industry" stand out.
	Activation measures and enterprise development	The Journey of the Entrepreneur platform targets women who want to start businesses or professionalize through training in administration, finance, marketing, innovation, leadership and personal development, in response to the COVID-19 crisis. This initiative has the support of the organization Women of the Pacific (Mujeres del Pacífico).

	Activation measures and enterprise development	The PAR Impulsa Reactivation Support Program with a focus on entrepreneurship and MSMEs led by women. Through the Program, women entrepreneurs and MSMEs led by women can access subsidies to reactivate, reconvert or digitize their businesses. This call seeks to finance work plans to the development of investment or working capital capacities for these MSMEs. PAR Impulsa has the support of resources provided by the regional governments and is available in eight regions of the country. Each region defines the amounts which do not exceed CLP 3,000,000 (\$4000) per project or CLP 4,000,000 (\$5400) in case the proposal considers the digitization of the business.
	Activation measures and enterprise development	Virtual platform for the commercialization of products and services of women entrepreneurs. The Women's Market (Mercado Mujer) Online virtual platform was created with the aim of supporting the reactivation of women entrepreneurs through the commercialization of their products and services. The website brings together more than 250 women entrepreneurs from different sectors who received training in trade services electronic to facilitate the sale of their products to different territories.
	Activation measures and enterprise development	Virtual platform for the of women's enterprises to generate exchange and support. The "#PasaElDato" (Pass the Info) platform is a virtual community to disseminate services and products offered by women through their social media accounts in the context of confinement.
	Social insurance	Law no. 21,247 "Protected Parenting" allows the extension of parental postnatal leave for workers in the public or private sector, dependent or independent, whose term occurs while the constitutional state of exception of catastrophe as a result of COVID-19 lasts through a "Parental Preventive Medical Leave". It is granted for 30 days, extendable up to two times (charged to the respective health insurance) while the state of exception is maintained (art. 1, Title I). During said period, the worker will enjoy a subsidy whose daily amount will be the same as the subsidy for parental postnatal leave (Article 2, Title I). It also establishes that the workers affiliated with the unemployment insurance who are in charge of the care of one or more children born after the year 2013 and who are not making use of a parental postnatal leave may request the suspension of their employment contract. Work

		for care reasons, while the operation of educational establishments, kindergartens and nurseries that the child attends is suspended due to COVID-19 (art. 4, Title II). In this way, fathers, mothers or caregivers of girls and boys born since 2013 may unilaterally benefit from work suspension under the Employment Protection Law (No. 21,227).
	<i>Social assistance</i>	<i>Cash transfers to households that depend on informal work, whose income was affected by COVID-19, or with children under the age of two; access to unemployment benefits, including domestic workers; food baskets for vulnerable families.</i>
<b>Dominican Republic/other developing</b>	Equity injections: public-sector loans to businesses	The government is providing assistance to households and SMEs in form of subsidized loans (186 million). Particularly damaged sectors are targeted (229 million) as recipients of this programme, including tourism. Tourism-related activities, such as accommodation and food services, account for 11 percent of women's employment compared to 5.8 percent of men's.
<b>Guatemala/other developing</b>	Wage subsidy and income replacement for self-employed	Access to financing for women entrepreneurs. A loan of \$200 million is approved to meet the financing needs of small and medium-sized enterprises (SMEs), prioritizing women entrepreneurs, particularly in rural areas of Huehuetenango, Quetzaltenango, Quiché, San Marcos, Totonicapán and Alta Verapaz. Through this instrument, SMEs will be able to present expansion and growth plans, contribute to the generation of jobs and the economic recovery of the country. The initiative has the support of the United States Finance Corporation for International Development.
	<i>Social assistance</i>	<i>Easing application requirements and distribution for existing cash-transfer programmes that target mothers.</i>
<b>Mexico/emerging industrial</b>	Equity injections: public-sector loans to businesses	Financial Support Program for Family Microenterprises ("Word Credit Program"). Credit destined to formal and informal micro-businesses in urban areas, and companies that have not reduced their workforce during the first quarter of 2020 due to COVID-19. This programme benefits micro-entrepreneurs, people who are self-employed, service providers, domestic workers independent workers and solidarity companies in the formal sector, who have financial support granted with programme resources and registered before the Mexican

