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Labor Market Gender Gaps in the Time of COVID-19 in Latin America and the Caribbean

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Abstract: This study shows that the trend of declining gender gaps in labor market indicators in Latin America in previous decades did not change significantly in most countries during the COVID-19 pandemic. However, a closer look at the dynamics during the 2019–2021 period shows that (i) women were harder hit in terms of employment losses during the 2020 economic shock; (ii) despite the labor market recovery, women in 2021 often remained less likely to work than they did in 2019; nevertheless, (iii) in a subset of countries the gender gap in employment rates widened. However, relative to the value of their 2019 wages, the accumulated income losses were considerably greater for women than for men in most cases. This can create scarring effects for the future through greater vulnerability, lower incomes, and reduced probabilities of job insertion. The groups of women hit hardest by the shock were those with less than a tertiary education, those in the 14-24 year-old age group, those living in urban areas, and those working in the tertiary sector.

JEL codes: J3, J6, O15

Key words: gender gaps, labor markets, COVID-19, Latin America and the Caribbean

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Introduction

Gender differences in the labor market have declined substantially in Latin America in recent decades. Although still 20 percentage points below the rates for men, female labor force participation rates increased by a notable 25 percent between 1990 and 2018, with surging employment levels, reduced unemployment rates, and declining wage differentials (World Bank 2020; Acevedo and Székely 2021). However, women are still disproportionally employed in the informal sector and in low-wage occupations (Marchionni, Gasparini, and Edo 2019).

This paper analyzes the evolution of labor market gender gaps during the COVID-19 pandemic in the region. We measure gaps along different dimensions: labor force participation, employment, unemployment, informality, labor income and wages. There is a rapidly growing literature finding that in advanced economies the female employment was disproportionately harmed by the pandemic (Blundell et al. 2020; Alon et al. 2020; Lemieux et al. 2020; Bluedorn et al. 2021; Singh, Shirazi and Turetken 2022).

Demand-side and supply-side reasons can explain this so-called Shecession:[1] on the demand side, the pandemic hit sectors and occupations where women are more likely to be employed and therefore more likely to be affected, and on the supply-side, school closures implied higher childcare demands to be attended by parents, mostly mothers, who in turn moved out of labor markets in larger proportions (Albanesi and Kim 2021; Alon et al. 2022). Comprehensive evidence for Latin America is more scarce, but also expanding. Most analyses focus on data available up to 2020 for a limited set of countries, and provide further evidence of the uneven burden bore by women more than men during the pandemic (Viollaz et al. 2022; Soares and Berg 2022; Verick, Schmidt-Klau and Lee 2022; Leyva and Urrutia 2022; Cueva, Del Carpio and Winkler 2021).[2]

Through high-frequency phone surveys, the World Bank and the United Nations Development Programme (UNDP) managed to collect data on the well-being of households in 24 countries in in Latin America and the Caribbean, and found that gender gaps in terms of job losses had widened since the onset of the pandemic in 2020, especially for mothers with younger children (Mejia-Mantilla et al. 2022); 15 months into the pandemic, women's employment was still 23 percent below its pre-pandemic level, more than three times that of men (Cucagna et al. 2022). These data collections was an unprecedented and laudable effort to monitor the impacts of the crisis across a wide range of countries in the region.[3]

To the best of our knowledge, the present study is the first to process data from household and employment surveys for 14 countries in the region, which are nationally representative, and provide a more comprehensive perspective on the effects of the pandemic on gender differences in the labor market. For 10 of those countries – Argentina, Brazil, Colombia,

[1] She-cession is an informal term that indicates that female employment was more adversely affected than male employment, contrary to the mancession that characterized the 2008 global financial crisis. (Fabrizio, Gomes, Mendes 2021).

[2] Recent studies for other world regions also find disproportionate negative impacts on female employment and time use (Alon et al. 2022).

[3] However, analyses relying on phone surveys could also suffer from limitations, such as non-response bias, that can compromise the representativeness of the sample and the external validity of the results (Ambel, McGee and Tsegay 2021).

Costa Rica, Ecuador, Guatemala, Mexico, Peru, Paraguay, and Uruguay – the data include 2021. [4]This allows for informing gender-based policy responses centered around accumulated losses during the economic contraction resulting from the pandemic, and around differentials in the extent of the recovery.

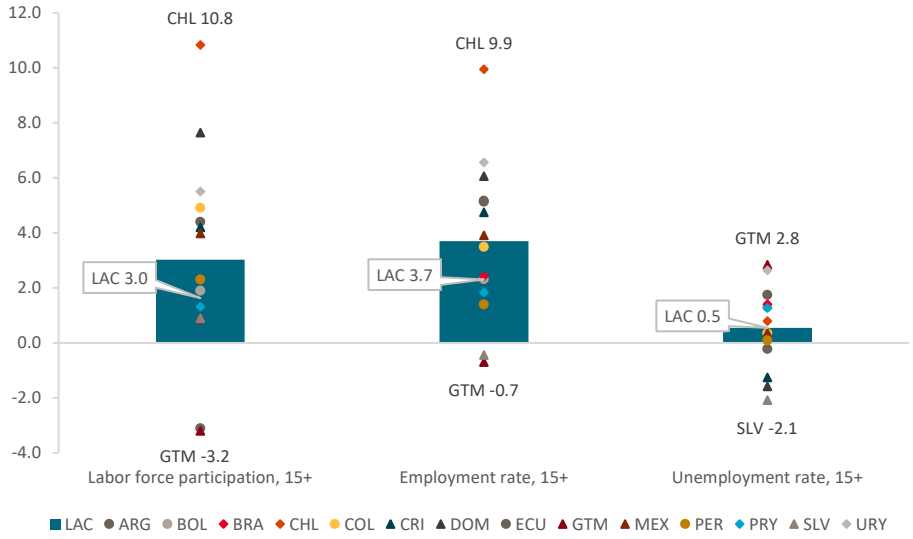
Section 1 briefly discusses the evolution of labor market gender gaps before COVID-19 in Latin America and the Caribbean. Section 2 compares gender gaps at the endpoints of initial conditions in 2019 and the latest data at the time of recovery in 2021. Section 3 estimates differences in the likelihood of working for men and women during the pandemic, with data for 2019–2021, and provides a more precise picture of the dynamics of gender gaps. Section 4 employs a similar strategy to further understand how the pandemic might have had a differential effect on specific subgroups of the population. The final section presents conclusions.

1. Evolution of Labor Gender Gaps in Latin America and the Caribbean before the COVID-19 Pandemic

In this section, we use data from CEPALSTAT to describe the evolution of the gender gaps in labor outcomes, such as labor force participation, employment, and unemployment. Figure 1 presents the changes in gender gaps over the period 2006-2019 for different labor indicators. The gender gap for the labor participation rate and employment is measured as: $\Delta \text{ gap} = (T_F - T_M)_{t_1} - (T_F - T_M)_{t_0}$, where T is the indicator for total net enrollment, F = Female, M = Male, t0 = circa 2006, and t1 = circa 2018, whereas for the unemployment rate, the gender gap is calculated as: $\Delta \text{ gap} = (T_M - T_F)_{t_1} - (T_M - T_F)_{t_0}$. This way, positive values indicate changes favorable to women, while negative changes capture widening gaps. Over the 2006–2019 period, labor force participation rates increased faster for women, reducing the gender gap by 3 percentage points. Chile had the largest positive change (of 10.8 percentage points in favor of women), while Guatemala saw a widening gap of 3.2 percentage points. Increased access to education, sectoral shifts, and trade openness (World Bank 2020; Heath and Jayachandran 2016) are some of the factors associated with the increase in women's labor participation, according to the empirical literature (World Bank 2020; Heath and Jayachandran 2016).

[4] For Bolivia, El Salvador, and the Dominican Republic, the 2021 survey data were not publicly available during the first trimester of 2022 –when we started this project, and the databases were processed for analysis. For Chile, the CASEN survey is carried out biannually, with the latest version published in 2020. See Annex 1 for a detailed description of the data sources.

Figure 1. Change in the Gender Gap in Labor Outcome Indicators for the Population Ages 15-65 in 14 Latin American and Caribbean Countries, 2006–2019 (Percentage points)

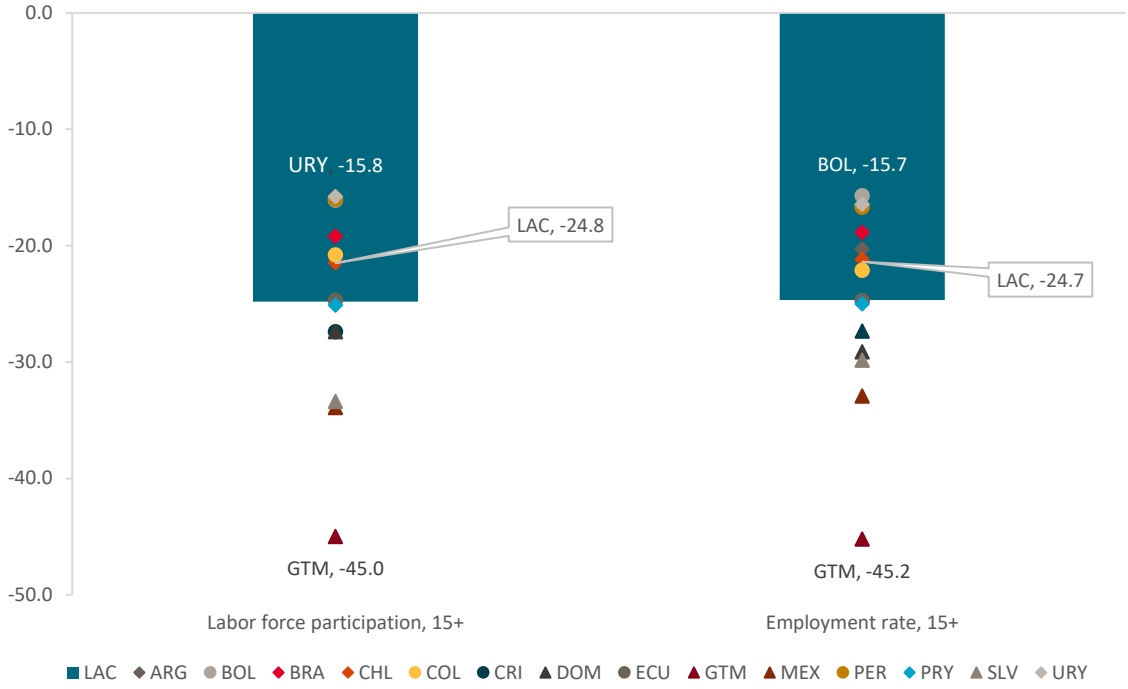


Source: Calculations based on data from CEPALSTAT.
Note: ARG = Argentina, BOL=Bolivia, BRA = Brazil, CHL = Chile, COL = Colombia, CRI = Costa Rica, DOM = Dominican Republic, ECU = Ecuador, GTM = Guatemala, LAC = Latin America and the Caribbean, MEX = Mexico, PER = Peru, PRY = Paraguay, SLV = El Salvador, URY = Uruguay. The gender gap for the labor participation rate and employment is measured as: $\Delta\ gap = (T_F - T_M)_{t_1} - (T_F - T_M)_{t_0}$, where T is the indicator for total net enrollment, F = Female, M = Male, t_0 = circa 2006, and t_1 = circa 2019. For the unemployment rate, the gender gap is calculated as: $\Delta\ gap = (T_M - T_F)_{t_1} - (T_M - T_F)_{t_0}$.

Female employment rates increased faster than men's during the same period, reducing the average gender gap in Latin America and the Caribbean by 3.7 percentage points – with differences ranging from 9.9 percentage points in Chile to -0.7 for Guatemala and with only El Salvador and Guatemala registering negative variations. For the unemployment rate, the changes were not as pronounced as the employment rate showing a more rapid decline in the unemployment rate for women, although with smaller differences than for men, resulting in an average reduction of 0.5 percentage points in the gender gap. However, the Central American countries and the Dominican Republic registered negative changes favoring men.

Despite the overall progress, large gender gaps persisted before the pandemic, that is, the average gender gap for labor force participation was 24.8 percentage points in favor of men (Figure 2). Novta and Wong (2017) point to a mixed pattern within the region, with Central America and the Dominican Republic showing larger differences of around 40 percentage points, well above those of Uruguay, Bolivia, Peru and Argentina. The pace of growth in female labor force participation has slowed since the mid-2000s, associated with the decrease in the labor supply of vulnerable women (women in rural areas and from lower-income quintiles) (Serrano et al. 2019; Gasparini and Marchionni 2015). Kleven and Landais (2017) argue that the role of women in parenting and social norms might also explain the persistent gender disparities in the labor market.

Figure 2. Female vs. Male Gender Gap in Labor Market Indicators for the Population Ages 15-65 in 14 Latin American and Caribbean Countries, 2019 (Percentage points)

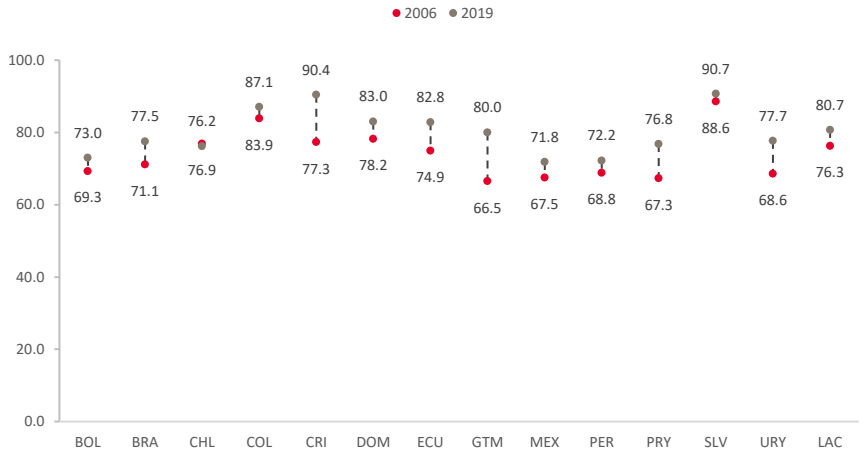


Source: Calculations based on data from CEPALSTAT.
Note: ARG = Argentina, BOL = Bolivia, BRA = Brazil, CHL = Chile, COL = Colombia, CRI = Costa Rica, DOM = Dominican Republic, ECU = Ecuador, GTM = Guatemala, LAC = Latin America and the Caribbean, MEX = Mexico, PER = Peru, PRY = Paraguay, SLV = El Salvador, URY = Uruguay. The gender gap for the labor participation rate and employment is measured as: gap $= (T_F - T_M)_{t1}$, where *T* = indicator, *F* = Female, *M* = Male, and t_1 = circa 2019. For the unemployment rate the gender gap is calculated as: Δ *gap* $= (T_M - T_F)_{t_1}$, where *T* = indicator, *F* = Female, *M* = Male, t_1 = circa 2019.

The gender gap in the employment rate, at -24.7 percentage points in 2019, showed patterns similar to the labor force participation rate, with Central America, the Dominican Republic, and Mexico registering the highest levels (Figure 2). For the unemployment rate, gaps were more limited, being on average 2 percentage points in 2019.

Finally, Figure 3 illustrates the mean labor income ratio for gender from CEPALSTAT indicators, which measures the average income of wage earners and self-employed women compared to average income of wage earners and self-employed men after controlling for age, education and area between 2006 and 2019. In 2006 the ratio was 76.3 percent, indicating that, on average, for each dollar earned by men, women with the same characteristics earned 0.763 cents. This ratio increased to 80.7 percent in 2019. Guatemala, Costa Rica, Paraguay and Uruguay experienced the largest gains, while Chile and El Salvador did not register differences.

Figure 3. Female vs. Male Mean Labor Income Ratio for Gender for the Employed Population Ages 15-65 in 14 Latin American and Caribbean Countries, 2006–2019 (Percentage)



Source: Data from CEPALSTAT.
Note: ARG = Argentina, BOL=Bolivia, BRA = Brazil, CHL = Chile, COL = Colombia, CRI = Costa Rica, DOM = Dominican Republic, ECU = Ecuador, GTM = Guatemala, LAC = Latin America and the Caribbean, MEX = Mexico, PER = Peru, PRY = Paraguay, SLV = El Salvador, URY = Uruguay. The indicator measures the proportion of the average income of women compared with the average income of men with the same characteristics.

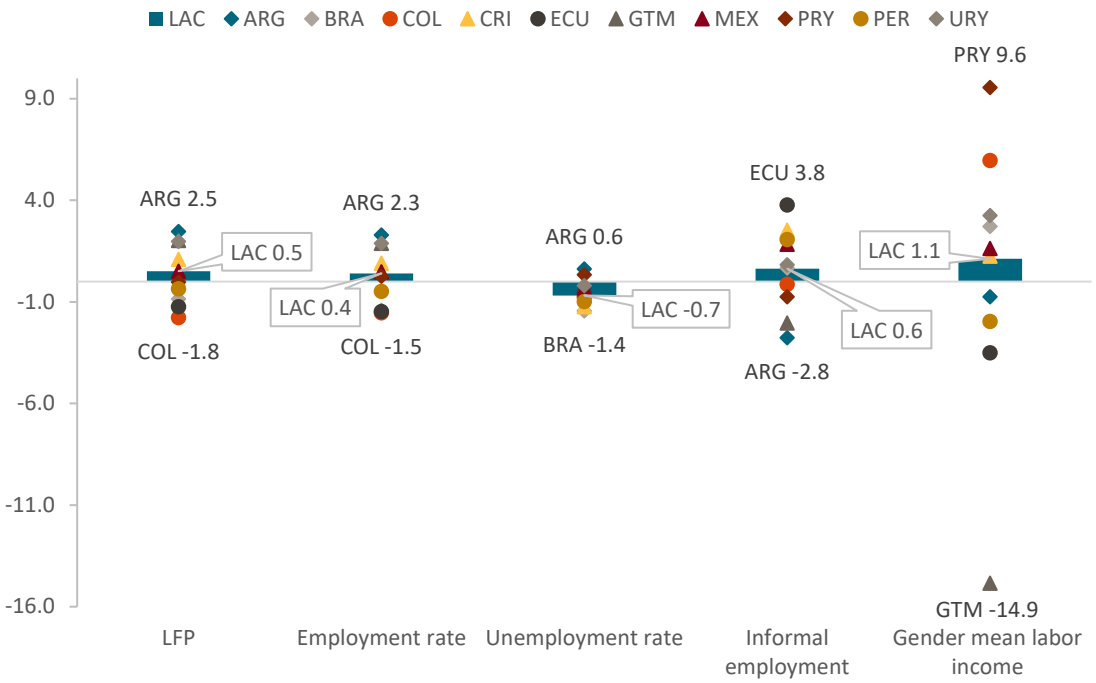
2. Changes in Labor Market Gender Gaps between 2019 and 2021

Extensive evidence on labor market dynamics shows unprecedented job losses and a massive exit from the labor force during the COVID-19 pandemic (Khamis et al. 2021; De Paz Nieves, Gaddis, and Muller 2021; Acevedo et al. 2021). For Latin America and the Caribbean, evidence suggests that approximately 25.8 million people lost their jobs in 2020 (ECLAC 2021; Leyva and Urrutia 2022), and women were among the most affected because a large proportion was employed in low-productivity occupations and the informal sector (Cucagna and Romero 2021; Kugler et al. 2021). In the rest of this section, we use survey data to describe the labor market dynamics during 2019-2021 by gender. Annex 1 provides a detailed description of the data sources, and Table A1.1 shows the descriptive statistics for the labor outcomes variables disaggregated by gender.

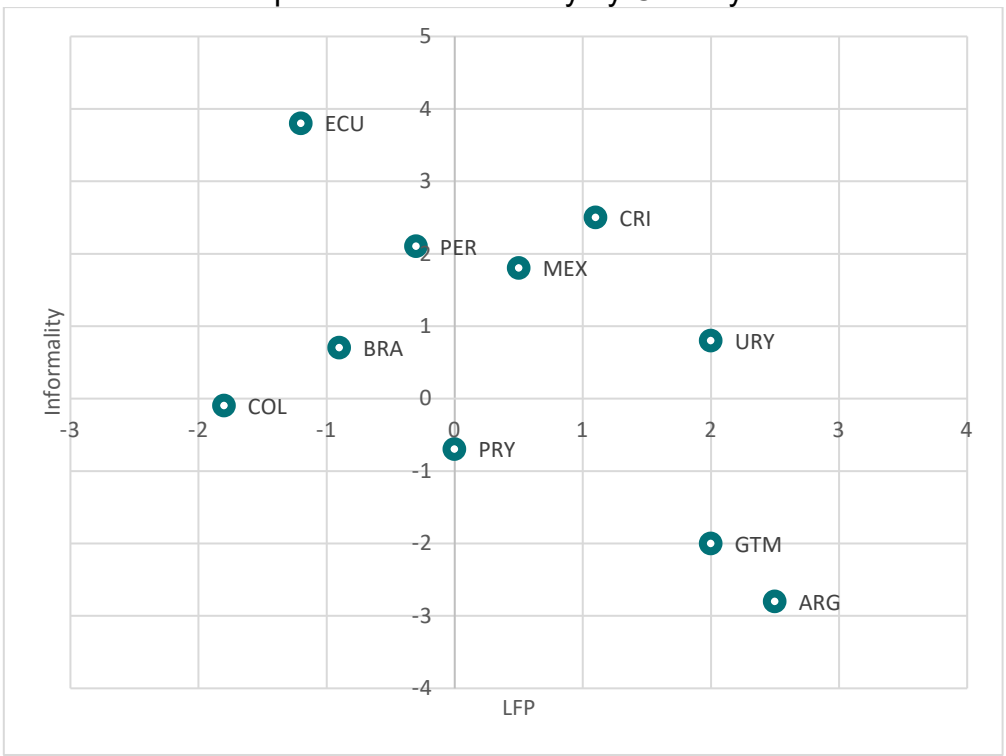
Figure 4 summarizes the changes in the unconditional gender gaps between 2019 and 2021 in labor market outcomes for the 10 countries in the sample (data can be found in Table A2.1). As before, the change in the gender gap in labor force participation and employment is measured as: $\Delta\ gap = (T_F - T_M)_{t_1} - (T_F - T_M)_{t_0}$, where T = indicator, F = Female, M = Male, t_0 = circa 2019, and t_1 = circa 2021. For the unemployment and informality rates instead, the gender gaps are calculated as: $\Delta\ gap = (T_M - T_F)_{t_1} - (T_M - T_F)_{t_0}$, so that positive values indicate improvements for women in labor market indicators. The reference values that allow for the calculation of changes in gender gaps are listed in Table A2.1.

Figure 4. Absolute Change in Labor Market Indicators for the Population Ages 15-65 Years Old in 14 Latin American and Caribbean Countries, 2019–2021 (Percentage points)

a. By Indicator



b. Labor Force Participation and Informality by Country



Source: Estimates using household or employment surveys with appropriate survey weights. Argentina – EPH (2019, 2020, 2021), Brazil – PNADC (2019, 2020, 2021), Colombia – GEIH (2019, 2020, 2021), Costa Rica – ENAHO (2019, 2020, 2021), Ecuador – ENEMDU (2019, 2020, 2021), Guatemala – ENEI (2019, 2021), Mexico – ENOE (2019, 2020, 2021) , Paraguay – EPHC (2019, 2020, 2021), Peru – ENAHO (2019, 2020, 2021), Uruguay – ECH (2019, 2020, 2021).
Note: ARG = Argentina, BRA = Brazil, COL = Colombia, CRI = Costa Rica, ECU = Ecuador, GTM = Guatemala, LAC = Latin America and the Caribbean, MEX = Mexico, PER = Peru, PRY = Paraguay, URY = Uruguay. Argentina has urban coverage only. For Argentina, Brazil, Ecuador and Mexico, the pre-pandemic period is 2019:Q3, and the pandemic period is 2021:Q3; for Chile, the pre-pandemic year is 2017, and the pandemic year is 2020; for Colombia the pre-pandemic period is August 2019 and the pandemic period is August 2021; for Costa Rica and Guatemala, the pre-pandemic year is 2019 and the pandemic year is 2021. For Peru, the pre-pandemic year is 2019, and the pandemic period is 2021:Q3. The change in the gender gap is measured as: $\Delta\ gap = (T_F - T_M)_{t_1} - (T_F - T_M)_{t_0}$, where T = indicator, F = Female, M = Male, t_0 = circa 2019, and t_1 = circa 2021. For the unemployment and informality rates the gender gaps are calculated as: $\Delta\ gap = (T_M - T_F)_{t_1} - (T_M - T_F)_{t_0}$.