		Institute of Social Security. The programme comprises two modalities. The Family Microenterprise scheme is for those who have a non-agricultural micro-business with at least six months of operation. The modality of Solidarity Support is aimed at solidarity companies in the formal sector, as well as domestic workers and independent workers. In Mexico, informal employment accounts for roughly two-thirds of total employment among both women and men; 8.7 percent of women's employment is in the domestic services category compared to only 0.2 percent of men's.
	Reduced work time and telework	Mexican Official Standard NMX-R-025-SCFI-2015 on Labor Equality and Non-Discrimination. Promotes the incorporation of the gender perspective in the conditions established by workplaces for remote work, through the promotion of the Mexican Standard on Labor Equality and Non-Discrimination by coordinated work between the National Institute of Women and the Ministry of Labor and Social Welfare. The standard is a certification mechanism for voluntary adoption to recognize workplaces—public, private and social, of any size, sector or activity—that have practices in the area of labour equality and non-discrimination, in order to favour the integral development of workers. To obtain this certification, workplaces are audited by a third party to verify that their policies and practices comply with labour equality and non-discrimination requirements.
	Wage subsidy and income replacement for self-employed	The initiative Microcredit programme rotating savings and credit association (“Tandas para el Bienestar”) was launched to grant one million microcredits for MXN 25,000 (around \$1,100) for people who are enrolled in the programme. This programme grants direct productive credits, without intermediaries, with interest rates of 0 percent to people aged 30 to 64 who have a micro-business with more than 6 months of operation and are residents of a locality belonging to the coverage areas of the programme (of medium to high rates of marginalization or high rates of violence). In addition, credits are granted as a priority to women who live or have experienced gender violence and who are in a situation of vulnerability. According to data from the National Institute for Women, 71% of the beneficiaries of this programme are women.

	Activation measures and enterprise development	The Ministry of Labor and Social Welfare has strengthened the "Youth Building the Future" Programme for sectors most affected by COVID-19, including health, culture, agriculture, sport, services and STEM. This programme is aimed at people aged 18-29 who are not studying or working. It links them to companies, workshops, institutions or businesses where they develop or strengthen work habits and technical skills to increase their employability. It should be noted that during the training, up to one year, they receive monthly support of MXN 3,748 and medical insurance against illness, maternity and occupational hazards. According to official data, 60 percent of the beneficiaries are women.
	Activation measures and enterprise development	The Ministry of the Interior launched the Facebook initiative "Ella hace historia" (She Makes History), which offers financial education to 15,000 women entrepreneurs to contribute to the economic recovery of Mexico after the effects of the COVID-19 pandemic.
	Social assistance	Reinforce the "Support Program for the Wellbeing of Girls and Boys, children of working mothers" ("Programa de Apoyo para el Bienestar de las niñas y niños, hijos de madres trabajadoras"). The programme seeks to improve the conditions of access to labour markets of parents and guardians who work, seek employment or study to help them pay for childcare. A direct economic support of MXN 1,600 is granted bimonthly for each child, to mothers, fathers or guardians with children in their care (between 1 year and up to one day before turning 4 years). In the case of tutors with children with disabilities between 1 year and up to one day before reaching the age of 6, the amount is MCN 3,600 bimonthly. In the context of COVID-19, bank cards are delivered to each house of the beneficiaries of the programme. According to the official data, 97% of the beneficiaries are women.
	Wage subsidy and income replacement for self-employed	The Mexican Social Security Institute (IMSS) reported that it would grant solidarity loans to more than 22,300 domestic workers.
	<i>Social assistance</i>	<i>Emotional and hygiene support for elderly women; loans for domestic workers.</i>

*Note:* This table is a reorganized subset of UNDP et al. 2021. Accessible at <https://data.undp.org/gendertracker/>. Policies identified as directly supporting women's participation in paid work listed; other women-targeted policies are summarized in italics.



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