2.1. Labor Force Participation

Argentina, Guatemala and Uruguay had positive absolute changes in the labor force participation gender gap (in favor of women) of 2 percentage points or more over 2019–2021. As can be seen in Table A2.1, these changes in labor force participation gaps hide different dynamics. In Argentina, women experienced an increase in the probability to be in the labor force in 2021 compared to 2019, whereas the opposite happened to men. For Guatemala instead, labor force participation increased for both genders, but for women even more. In Uruguay, female labor force participation was practically unchanged, but men's decreased. Costa Rica, Mexico, Paraguay, Peru and Brazil had changes below 1 percentage point in absolute value, that is, the gap remained practically unchanged, which suggests that pre-2019 trends were not significantly affected when comparing initial conditions in 2019 with the first stages of recovery in 2021. On the other hand, negative changes in the labor force participation gender gap were observed in Colombia (-1.8 percentage points) and Ecuador (-1.2 percentage points), which imply differences from the pre-2019 trends, but differences not large enough to constitute a major turning point relative to past decades. Both changes in the gender gaps were driven by a decrease in labor force participation much larger for women than for men. The average for the 10 countries was also marginally positive.[5]

2.2. Employment Rates

Most countries showed positive trends in favor of women, or no change, indicating that women's employment rates were affected by the crisis no more than men's employment rates. However, Colombia, Ecuador, Brazil and Peru instead widened their gaps in favor of men, although by less than 1.6 percentage points, which does not seem to be large enough to represent a substantial turning point with respect to the pre-2019 years. The same can be said about gender gaps in unemployment, which remained practically constant, except for Brazil, which registered a 2.5 percentage point and 1.4 percentage point expansion of the gender gap in favor of men, respectively.

2.3. Labor Informality

The story is mixed in the case of labor informality, measured as the proportion of the working force that does not have access to legally mandated social security benefits. Acevedo et al. (2021) show that during the pandemic shock in 2020 there was a shift towards more formality

[5] Annex 2 presents the data by country, including for Bolivia, Chile, El Salvador and the Dominican Republic, for which the latest data point is 2020. The results reveal a mixed picture.

driven by a larger exit from the labor force by informal workers, especially women. Figure 4 shows that between 2019 and 2021 the gender gap in this dimension changed positively for women in Ecuador, Costa Rica and Peru by around 2 percentage points or more, and remained practically stable in Brazil, Colombia, Paraguay and Uruguay (with variations either way of less than 1 percentage point). The only visible negative changes in the gender gap in favor of men were in Argentina and Guatemala.

2.4 Labor Income

In contrast to the other areas, the results for labor income –measured as the monthly wage in the main occupation for wage earners and self-employed– are much more noteworthy in most countries, and they shifted in favor of women. This is the case in Paraguay (9.6 percentage points), Colombia (6 percentage points), Brazil (2.7 percentage points), Mexico (1.6 percentage points), and Costa Rica (1.3 percentage points), along with a minor negative modification in Argentina, all of which imply continuation of pre-pandemic trends. The regional average was also slightly positive. There are exceptions, however. Guatemala saw a 14.9 percentage point expansion of the gender gap in favor of men, which could be taken as a turning point with respect to what was observed in previous decades (Figure 3). Ecuador and Peru also saw negative changes in the gender gap that also seem to deviate from pre-2019 trends.

The results discussed in this section show that with some exceptions, unconditional gender gaps in labor market indicators did not worsen substantially when comparing the endpoints between 2019 and 2021, and in some cases even changed in favor of women.[6]

3. Analyzing Labor Market Dynamics during the COVID-19 Pandemic

The dynamics of labor market gender gaps during 2019–2021 provide insights on the dynamics during the pandemic stage. Even in cases of minor differences when comparing the 2019 and 2021 endpoints, it is possible that trajectories within the period varied both in terms of the size of the initial shock – which could imply future scars due, for instance, to differences in the value of forgone incomes in 2020 – and the pace of recovery in 2021, when losses could have continued to accumulate.[7]

Panel (a) in Figure 5 shows the evolution of employment rates for men and women in Argentina, Brazil, Colombia and Mexico, the four countries with quarterly data covering the pre-pandemic and post-pandemic stages. In the case of Argentina and Mexico, the employment shock followed a similar path for women and men over 2020–2021, with a slightly stronger shock for men in the second quarter of 2020 for Mexico. Towards the end of 2021, women's employment rate outpaced that of men, generating a positive gender gap in both countries. In contrast, women in Brazil and Colombia were more affected by the

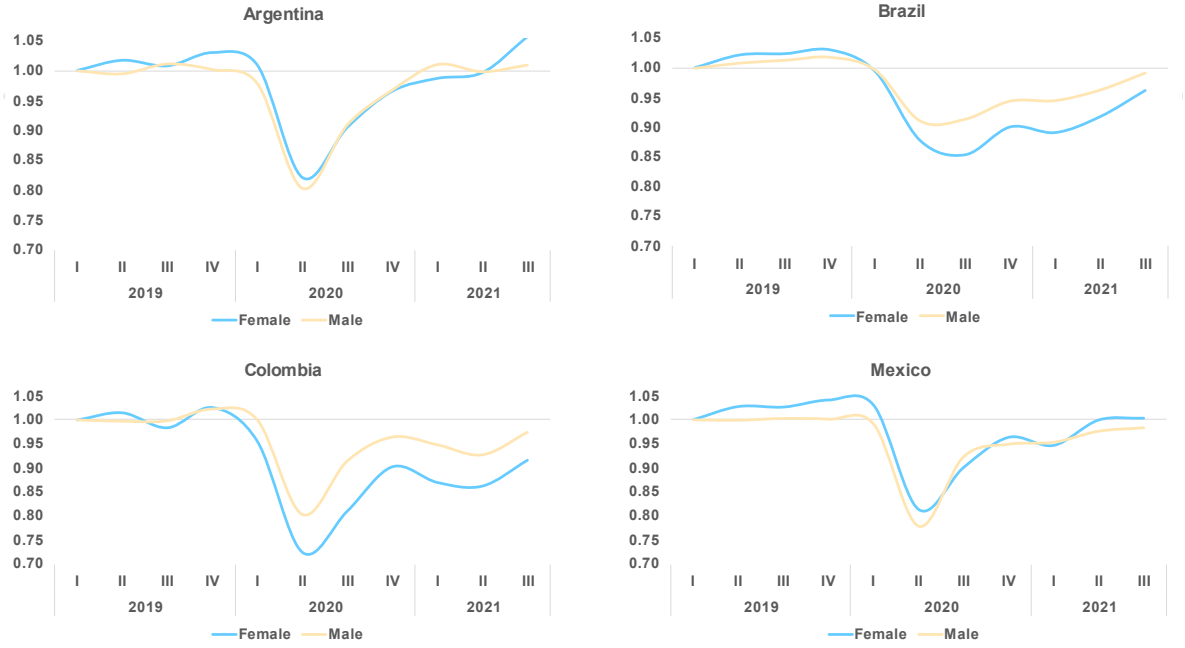
[6] Aside from the potential effects of the pandemic on labor market outcomes, there is evidence suggesting that domestic violence cases affecting women might have increased disproportionately during the confinement measures, although theft and homicide showed a downward trend (Nivette et al. 2021; Acevedo, Pérez, and Székely 2021). Also, the pandemic might have had a disproportionally negative effect on health indicators – including sexual and reproductive health – that could deepen health inequities in the region (ECLAC 2020).

[7] The data for each year of the 2019–2021 period are available for all countries except Guatemala, for which the survey was not carried out in 2020.

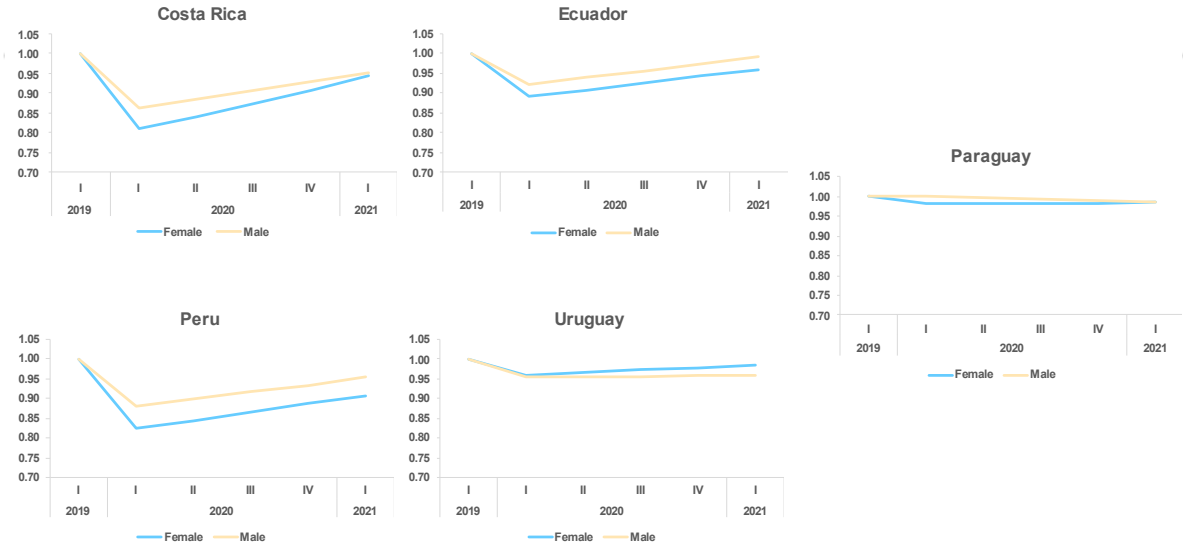
shock in the second quarter of 2020 and had a relatively delayed catch-up in 2021, which resulted in the expansion of the gender gap. In these cases, the area between the curve representing the trajectory for women and the horizontal line with unit value is greater than for men, implying larger accumulated job losses throughout the period with respect to the pre-pandemic period.

Figure 5. Path of Employment Rates for Women and Men, 2019–2021

a. Countries with Quarterly Data



b. Countries with Yearly Data



Source: Authors' calculations based on household and employment surveys using appropriate survey weights. Guatemala is not included since the survey was not carried out during 2020.
Note: Employment rates are normalized to 1 in the base year.

This contrasts with Costa Rica (Figure 5, panel b), where there was no change in the gender gap when comparing the endpoints but where, clearly, women experienced more accumulated job losses throughout the period. In Peru and Ecuador, the gap changed in favor of men due to the initial shock and remained mostly constant thereafter, with larger accumulated losses for women. In Paraguay and Uruguay, trajectories for men and women were practically the same, with a slight shift in favor of women in Uruguay.

To further understand how the pandemic might have had gender differential effects when separating the 2020 shock from the 2021 recovery stages, and keeping observable characteristics as constant, the probit models in equations (1)-(3) are estimated for the working-age population observed in 2019, 2020 and 2021:[8]

$$P(y_{ic2019} = 1|X) = \Phi(\alpha_1 X_{ic2019} + \beta_1 woman_{ic2019} + \gamma_1 (X_{ic2019} \times woman_{ic2019}) + \delta_c) \quad (1)$$

$$P(y_{ic2020} = 1|X) = \Phi(\alpha_2 X_{ic2020} + \beta_2 woman_{ic2020} + \gamma_2 (X_{ic2020} \times woman_{ic2020}) + \delta_c) \quad (2)$$

$$P(y_{ic2021} = 1|X) = \Phi(\alpha_3 X_{ic2021} + \beta_3 woman_{ic2021} + \gamma_3 (X_{ic2021} \times woman_{ic2021}) + \delta_c) \quad (3)$$

where y_{ict} is a dummy with unit value when the individual *i* in country *c* in year *t* is either working, unemployed or inactive. One of the advantages of using a nonlinear probability model like probit rather than a linear probability model is that the predicted probabilities derived from it will always be between zero and one. Survey weights for each survey wave *ct* are used to make estimations representative of the population.

[8] Individuals between 15 and 65 years old.

Once the sample is restricted to only employed individuals, y_{ict} is a dummy with unit value when the employed individual works in the informal sector, works in the primary, secondary or tertiary sector, is an employee, is self-employed, is an employer, or is a non-remunerated employee/domestic worker.

Φ is the standard normal cumulative function. X_{ict} are observable characteristics: dummies indicating the age cohort (14-24 [base category], 25-44, 45-54, and 55-65 years old); education levels (no education [base category], primary completed, secondary completed, tertiary completed); if the individual lives with a child between 0 and 5 years old in the household; if the individual lives with a child between 6 and 14 years old in the household; an indicator variable distinguishing heads of the household; and an indicator variable capturing whether the individual lives in an urban or rural area. For Brazil, Ecuador and Peru, it is also possible to include a dummy with unit value when the individual is indigenous.

All the characteristics X_{ict} are included by themselves and interacted with a dummy with unit value when the individual is a woman, $woman_{ict}$.

The survey data employed are not a panel but repeated cross-sections, with different respondents interviewed in each year. That is why to compare whether the likelihood of working (or other outcome variables) changes in time for different types of women (by education, age, number of children, role in the household, area), a separate model is fitted for each time period, pooling together all countries, but separately for 2019, 2020 and 2021. Equal weights are given to each country year, and country fixed effects δ_c are also included.[9]

Since the models in equations (1)-(3) are nonlinear, the interpretation of estimated coefficients *β* and *γ* is not straightforward, and tests on partial effects and interaction terms are uninformative in the context of the model (Greene 2010). Most economists compute instead marginal effects, which measure the effect on the conditional mean of y of a change in one of the regressors, which will depend not only on *β* and *γ*, but also on the values of all the other regressors (see AI and Norton 2003; Green 2010; Cameron and Trivedi 2010; Williams 2012).

The marginal effect for a dichotomous variable like $woman_{ict}$ will show how $P(y_{ict} = 1|X)$ changes as the variable $woman_{ict}$ switches from 0 to 1, after controlling in some way for the other variables in the model. In other words, the marginal effect is the difference in the adjusted predictions for the two groups, women and men.

Rather than using the means of the other variables when computing predicted values, some argue it is best to use the actual observed values for the variables (Williams 2012). We will follow this approach to compute predicted probabilities for each observation and then average the predicted values.

As Williams (2012) explains very clearly, the intuition behind the computation of the average marginal effects (AME) for being a woman using the actual observed values of the other regressors works as follows: i) the first observation in the sample is treated as if she was a woman, regardless of what the person's gender actually is, leaving all other independent variable values as is; ii) then we compute the probability that this person (if she was a

[9] Estimates are not significantly different if, rather than giving equal weights to each country/year, equal weights are assigned to countries.

woman) would have $y_{ict} = 1$; iii) we'll then do the same but treating the person as though she was a man; iv) the difference in the two probabilities just computed is the marginal effect for that observation; v) the process is repeated for every observation, and the average of all the marginal effects are computed, which gives us the AME for being woman.

In sum, predicted probabilities and AME are calculated at the observed values of the covariates for each year and a seemingly unrelated estimation is used to combine estimates and test the equality of predictions and effects across models.[10] Standard errors are computed by using the linearized variance estimator based on a first-order Taylor series approximation (Wolter 2007), which in non-survey data corresponds to the Huber/White/Sandwich estimator (StataCorp 2021, 6).

Finally, equations (1)-(3) are estimated for each country separately in order to gain a better understanding of within-country dynamics.[11]

This section considers only data for Argentina, Brazil, Colombia, Costa Rica, Ecuador, Mexico and Peru.[12]

Data for 2019 show that women and men in the sample were on average 55 percent and 75 percent likely to work, respectively, which yields a significant 20 percentage point gap for that year (Figure 6). As already shown above, in 2020 labor markets were strongly affected, with the hardest hit taking place in March 2020. Throughout the year, women became 15 percent less likely to work than in 2019, while men became 10 percent less likely to work (Table A2.2).

Keeping all else constant, the shock to women's likelihood of working in 2020 was large and negative in all countries (Figure 6), with women becoming less likely to work compared to 2019 by 19 percent in Costa Rica, 18 percent in Peru, 17 percent in Colombia, 16 percent in Brazil, 13 percent in Argentina, 11 percent in Mexico, and 8 percent in Ecuador. Men were less hit by the pandemic in this regard. Regardless of the dynamics during the recovery process, the accumulated losses derived from greater shock for women in 2020 could leave different types of scars for the future. These include the depletion of family assets – which could in turn result in greater future vulnerability – along with difficulties in re-engaging in the

[10] Seemingly unrelated estimation allows for the computation of cross-model covariances that are needed to test for predictions and effects across models. See Mize, Doan and Long (2019) for more details on the methodology.

[11] Since the household surveys for Colombia, Costa Rica and Mexico also provide information on how individuals spend their time, weekly hours spent on domestic activities or care are included as the dependent variable, which in this case will be estimated through ordinary least squares. Results are presented in the Appendix.

[12] Guatemala is not included because a 2020 survey is not available, while for Paraguay and Uruguay the 2020 datasets have only limited variables, which restricts the controls that can be included.

labor market due to the temporary exit from it, and a reduction in wage levels that may persist even after the shock.[13]

In fact, after the accumulated losses in 2020, the likelihood of working did improve in all countries in 2021, with women less likely to work than men as compared to 2019 in all cases except for urban Argentina. These dynamics can be observed in Figure 6, which plots the percentage change in estimated probabilities to work for men and women in 2020 vs 2019 and in 2021 vs 2019 calculated with seemingly unrelated estimation of equations (1)-(3).

Figure 6. Estimated Change in the Probability of Working for Men and Women in 2020 and 2021 Compared to 2019 (Percent)

Source: Authors' calculations from household and employment surveys using appropriate survey weights.

Since the 2020 shock affected women more, it is not surprising that their rebound was more pronounced, except for Ecuador. Specifically, the size of the rebound in the likelihood of working (calculated by subtracting the 2021 values from the 2020 values) was 5 percentage points greater for women than for men in Argentina and Costa Rica, 3 percentage points greater in Brazil, Mexico, and Peru, and 2 percentage points greater in Colombia. The only country where the rebound was greater for men was Ecuador, but even in that case the difference was 1 percentage point. On average, for the seven countries analyzed in Figure

[13] The same approach is used to explore changes in the likelihood of becoming inactive, engaging in formal employment, experiencing unemployment, and participating in different sectors of activity. The likelihood of becoming inactive in 2020 increased for women and men by 21 percent and 47 percent, respectively, while the probability of becoming unemployed increased by 29 percent and 43 percent, respectively. Women who remained in the labor force were more likely to be formal by 4 percent compared to 2019, whereas for men the likelihood remained the same. This implies that women with formal jobs were more likely to remain in the labor market compared to women in informal occupations. Nevertheless, men became 3 percent more likely to be self-employed and women 6 percent more likely to be self-employed, and both became 2 percent less likely to be salaried workers.

6, the rebound in women's likelihood of working during 2021 was 2 percentage points above that observed for men, almost fully offsetting the largest declines.

To further quantify the magnitude of the accumulated employment losses, a calculation Is made of the value in wage terms of the distance between the trajectories plotted in Figure 5 and the unit value horizontal line (the wage bill). This is done by multiplying the average wages observed in 2019 by the number of jobs lost in each quarter of 2020–2021 (for the countries with yearly data, we interpolate between the data points). Table 1 presents the results.

Relative to the 2019 wage bill (i.e., employed population multiplied by individual wages), women lost considerably more labor income than men in Colombia (45 percentage points), Brazil (26 percentage points), Peru (14 percentage points), and Costa Rica and Ecuador (6 percentage points each). In Argentina, relative losses were similar for men and women, while in Mexico (4.5 percentage points) and Uruguay (3 percentage points) men's losses were above women's, although with small differences. In terms of GDP, Colombia and Brazil showed the largest losses for women of 1.3 percent and 0.7 percent, respectively.

Table 1. Monetary Value of Job Losses during the COVID-19 Pandemic

Country	Employed in 2019 (Millions)		Accumulated Jobs Lost 2020–2021 (Millions)		Value of Accumulated Jobs Lost in 2020–2021 as a Percent of 2019 Wage Bill		Value of Accumulated Jobs Lost in 2020–2021 as a Percent of GDP	
	Women	Men	Women	Men	Women	Men	Women	Men
Argentina	5.15	6.78	1.69	2.22	32.8	32.8	0.12	0.21
Brazil	39.52	52.96	23.51	17.69	59.5	33.4	0.70	0.65
Colombia	9.08	12.88	8.32	6.01	91.6	46.7	1.29	0.99
Costa Rica	0.83	1.27	0.20	0.24	24.6	18.5	0.23	0.30
Ecuador	3.37	4.61	0.50	0.40	14.8	8.7	0.20	0.19
Mexico	20.88	33.27	7.84	13.93	37.5	41.9	0.17	0.39
Peru	8.02	9.22	2.96	2.10	36.9	22.8	0.20	0.23
Uruguay	0.73	0.89	0.04	0.08	5.6	8.6	0.06	0.14

Source: Authors' calculations based on household and employment surveys using appropriate survey weights.

The dynamics over the 2019–2021 period are important due to their potential negative consequences for the future of the labor market. After controlling for a set of personal characteristics, women were in fact harder hit in 2020 by the pandemic shock in terms of the likelihood to work, and although their rebound in 2021 was generally larger than men's, they still had less of a likelihood to work (except for Argentina) than in 2019. Additionally, the value of job losses relative to the pre-pandemic wage bill was considerably higher for women in most cases.

4. Who Was Hardest Hit by the COVID-19 Pandemic?

To better depict the most affected groups among women by the COVID-19 crisis, this section delves into the specific characteristics of the different groups. The findings are summarized in Table 2.

4.1. Education

In 2020, all women were affected by the pandemic crisis, regardless of their education level. Women with tertiary education were the least affected in relative terms, becoming 11 percent less likely to work. In 2021, men and women recovered, but not fully, while women across all education levels still fared significantly worse (by approximately 1 percentage point) than men.

4.2. Age

When looking at differences across age groups,[14] it is observed that women ages 14-24 were the most affected by the pandemic crisis in 2020, becoming 19 percent less likely to work than in 2019. In 2021, while men ages 14-24 fully went back to 2019 levels, women were still 4 percent less likely to work. In relative terms, women ages 55-65 were those still lagging, being 6 percent less likely to work

4.3. Household Heads

Women heads of households were 2 percentage points less likely to work than men heads of households in 2020. In 2021, women heads of households were still 3 percent less likely to work, showing an even wider gender gap with men heads of households than in 2019.

[14] In 2019, the conditional probability to work for women was 32 percent for those 14-24 years old (24 percentage points less than men), 67 percent for 24-54 year old (19 percentage points less than men), and 46 percent for 55-65 year old (24 percentage points less than men).

Table 2. Estimated Change in the Probability of Working by Group, 2020 and 2021 Compared to 2019 (Percent)

By Level of Education		
Group	**Men**	**Women**
2020		
None	-11.0***	-15.2***
Primary	-11.1***	-16.3***
Secondary	-10.9***	-16.3***
Tertiary	-7.2***	-11.4***
2021		
None	-3.8**	-7.8***
Primary	-1.8***	-4.6***
Secondary	-1.8***	-4.5***
Tertiary	-1.1***	-3.3***
By Age Group		
Group	**Men**	**Women**
2020		
14-24	-14.4***	-18.8***
25-44	-8.3***	-13.9***
45-55	-8.4***	-13.8***
56-65	-11.4***	-16.0***
2021		
14-24	-1.2	-4.1***
25-44	-1.2***	-3.4***
45-55	-1.5***	-4.1***
56-65	-2.7***	-6.3***
By Household Head		
Group	**Men**	**Women**
2020		
Head	-7.7***	-12.8***
No head	-11.3***	-16.4***
2021		
Head	-1.2***	-3.5***
No head	-1.7***	-4.6***

By Area		
Group	**Men**	**Women**
2020		
Rural	-5.6***	-8.4***
Urban	-10.6***	-15.9***
2021		

Rural	0.0	-1.4
Urban	-1.7***	-4.4***
By Number of Children in the Household		
Group	**Men**	**Women**
2020		
Child 0-5	-9.0***	-13.5***
Child 6-14	-9.5***	-14.3***
No child 0-5	-9.9***	-14.8***
No child 6-14	-9.7***	-14.6***
2021		
Child 0-5	-1.1**	-3.3***
Child 6-14	-0.7**	-2.8***
No child 0-5	-1.6***	-4.0***
No child 6-14	-1.8***	-4.5***
By Sector of Occupation		
Group	**Men**	**Women**
2020		
Primary Sector	10.7***	21.2***
Secondary Sector	-2.1**	-1.9
Tertiary Sector	-2.2***	-2.8***
2021		
Primary Sector	3.6***	12.5***
Secondary Sector	0.9	-4.3***
Tertiary Sector	-1.8***	-0.7**
By Occupation		
Group	**Men**	**Women**
2020		
Self-employed	3.2***	5.7***
Employee	-1.9***	-2.2***
Family worker	23.8***	1.4
Employer	-13.0***	-19.2***
2021		
Self-employed	5.0***	7.9***
Employee	-1.9***	-2.7***
Family worker	7.1**	-2.9
Employer	-8.7***	-15.4***

Source: Authors' calculations based on household and employment surveys using appropriate survey weights.

4.4. Children

There were few differences in terms of changes in the likelihood of working when dividing the population by the number of children of different ages in the household. Viollaz et al. (2022) find that female labor force participation and employment were more affected than

men's during the first stages of the pandemic, and that the effect of the pandemic was significantly stronger for women with school-age children over four quarters for a set of balanced panel samples from Brazil, Chile, the Dominican Republic and Mexico. For the present analysis, no significant differences in the probability of working were found between women with and without school-age children. Nevertheless, in 2021 both groups were significantly less likely to work compared to men with and without school-age children.

4.5. Urban versus Rural

Women in urban areas became 16 percent less likely to work, widening the gap with men, while women in rural areas became only 8 percent less likely to work, with no significant gender differences. In 2021, women in urban areas were still 4 percent less likely to work than in 2019, while in rural areas they fully recovered pre-pandemic levels. Formal workers in 2020 – despite their gender and residence – were still more likely to work.

4.6. Sector of Employment

In 2020, the tertiary sector – the only one where women were more likely to be working than men – was the hardest hit by the pandemic crisis. In that year, women also became 2 percent less likely to be working in the secondary sector and 21 percent more likely to be working in the primary sector. The figures were unchanged in 2021.

4.7. Occupation

In 2020, there was a significant but temporary increase of family workers among men by 24 percent and a decrease in absolute terms in the probability to be employers for both men and women (by 13 percent and 19 percent, respectively). When comparing results for 2021 versus 2019, women were 3 percent less likely to work as salaried employees (with no significant differences as a result of having children at home), 15 percent less likely to be an employer, and 3 percent less likely to be family workers. However, women were 8 percent more likely to be self-employed.

4.8. Other Groups

A few of the countries in the sample allow for analyzing differences by ethnicity and by use of time patterns. The results for each of these categories vary considerably from case to case and are discussed in Annex 3.

4.9. Summary: Women Hardest Hit by the Pandemic Shock

In sum, women with tertiary education were the least affected in relative terms during the labor market shock resulting from the COVID-19 pandemic. Young women (ages 14-24) were the most affected, becoming 19 percent less likely to work and, despite the recovery, 4 percent more likely to be informal in 2021 (more than other age groups). Women in urban areas were more affected than men, and more affected than women in rural areas. In 2020, women became more likely to work in the primary sector and less likely to work in the tertiary sector, a shift that was not fully reversed in 2021. Few differences emerge when considering household characteristics.

5. Conclusions

This paper has analyzed whether the COVID-19 pandemic in Latin America and the Caribbean affected women's labor market outcomes more than men's. In contrast with previous studies, this paper used data for a larger number of countries (14) and looked at labor market dynamics during the 2019–2020 shock and during the start of the economic recovery process in 2020–2021.

The analysis found that the previous two-decade trend of declining gender gaps was not considerably altered in most countries as a result of the pandemic crisis. Gaps widened in Brazil, Colombia and Ecuador for labor force participation and employment levels, but not enough to represent a significant turning point. Notably, wage gender gaps continued to decline in most of the sample of countries.

A closer look at the dynamics over the period, controlling for a large set of personal characteristics and composition effects, shows that women were harder hit in terms of employment losses, that they continued to be less likely to work in 2021 than in 2019, and that in a subset of countries the gender gap widened. The rebound for women in terms of employment levels was larger than for men in 2020–2021, but that rebound apparently was not large enough to counterbalance initial losses.

The income value of employment losses was considerably greater for women in most countries. Aside from the short-term effects implied, this issue is relevant because the accumulated losses can leave future scars by generating vulnerability through the depletion of family assets. It can also affect future wages and reduce labor market re-insertion probabilities. This could be part of the reason why women still had less of a likelihood to work than men in 2021, despite the rebound.

Women with less than tertiary education, those in the 14-24 year-old age group, those in urban areas, and those working in the tertiary sector were the most affected by the pandemic. These groups witnessed both larger initial shocks in 2020 and a weaker rebound in their likelihood to be working by 2021.

Even though the trends in labor market gaps did not reverse substantially, gender differences in the likelihood of working, access to formal employment, and wages are still sizable. It is important to implement gender-neutral policies that favor formality (and thus women, who are more likely to be informal in the region); offer full-time childcare services, parental leave, and long-term care facilities for older adults; punish wage discrimination; and combat stereotypes. Moreover, since women with tertiary education proved to be most resilient to the shock, it is important to keep investing in accessible quality education to create a more resilient workforce and prevent exit from labor markets with potentially detrimental consequences in the longer term.

Annex 1. Data Description for the Employment or Household Surveys

For this research, we use cross-sectional data from national household or employment surveys for 14 countries in Latin America for the period 2019-2021. For Argentina, we used the Permanent Household Survey (*Encuesta Permanente de Hogares* – EPH, in Spanish) for the third quarter of 2019, 2020, and 2021. The survey only has urban coverage and is carried out quarterly by the National Institute of Statistics and Censuses (INEC, by its acronym in Spanish), available at https://www.indec.gob.ar/indec/web/Institucional-Indec-BasesDeDatos. The survey collects data on living conditions.

For Bolivia, we used the Household Survey (*Encuesta de Hogares* – ECH, in Spanish) for 2019 and 2020, both years were available at the start of this project. It is a nationally representative survey and is carried out annually by the Institute of Statistics (INE, by its acronym in Spanish). The survey collects data on household characteristics, employment, income, and education, among others. The database is available at https://www.ine.gob.bo/index.php/estadisticas-sociales/vivienda-y-servicios-basicos/encuestas-de-hogares-vivienda/.

For Brazil, we used the nationally representative Continuous National Sample Survey (*Pesquisa Nacional por Amostra de Domicilio Contínua* – PNADC), for the third quarter of 2019, 2020, and 2021. The quarterly survey collects data on labor force and income indicators. For this project, we use the data series updated on February 24, 2022 –which incorporates the new weighting structure for the survey. The data is available at https://www.ibge.gov.br/en/statistics/social/labor/16833-monthly-dissemination-pnadc1.html?=&t=microdados.

For Chile, the survey is the Economic Characterization Survey (*Encuesta de Caracterización Socioeconómica Nacional* – CASEN, in Spanish) for 2017 and 2020. The survey is carried out biannually or triennially, and it has national coverage. The survey covers topics such as education, employment, income, social programs, etc. The survey is available at http://observatorio.ministeriodesarrollosocial.gob.cl/encuesta-casen-en-pandemia-2020.

For Colombia, we used the Great Integrated Household Survey (*Gran Encuesta Integrada de Hogares* – GEIH, in Spanish) for August 2019, August 2020, and August 2021, carried out by the National Administrative Department of Statistics (DANE, by its acronym in Spanish). The survey is nationally representative, and the data is collected throughout the year. The topics cover education, employment, income, and household demographics, among others. The surveys used in this project use the 2005 sampling framework and are available at https://microdatos.dane.gov.co/catalog/MICRODATOS/about_collection/23.

For Costa Rica, National Household Survey (*Encuesta Nacional de Hogares* – ENAHO, in Spanish) for 2019, 2020, and 2021. The survey has national coverage and is nationally representative. The National Institute of Statistics and Censuses (INEC, by its acronym in Spanish) carries out the survey annually, collecting information about living conditions. The survey is available at https://inec.cr/estadisticas-fuentes/encuestas/encuesta-nacional-hogares.

For the Dominican Republic, the data comes from the Continuous National Labor Force Survey (*Encuesta Nacional Continua de Fuerza de Trabajo* – ENCFT, in Spanish) for the

fourth quarter of 2019 and 2020, which is nationally representative. The quarterly survey collects data on labor force and income indicators. The survey is available upon request.

For Ecuador, we used the National Employment, Unemployment and Under-employment Survey (*Encuesta Nacional de Empleo, Desempleo y Subempleo* – ENEMDU, in Spanish) for the third quarter of 2019, 2020, and 2021. The survey is carried out by the National Institute of Statistics and Censuses (INEC, by its acronym in Spanish), is nationally representative, and covers topics such as education, employment, and income. The survey is available at https://www.ecuadorencifras.gob.ec/enemdu-trimestral/.

For El Salvador, the data comes from the Household Survey for Multiple Purposes (*Encuesta de Hogares de Propósitos Múltiples* – EHPM, in Spanish) for 2019 and 2020, which is nationally representative. The survey collects data on housing, household characteristics, education, employment, and income. The survey is carried out annually by the National Office of Statistics and Censuses (ONEC, by its acronym in Spanish), formerly the General Administration of Statistics and Censuses (DIGESTYC, by its acronym in Spanish). The survey is available at https://onec.bcr.gob.sv/Repositorio_archivos/.

For Guatemala, we used data from the National Employment and Income Survey (*Encuesta Nacional de Empleo e Ingresos*- ENEI, in Spanish) for 2019 and 2021; for 2020, the survey was not carried out. The survey is collected once or twice a year by the National Statistics Institute (INE, by its acronym in Spanish) and is nationally representative. The survey is available at https://www.ine.gob.gt/encuesta-nacional-de-empleo-e-ingresos/.

For Mexico, the data comes from the third quarter of the National Survey of Occupation and Employment (*Encuesta Nacional de Ocupación y Empleo* – ENOE, in Spanish) for 2019, 2020, and 2021. The survey has national coverage and is carried out quarterly by the National Institute of Statistics and Geography (INEGI, by its acronym in Spanish). The survey covers topics such as labor force, occupation, employment, and income. As of 2021, the survey weights incorporate the new population estimates. The survey is available at http://en.www.inegi.org.mx/programas/enoe/15ymas/.

For Paraguay, we used the nationally representative Continuous Permanent Household Survey (*Encuesta Permanente de Hogares Continua* – EPHC) for 2019, 2020, and the third quarter of 2021. The survey is carried and quarterly for labor indicators and it is published annually for labor, and other socioeconomic indicators. The data is available at https://www.ine.gov.py/microdatos/.

For Peru, we used the National Household Survey (*Encuesta Nacional de Hogares* – ENAHO), 2019, 2020, 2021. The survey is nationally representative, and the data is collected throughout the year by the National Institute of Statistics and Informatics (INEI, by its acronym in Spanish). The survey collects data on employment, income, education, expenditures, social programs, and household characteristics. The data is available at http://iinei.inei.gob.pe/microdatos/.

For Uruguay, the data comes from the nationally representative Continuous Household Survey (*Encuesta Continua de Hogares* – ECH, in Spanish) 2019, 2020, and the first semester of 2021. During 2020 and the first semester of 2021, the survey was collected via telephones using a subsample of the 2019 survey, thus only a set of labor market variables are available. The data is available at https://www.ine.gub.uy/encuesta-continua-de-hogares1.

For the analysis, we use these representative sample surveys of the population of 15 years and older for each country to calculate labor market outcomes such as labor force participation, employment rate, unemployment rate, the share of informal workers, and the share of the population out of the labor force. Labor force participation is expressed as a percentage of the working-age population and includes the employed and unemployed population. For making cross-country comparisons, we use 15 years and older as the working-age population –similar to the cutoff used by International Labour Organization.[15]

The employment rate is defined as the percentage of the working-age population ages 15 and older who reported working or having a job in the period of reference –usually the week prior to the survey. The unemployment rate is the percentage of the labor force that is not working during the period of reference but is available for work and has taken measures to seek paid employment. For the share of informal employment, we defined formal work as having access to social security. The economically inactive population is defined as the percentage of the working-age population 15 years and older who are neither employed nor unemployed.

When using survey data, we use the appropriate survey weights to estimate the population parameters and to make valid estimates and inference analyses of the population. Finally, all the indicators are disaggregated by gender. Table A1.1 shows the descriptive statistics of the outcome variables.

[15] More information is available at https://ilostat.ilo.org/resources/concepts-and-definitions/description-labour-force-statistics/#:~:text=The%20labour%20force%20is%20the,the%20number%20of%20persons%20unemployed.

Table A1.1. Descriptive Statistics for the Labor Outcomes by Sex, Latin America, 2019–2021

Country	2019						2020						2021					
	Female			Male			Female			Male			Female			Male		
	Average (%)	S.D.	Obs.	Average (%)	S.D.	Obs.	Average (%)	S.D.	Obs.	Average (%)	S.D.	Obs.	Average (%)	S.D.	Obs.	Average (%)	S.D.	Obs.
Labor force participation 15+																		
ARG	50.1***	0.500	23,402	71.9	0.450	21,020	46.1***	0.499	17,333	65.9	0.474	15,496	51.5***	0.500	20,519	70.8	0.455	18,261
BOL	61.4***	0.487	14,438	81.2	0.390	13,319	60.4***	0.489	13,627	80.9	0.393	12,748						
BRA	55.4***	0.497	226,400	74.9	0.433	210,336	48.1***	0.500	155,337	69.8	0.459	140,797	53.1***	0.499	183,779	73.4	0.442	167,808
CHL	48.9***	0.500	92,940	71.6	0.451	82,136	46.7***	0.499	82,687	65.8	0.474	68,628						
COL	55.7***	0.497	26,637	79.6	0.403	22,827	50.1***	0.500	26,605	77.4	0.418	22,758	53.1***	0.499	25,516	78.8	0.409	21,257
CRI	44.3***	0.497	14,402	71.7	0.450	13,219	40.0***	0.490	10,639	67.4	0.469	9,797	43.1***	0.495	13,487	69.5	0.460	12,337
DOM	52.4***	0.499	7,821	78.1	0.414	7,499	47.7***	0.500	6,541	74.4	0.436	6,257						
ECU	56.7***	0.495	23,550	79.4	0.405	21,938	51.6***	0.500	11,895	74.5	0.436	11,290	54.7***	0.498	36,055	78.7	0.410	33,349
GTM	38.7***	0.487	8,900	83.1	0.375	7,560							43.3***	0.495	9,225	85.6	0.351	7,965
MEX	44.9***	0.497	158,570	77.5	0.417	142,870	39.9***	0.490	117,833	72.5	0.446	106,433	44.2***	0.497	170,464	76.3	0.425	153,148
PER	63.6***	0.481	47,658	79.2	0.406	44,208	54.0***	0.498	46,770	72.5	0.447	43,796	63.2***	0.482	10,678	79.2	0.406	9,810
PRY	60.1***	0.490	20,068	85.0	0.357	19,620	60.5***	0.489	6,586	84.7	0.360	6,326	59.1***	0.492	5,438	84.0	0.367	5,168
SLV	44.7***	0.497	30,320	76.4	0.425	25,597	44.7***	0.497	15,238	74.9	0.434	12,873						
URY	55.9***	0.497	47,640	71.5	0.451	40,616	54.7***	0.498	66,092	69.2	0.462	54,668	55.8***	0.497	29,819	69.5	0.460	24,724
Employment rate 15+																		
ARG	44.7***	0.497	23,402	65.5	0.476	21,020	40.1***	0.490	17,333	58.9	0.492	15,496	46.8***	0.499	20,519	65.3	0.476	18,261
BOL	58.3***	0.493	14,438	78.3	0.412	13,319	54.0***	0.498	13,627	75.5	0.430	12,748						
BRA	47.5***	0.499	226,400	67.5	0.468	210,336	39.7***	0.489	155,337	60.8	0.488	140,797	44.7***	0.497	183,779	66.1	0.474	167,808
CHL	44.6***	0.497	92,940	66.5	0.472	82,136	40.2***	0.490	82,687	58.3	0.493	68,628						
COL	47.7***	0.499	26,637	73.0	0.444	22,827	39.2***	0.488	26,605	67.0	0.470	22,758	44.4***	0.497	25,516	71.3	0.452	21,257
CRI	39.3***	0.489	14,402	66.1	0.473	13,219	31.9***	0.466	10,639	56.9	0.495	9,797	37.2***	0.483	13,487	63.0	0.483	12,337
DOM	47.7***	0.500	7,821	75.2	0.432	7,499	42.5***	0.494	6,541	70.7	0.455	6,257						
ECU	53.3***	0.499	23,550	76.2	0.426	21,938	47.5***	0.499	11,895	70.3	0.457	11,290	51.2***	0.500	36,055	75.5	0.430	33,349
GTM	37.7***	0.485	8,900	81.7	0.387	7,560							42.0***	0.494	9,225	84.0	0.366	7,965
MEX	43.2***	0.495	158,523	74.6	0.435	142,821	38.0***	0.485	117,775	68.7	0.464	106,378	42.3***	0.494	170,459	73.2	0.443	153,145

PER	61.0***	0.488	47,658	76.6	0.423	44,208	50.3***	0.500	46,770	67.5	0.469	43,796	58.2***	0.493	10,678	74.3	0.437	9,810
PRY	55.3***	0.497	20,068	80.5	0.396	19,620	54.3***	0.498	6,586	80.5	0.396	6,326	54.4***	0.498	5,438	79.4	0.405	5,168
SLV	42.9***	0.495	30,320	73.4	0.442	25,597	42.3***	0.494	15,238	71.4	0.452	12,873						
URY	49.9***	0.500	47,640	66.3	0.473	40,616	47.9***	0.500	66,092	63.2	0.482	54,668	49.1***	0.500	29,819	63.6	0.481	24,724
Unemployment rate 15+																		
ARG	10.8***	0.311	11,335	8.9	0.285	14,632	13.1	0.338	7,641	10.6	0.308	9,977	9.0	0.286	9,786	7.7	0.266	12,298
BOL	5.0	0.219	8,606	3.6	0.187	10,593	10.6***	0.308	7,883	6.7	0.250	10,214						
BRA	14.3***	0.350	113,772	9.9	0.299	148,708	17.5***	0.380	68,267	12.9	0.335	91,668	15.9***	0.365	87,340	10.1	0.301	115,029
CHL	8.8***	0.283	42,809	7.1	0.257	57,411	13.9***	0.346	36,841	11.4	0.318	43,998						
COL	14.5***	0.352	14,805	8.2	0.274	17,443	21.7	0.412	13,162	13.5	0.342	16,549	16.5***	0.371	13,280	9.5	0.293	15,803
CRI	11.1***	0.314	6,268	7.9	0.269	9,462	20.3***	0.403	4,087	15.5	0.362	6,539	13.8*	0.345	5,710	9.3	0.291	8,588
DOM	8.9***	0.284	4,060	3.8	0.190	5,908	11.0***	0.312	3,071	5.0	0.217	4,718						
ECU	6.0	0.238	13,501	4.0	0.196	17,257	8.0	0.271	6,203	5.7	0.231	8,538	6.5***	0.247	20,054	4.0	0.195	25,588
GTM	2.5**	0.157	3,631	1.7	0.128	6,152							2.9	0.169	4,193	1.8	0.133	6,658
MEX	3.7***	0.190	75,087	3.8	0.190	109,915	4.9***	0.215	49,795	5.3	0.225	76,570	4.4***	0.206	78,748	4.1	0.199	116,104
PER	4.0	0.196	30,732	3.3	0.178	35,251	6.9***	0.254	26,305	6.9	0.254	32,543	7.9	0.270	6,950	6.2	0.242	7,896
PRY	8.0	0.271	11,709	5.3	0.223	16,481	10.2***	0.303	3,824	4.9	0.217	5,310	7.9	0.270	3,133	5.5	0.228	4,319
SLV	4.2***	0.200	13,072	3.9	0.194	19,574	5.5***	0.227	6,487	4.7	0.212	9,835						
URY	10.7***	0.309	25,528	7.3	0.261	27,939	12.4***	0.329	34,476	8.6	0.281	35,919	12.0***	0.325	15,754	8.5	0.278	16,069
Informal employment 15+																		
ARG	47.7***	0.500	10,321	51.0	0.500	13,523	43.4***	0.496	6,935	47.4	0.499	9,123	47.9***	0.500	9,052	48.4	0.500	11,558
BOL	82.0***	0.384	8,091	76.9	0.422	10,147	81.8***	0.386	6,909	78.5	0.411	9,464						
BRA	36.0***	0.480	98,470	38.3	0.486	134,758	32.2***	0.467	57,221	36.3	0.481	80,818	35.3***	0.478	74,417	38.3	0.486	104,408
CHL	33.5***	0.472	39,027	30.6	0.461	53,390	28.3***	0.451	31,738	27.3	0.446	38,838						
COL	61.7***	0.486	12,634	62.7	0.484	15,738	58.6***	0.493	10,109	63.1	0.483	13,751	62.7***	0.484	10,954	63.6	0.481	13,942
CRI	32.8***	0.469	5,556	26.4	0.441	8,713	28.4***	0.451	3,231	24.2	0.428	5,541	31.3***	0.464	4,903	27.4	0.446	7,793
DOM	49.8***	0.500	3,711	60.4	0.489	5,707	50.6***	0.500	2,753	62.9	0.483	4,508						
ECU	67.8***	0.467	12,795	62.7	0.484	16,635	66.4***	0.472	5,715	65.9	0.474	8,051	70.5***	0.456	18,623	69.2	0.462	24,249

GTM	78.7***	0.409	3,522	78.1	0.414	6,031							84.6***	0.361	4,050	81.9	0.385	6,500
MEX	62.2***	0.485	72,105	63.0	0.483	105,711	56.9***	0.495	47,242	61.7	0.486	72,214	60.4***	0.489	75,403	63.0	0.483	111,260
PER	82.4***	0.381	29,855	76.6	0.423	34,416	83.3***	0.373	25,028	80.2	0.398	30,836	80.9***	0.393	6,561	77.2	0.420	7,551
PRY	76.3***	0.425	10,847	77.3	0.419	15,655	76.1***	0.426	3,513	78.1	0.413	5,087	76.3***	0.425	2,903	76.5	0.424	4,097
SLV	67.6***	0.468	12,600	62.9	0.483	18,829	69.3***	0.461	6,176	61.9	0.486	9,408						
URY	23.0***	0.421	22,996	25.7	0.437	26,021	19.5***	0.396	30,701	23.8	0.426	33,044	18.9***	0.392	14,155	22.4	0.417	14,842
Inactive population 15+																		
ARG	49.9***	0.500	23,402	28.1	0.450	21,020	53.9***	0.499	17,333	34.1	0.474	15,496	48.5***	0.500	20,519	29.2	0.455	18,261
BOL	38.6***	0.487	14,438	18.8	0.390	13,319	39.6***	0.489	13,627	19.1	0.393	12,748						
BRA	44.6***	0.497	226,400	25.1	0.433	210,336	51.9***	0.500	155,337	30.2	0.459	140,797	46.9***	0.499	183,779	26.6	0.442	167,808
CHL	51.1***	0.500	92,940	28.4	0.451	82,136	53.3***	0.499	82,687	34.2	0.474	68,628						
COL	44.3***	0.497	26,637	20.4	0.403	22,827	49.9***	0.500	26,605	22.6	0.418	22,758	46.9***	0.499	25,516	21.2	0.409	21,257
CRI	55.7***	0.497	14,402	28.3	0.450	13,219	60.0***	0.490	10,639	32.6	0.469	9,797	56.9***	0.495	13,487	30.5	0.460	12,337
DOM	47.6***	0.499	7,821	21.9	0.414	7,499	52.3***	0.500	6,541	25.6	0.436	6,257						
ECU	43.3***	0.495	23,550	20.6	0.405	21,938	48.4***	0.500	11,895	25.5	0.436	11,290	45.3***	0.498	36,055	21.3	0.410	33,349
GTM	61.3***	0.487	8,900	16.9	0.375	7,560							56.7***	0.495	9,225	14.4	0.351	7,965
MEX	55.1***	0.497	158,570	22.5	0.417	142,870	60.0***	0.490	117,833	27.4	0.446	106,433	55.8***	0.497	170,464	23.7	0.425	153,148
PER	36.4***	0.481	47,658	20.8	0.406	44,208	46.0	0.498	46,770	27.5	0.447	43,796	36.8***	0.482	10,678	20.8	0.406	9,810
PRY	39.9***	0.490	20,068	15.0	0.357	19,620	39.5***	0.489	6,586	15.3	0.360	6,326	40.9***	0.492	5,438	16.0	0.367	5,168
SLV	55.3***	0.497	30,320	23.6***	0.425	25,597	55.3***	0.497	15,238	25.1	0.434	12,873						
URY	44.1***	0.497	47,640	28.5	0.451	40,616	45.3***	0.498	66,092	30.8	0.462	54,668	44.2***	0.497	29,819	30.5	0.460	24,724

Sources: Estimates using household or employment surveys with appropriate survey weights. Argentina – EPH (2019, 2020, 2021), Bolivia – ECH (2019, 2020), Brazil – PNADC (2019, 2020, 2021), Chile – CASEN (2017, 2020), Colombia – GEIH (2019, 2020, 2021), Costa Rica – ENAHO (2019, 2020, 2021), El Salvador – EHPM (2019, 2020), Ecuador – ENEMDU (2019, 2020, 2021), Guatemala – ENEI (2019, 2021), Mexico – ENOE (2019, 2020, 2021), Paraguay – EPHC (2019, 2020, 2021), Peru – ENAHO (2019, 2020, 2021), Dominican Republic – ENCFT (2019, 2020), Uruguay – ECH (2019, 2020, 2021).

Note: ARG = Argentina, BOL = Bolivia, BRA = Brazil, CHL = Chile, COL = Colombia, CRI = Costa Rica, ECU = Ecuador, MEX = Mexico, DOM = Dominican Republic, GTM = Guatemala, PER = Peru, SLV = El Salvador, PRY = Paraguay, URY = Uruguay. Argentina only has urban coverage. For Chile, the period is 2017 and 2020. Statistical significance ***p<0.01, **p<0.05, *p<.10 for the difference between female and males for each year.

Annex 2. Labor outcomes for Latin America

Table A2.1. Labor Market Indicators for the Population 15 years of Age and Older, by Sex, Latin America, 2019–2021 (Percent)

a. Labor Force Participation							
Country	Total		Female		Male		Absolute Change in Gender Gap in Labor Force Participation
	Pre-pandemic (2019)	Pandemic (2021)	Pre-pandemic (2019)	Pandemic (2021)	Pre-pandemic (2019)	Pandemic (2021)	
ARG	60.4	60.7	50.1	51.5	71.9	70.8	2.5
BOL*	71.0	70.3	61.4	60.4	81.2	80.9	-0.7
BRA	64.8	62.9	55.4	53.1	74.9	73.4	-0.9
CHL*	59.4	55.3	48.9	46.7	71.6	65.8	3.5
COL	67.3	65.5	55.7	53.1	79.6	78.8	-1.8
CRI	57.4	55.7	44.3	43.1	71.7	69.5	1.1
DOM*	64.7	60.5	52.4	47.7	78.1	74.4	-0.9
ECU	67.8	66.4	56.7	54.7	79.4	78.7	-1.2
GTM	59.1	63.0	38.7	43.3	83.1	85.6	2.0
MEX	60.4	59.4	44.9	44.2	77.5	76.3	0.5
PER	71.0	71.2	63.6	63.2	79.2	79.2	-0.3
PRY	72.4	71.4	60.1	59.1	85.0	84.0	0.0
SLV*	59.2	58.5	44.7	44.7	76.4	74.9	1.5
URY	63.4	62.4	55.9	55.8	71.5	69.5	2.0
b. Employment Rate							
Country	Total		Female		Male		Absolute Change in Gender Gap in Employment Rate
	Pre-pandemic (2019)	Pandemic (2021)	Pre-pandemic (2019)	Pandemic (2021)	Pre-pandemic (2019)	Pandemic (2021)	
ARG	54.5	55.7	44.7	46.8	65.5	65.3	2.3
BOL*	68.0	64.4	58.3	54.0	78.3	75.5	-1.6
BRA	57.2	55.0	47.5	44.7	67.5	66.1	-1.4
CHL*	54.8	48.3	44.6	40.2	66.5	58.3	3.7
COL	60.0	57.4	47.7	44.4	73.0	71.3	-1.5
CRI	52.1	49.5	39.3	37.2	66.1	63.0	0.9
DOM*	60.9	56.0	47.7	42.5	75.2	70.7	-0.8
ECU	64.5	63.1	53.3	51.2	76.2	75.5	-1.5
GTM	58.0	61.6	37.7	42.0	81.7	84.0	1.9
MEX	58.1	56.9	43.2	42.3	74.6	73.2	0.5
PER	68.5	66.2	61.0	58.2	76.6	74.3	-0.5
PRY	67.8	66.7	55.3	54.4	80.5	79.4	0.3
SLV*	56.8	55.6	42.9	42.3	73.4	71.4	1.5
URY	57.7	56.1	49.9	49.1	66.3	63.6	1.9
c. Unemployment Rate							
Country	Total		Female		Male		Absolute Change in Gender Gap Unemployment Rate
	Pre-pandemic (2019)	Pandemic (2021)	Pre-pandemic (2019)	Pandemic (2021)	Pre-pandemic (2019)	Pandemic (2021)	
ARG	9.7	8.2	10.8	9.0	8.9	7.7	0.6

BOL*	4.2	8.4	5.0	10.6	3.6	6.7	-2.5
BRA	11.8	12.6	14.3	15.9	9.9	10.1	-1.4
CHL*	7.9	12.6	8.8	13.9	7.1	11.4	-0.8
COL	10.9	12.4	14.5	16.5	8.2	9.5	-0.7
CRI	9.2	11.1	11.1	13.8	7.9	9.3	-1.2
DOM*	5.9	7.4	8.9	11.0	3.8	5.0	-0.9
ECU	4.9	5.1	6.0	6.5	4.0	4.0	-0.6
GTM	2.0	2.2	2.5	2.9	1.7	1.8	-0.3
MEX	3.7	4.2	3.7	4.4	3.8	4.1	-0.3
PER	3.6	7.0	4.0	7.9	3.3	6.2	-1.0
PRY	6.4	6.5	8.0	7.9	5.3	5.5	0.3
SLV*	4.0	5.0	4.2	5.5	3.9	4.7	-0.5
URY	8.9	10.1	10.7	12.0	7.3	8.5	-0.2

d. Percentage of Informal Employment (Without Access to Social Security)

Country	Total		Female		Male		Absolute Change in Gender Gap for Informal Employment
	Pre-pandemic (2019)	Pandemic (2021)	Pre-pandemic (2019)	Pandemic (2021)	Pre-pandemic (2019)	Pandemic (2021)	
ARG	49.6	48.2	47.7	47.9	51.0	48.4	-2.8
BOL*	79.2	79.9	82.0	81.7	76.9	78.5	2.0
BRA	37.3	37.0	36.0	35.3	38.3	38.3	0.7
CHL*	31.9	27.8	33.5	28.3	30.6	27.3	1.9
COL	62.3	63.3	61.7	62.7	62.7	63.6	-0.1
CRI	28.9	28.9	32.8	31.3	26.4	27.4	2.5
DOM*	56.1	58.0	49.8	50.6	60.4	62.9	1.8
ECU	64.9	69.8	67.8	70.5	62.7	69.2	3.8
GTM	78.3	82.8	78.7	84.6	78.1	81.9	-2.0
MEX	62.7	62.0	62.2	60.4	63.0	63.0	1.8
PER	79.3	78.8	82.4	80.9	76.6	77.2	2.1
PRY	76.9	76.4	76.3	76.3	77.3	76.5	-0.7
SLV*	64.9	64.9	67.6	69.3	62.9	61.9	-2.7
URY	24.5	20.8	23.0	18.9	25.7	22.4	0.8

e. Economically Inactive Population as a Percentage of the Working-age Population

Country	Total		Female		Male		Absolute Change in Gender Gap
	Pre-pandemic (2019)	Pandemic (2021)	Pre-pandemic (2019)	Pandemic (2021)	Pre-pandemic (2019)	Pandemic (2021)	
ARG	39.6	39.3	49.9	48.5	28.1	29.2	2.5
BOL*	29.0	29.7	38.6	39.6	18.8	19.1	-0.7
BRA	35.2	37.1	44.6	46.9	25.1	26.6	-0.9
CHL*	40.6	44.7	51.1	53.3	28.4	34.2	3.5
COL	32.7	34.5	44.3	46.9	20.4	21.2	-1.8
CRI	42.6	44.3	55.7	56.9	28.3	30.5	1.1
DOM*	35.3	39.5	47.6	52.3	21.9	25.6	-0.9
ECU	32.2	33.6	43.3	45.3	20.6	21.3	-1.2
GTM	40.9	37.0	61.3	56.7	16.9	14.4	2.0
MEX	39.6	40.6	55.1	55.8	22.5	23.7	0.5
PER	29.0	28.8	36.4	36.8	20.8	20.8	-0.3
PRY	27.6	28.6	39.9	40.9	15.0	16.0	0.0
SLV*	40.8	41.5	55.3	55.3	23.6	25.1	1.5

URY	36.6	37.6	44.1	44.2	28.5	30.5	2.0

f. Gender Mean Labor Income for the Employed Population

Country	Pre-pandemic (2019)	Pandemic (2020–2021)
ARG	76.9	76.2
BOL*	73.3	76.7
BRA	78.0	80.7
CHL*	76.8	76.6
COL	94.1	100.0
CRI	90.5	91.8
DOM*	80.6	81.0
ECU	85.1	81.6
GTM	88.4	73.6
MEX	77.2	78.8
PER	70.2	68.2
PRY	75.5	85.0
SLV*	80.7	89.6
URY	78.4	81.6

Sources: Estimates using household or employment surveys with appropriate survey weights. Argentina – EPH (2019, 2020, 2021), Bolivia – ECH (2019, 2020), Brazil – PNADC (2019, 2020, 2021), Chile – CASEN (2017, 2020), Colombia – GEIH (2019, 2020, 2021), Costa Rica – ENAHO (2019, 2020, 2021), El Salvador – EHPM (2019, 2020), Ecuador – ENEMDU (2019, 2020, 2021), Guatemala – ENEI (2019, 2021), Mexico – ENOE (2019, 2020, 2021), Paraguay – EPHC (2019, 2020, 2021), Peru – ENAHO (2019, 2020, 2021), Dominican Republic – ENCFT (2019, 2020), Uruguay – ECH (2019, 2020, 2021).

Note: ARG = Argentina, BOL = Bolivia, BRA = Brazil, CHL = Chile, COL = Colombia, CRI = Costa Rica, ECU = Ecuador, MEX = Mexico, DOM = Dominican Republic, GTM = Guatemala, PER = Peru, SLV = El Salvador, PRY = Paraguay, URY = Uruguay. Argentina only has urban coverage. For Argentina, Brazil, Ecuador and Mexico, the pre-pandemic period is 2019:Q3, and the pandemic period is 2021:Q3; for Chile, the pre-pandemic year is 2017, and the pandemic year is 2020; for Colombia the pre-pandemic period is August 2019 and the pandemic period is August 2021; for Costa Rica and Guatemala, the pre-pandemic year is 2019 and the pandemic year is 2021. For Peru, the pre-pandemic year is 2019, and the pandemic period is 2021Q3; for Bolivia, El Salvador, and the Dominican Republic, the pre-pandemic year is 2019 and the pandemic period is 2020. The change in the gender gap is measured as: $\Delta\ gap = (T_F - T_M)_{t_1} - (T_F - T_M)_{t_0}$, where T = indicator, F = Female, M = Male, t_0 = circa 2019, and t_1 = circa 2021. For the unemployment and informality rates instead, the gender gaps are calculated as: $\Delta\ gap = (T_M - T_F)_{t_1} - (T_M - T_F)_{t_0}$, so that positive values indicate improvements for women in labor market indicators.

* For Bolivia, Chile, the Dominican Republic and El Salvador the pandemic year is 2020.

Table A2.2. Conditional Estimated Probabilities of Working by Sex and Country, Latin America, 2019–2021

a. Probability of Working by Gender and Year (percent)

ARG	M	F	BRA	M	F	COL	M	F	CRI	M	F	ECU	M	F	PER	M	F	MEX	M	F	LAC	M	F
2019	0.724	0.532	2019	0.728	0.526	2019	0.759	0.538	2019	0.716	0.459	2019	0.783	0.589	2019	0.807	0.682	2019	0.773	0.501	2019	0.755	0.549
2020	0.648	0.463	2020	0.662	0.441	2020	0.687	0.446	2020	0.624	0.372	2020	0.742	0.539	2020	0.707	0.561	2020	0.713	0.444	2020	0.682	0.469
2021	0.718	0.543	2021	0.721	0.499	2021	0.751	0.502	2021	0.692	0.44	2021	0.784	0.563	2021	0.783	0.645	2021	0.763	0.491	2021	0.744	0.527

b. Change from 2019 (percentage points)

ARG	M	F	BRA	M	F	COL	M	F	CRI	M	F	ECU	M	F	PER	M	F	MEX	M	F	LAC	M	F
2020	-0.08	-0.07	2020	-0.07	-0.09	2020	-0.07	-0.09	2020	-0.09	-0.09	2020	-0.04	-0.05	2020	-0.10	-0.12	2020	-0.06	-0.06	2020	-0.07	-0.08
2021	-0.01	0.011	2021	-0.01	-0.03	2021	-0.01	-0.04	2021	-0.02	-0.02	2021	0.001	-0.03	2021	-0.02	-0.04	2021	-0.01	-0.01	2021	-0.01	-0.02

c. Change from 2019 (percent)

ARG	M	F	BRA	M	F	COL	M	F	CRI	M	F	ECU	M	F	PER	M	F	MEX	M	F	LAC	M	F
2020	-10	-13	2020	-9	-16	2020	-9	-17	2020	-13	-19	2020	-5	-8	2020	-12	-18	2020	-8	-11	2020	-10	-15
2021	-1	2	2021	-1	-5	2021	-1	-7	2021	-3	-4	2021	0	-4	2021	-3	-5	2021	-1	-2	2021	-1	-4

d. Change in Gender Gap from 2019 (percentage points)

ARG	Δ	p val	BRA	Δ	p val	COL	Δ	p val	CRI	Δ	p val	ECU	Δ	p val	PER	Δ	p val	MEX	Δ	p val	LAC	Δ	p val
2020	0.007	0.601	2020	-0.02	0	2020	-0.02	0.041	2020	0.005	0.572	2020	-0.01	0.381	2020	-0.02	0.001	2020	0.003	0.707	2020	-0.01	0.065
2021	0.017	0.176	2021	-0.02	0	2021	-0.03	0.005	2021	0.005	0.523	2021	-0.03	0.011	2021	-0.01	0.046	2021	0.000	0.901	2021	-0.01	0.001

Sources: Estimates using household or employment surveys with appropriate survey weights. Argentina – EPH (2019, 2020, 2021), Brazil – PNADC (2019, 2020, 2021), Colombia – GEIH (2019, 2020, 2021), Costa Rica – ENAHO (2019, 2020, 2021), Ecuador – ENEMDU (2019, 2020, 2021), Mexico – ENOE (2019, 2020, 2021), Peru – ENAHO (2019, 2020, 2021).
Note: Conditional average probabilities come from estimating the probit model in equation (1) for the working-age population observed in 2019, 2020 and 2021.

Annex 3. Differences by Ethnicity and Use of Time Patterns

Differences by Ethnicity

As mentioned in the main text, the data identifying ethnicity are available only for Ecuador, Brazil and Peru (upper panel in Table A3.1). In 2019, the probability of working for indigenous women in Ecuador was 3 percentage points lower than the probability of working for indigenous men, a gap significantly different from zero at a 10 percent significance level. The gender gap was much smaller compared to non-indigenous women, who were instead 20 percentage points less likely to work already before the COVID-19 pandemic. In 2020 and 2021, indigenous individuals of both genders remained active in the labor markets, as their change in the probability of working was not significantly different from zero. In contrast, non-indigenous people experienced a significant decrease in the likelihood of working in 2020 (but no significant changes in the gender gap), and whereas in 2021 non-indigenous men went back to pre-COVID-19 working rates, non-indigenous women were still 5 percent less likely to work, and the non-indigenous gender gap in the probability of working increased significantly by 3 percentage points

One important point to note, however, is that although indigenous women remained in the labor market in 2020 and 2021, they became 12 percent and 10 percent significantly more likely to be in informal occupations in the respective years. Non-indigenous women remained as likely to be informal in 2020, but in 2021 they were 5 percent more likely to be found in informal occupations too.

In Brazil, on the other hand, the gender gaps for indigenous and non-indigenous individuals were similar in 2019. With the pandemic, women of both ethnicities were negatively affected in terms of their probability of working, but while the gender gap did not change significantly for indigenous individuals, it did for non-indigenous individuals, with non-indigenous women becoming 2 percentage points less likely to work than non-indigenous men. Moreover, in 2021, both indigenous women and men went back to pre-COVID-19 levels, as the difference in the likelihood of working compared to 2019 was not significantly different from zero. Non-indigenous individuals also recovered, but women not fully, with the gender gap in 2021 remaining significantly wider than in 2019 (by 2 percentage points). The pattern for Brazil in the probability to be formal was also different: while the likelihood to be formal never changed for indigenous women, non-indigenous women who remained in the labor market in 2020 were 8 percent more likely to be formal (and went back to pre-COVID-19 probabilities in 2021).

Data for indigenous individuals in Peru are not reliable for 2020, as there are not sufficient observations. As for non-indigenous individuals, all were affected negatively in their probability of working in 2020, but women more so, with the gender gap increasing by 2 percentage points. And even though both non-indigenous men and women recovered in 2021, they did not return to pre-COVID-19 probabilities of working, and the wider 2020 gender gap remained as large in 2021. As for the probability to be informal, everyone became more likely to be informal than before, both in 2020 and 2021, but indigenous individuals much more so.

Use of Time

The information on the use of time is available only for Colombia, Costa Rica and Mexico, and here again, there are strong country heterogeneities.

A common theme is that gender gaps in time spent in childcare, elderly care, and domestic work within the household were already large before the COVID-19 pandemic in all three countries. In 2019, women in Colombia spent on average almost 9 hours per week taking care of minors or elderly men or women, while men spent 2.4 hours. Large disparities also already existed for the time spent on domestic activities in the household, with women spending on average almost 19 hours per week and men around 4.6 hours. In Costa Rica, too, women on average committed four times more time than men (20.6 hours per week on domestic activities within the household and 10.2 hours on taking care of others). In Mexico, the disparities were even larger, with women involved five times more than men (devoting 19 hours per week to domestic activities and 6.5 hours per week to care).

The lower panel in Table A3.1 shows the percentage changes in care and domestic activities by gender and country during the pandemic and the beginning of the recovery. In 2020, women in Colombia increased the time spent on childcare or elderly care by 1.2 hours, while men increased it as well, but only by 0.4 hours, widening the gap by almost another hour. The increase in the divide between men and women in 2020 was mostly driven by men and women with a child aged 0-5 in the household.[16]

In 2021, men with children even decreased the time spent compared to 2019 by 10 percent (approximately half an hour), so the gap remained at an extra 1.2 hours per week in 2021 compared to 2019, whereas men and women without children went back to 2019 patterns.

In 2020, men substantially increased the amount of time spent on domestic activities, by 34 percent. In absolute terms, this meant the increase was by 1.5 hours for men, whereas for women it was by 2.6 hours, which widened the gender gap further by 1 extra hour per week. Perhaps surprisingly, this larger divide was driven by men and women without children 0-5 years old in the household. The findings are consistent with Bustelo, Suaya, and Viollaz (2019), who also found widening gender disparities in the time devoted to these nonremunerated activities during the pandemic.

In 2021, the gender gap in time spent on domestic activities within households in Colombia went back to 2019 levels for men and women on average, but not for women and men without children 0-5 years old, where there was still almost a one-hour extra difference by gender compared to 2019.

As for Costa Rica, in 2020 women spent two extra hours of work per week on domestic activities in the household, 45 minutes more than the increase experienced by men, driven by women without children 0-5 years old at home. There were no significant differences in

[16] When having at least one child between 0-5 years old in the house, the increased engagement in care work was much larger: in 2019, women with a child 0-5 years old spent on average almost 18 hours per week and men almost 5 hours per week, while women without a child 0-5 years old spent on average almost 5 hours per week, and men 1.3 hours per week. The increase in the divide between men and women in 2020 was mostly driven by men and women with a child aged 0-5 in the household: while women increased the time spent by 2.1 hours, men increased it by only 0.8 hours, so the gap increased by 1.3 hours per week. The gap also increased for women and men without children, but by approximately 30 minutes.

the gender gap in terms of time spent taking care of children or the elderly in 2020, with both genders increasing their involvement.[17]

In 2021 both men and women were still spending more than 1 extra hour per week on domestic activities within the household, but women decreased the time spent on care by 1.3 hours compared to 2019, while men decreased it by 0.35 hours.

The fact that the gender gap in the time spent on childcare and elderly care did not change significantly in 2020 or 2021 could be linked to the fact that Costa Rica, contrary to most countries in the region, provided childcare services during the pandemic to allow parents to continue with their jobs through the National Child Care and Development Network (*Red Nacional de Cuido y Desarrollo Infantil* – REDCUDI), and the Serena Care Initiative (with private professional babysitters donating 500 hours of babysitting for the children of health personnel dedicated to caring for patients affected by the virus) (Bustelo, Suaya, and Viollaz 2021).

In Mexico, where disparities were the largest pre-pandemic, it was mostly men who increased their time spent on care and domestic activities (from low initial levels), so the gender gaps declined significantly in 2020 and remained smaller in 2021 (by half an hour in the time devoted to care, and by 1.2 hours in care activities). Nevertheless, women still spent 14 more hours on domestic activities in the household and almost 5 more hours on childcare and elderly care than men.

In sum, gender disparities in the time spent on domestic work and care of children and the elderly were large and remained large in the countries in the sample. During the pandemic, the extra burden was felt by both men and women, but to different extents depending on the country. Gender gaps widened in Colombia (only in 2020) and Costa Rica (only in 2020 for domestic work and only in 2021 for care), but declined in Mexico (where the disparities were the largest to begin with). In 2021, the time devoted to domestic activities was still significantly larger for all countries, whereas the time spent on childcare or elderly care was mostly lower even compared to 2019.

Table A3.1. Estimated Change in the Probability of Working by Ethnicity and Use of Time in 2020 and 2021 Compared to 2019 (Percent)

By Ethnicity			
Group	**Brazil**	**Ecuador**	**Peru**
2020			
Men			
Indigenous	-11.3	-3.3	
Non-indigenous	-9.1	-5.3	-12.0
Women			
Indigenous	-19.6	-3.7	

[17] Both men and women with children 0-5 years old increased by approximately 1 hour the time spent on care activities (which reached almost 26 hours per week for women, and almost 8 hours for men), while men and women without children 0-5 years old in the household increased this time by approximately half an hour (which reached almost 7 hours per week for women and almost 2 hours per week for men).

Non-indigenous	-16.2	-8.4	-17.4
2021			
Men			
Indigenous	0.3	0.6	-2.8
Non-indigenous	-1.0	0.0	-3.4
Women			
Indigenous	-2.0	-1.8	-0.9
Non-indigenous	-5.1	-5.4	-7.4
By Use of Time			
Group	**Colombia**	**Costa Rica**	**Mexico**
Care			
Men			
2020	16.2	15.3	10.0
2021	-8.1	-14.2	9.9
Women	**14.9**	**-10.2**	**-9.4**
2020	13.5	2.4	-3.8
2021	1.4	-12.6	-5.6
Domestic			
Men			
2020	33.6	24.5	12.9
2021	16.1	27.4	7.2
Women			
2020	13.4	9.8	0.1
2021	3.3	5.8	-4.7

Source: Authors' calculations based on household and employment surveys using appropriate survey weights.

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