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an analysis of its components

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The Gender Earnings Gap in Latin America and the Caribbean: an analysis of its components*

Manuel Urquidi and Miguel Chalup

March 2023

Synopsis

This study analyzes the gender earnings gap in 18 countries in Latin America and the Caribbean. It finds a significant difference in hourly earnings between men and women in most of the region. It also finds that while women should be earning more per hour than men based on their level of education, the economic sectors in which they work, their occupations, the setting in which they live (urban/rural), and their personal characteristics, they do not, in reality, earn more. The earnings gap favoring men is therefore due to factors that are not explained by the variables used in this study and are rather due to unobservable characteristics associated with discriminatory gender biases. These biases may be cognitive or rooted in poorly designed laws, discrimination, or labor costs related to child-rearing that are overlooked by society. This analysis uses data from the household surveys harmonized by the Inter-American Development Bank (IDB), and it uses two models to estimate the gender earnings gap: the Blinder-Oaxaca decomposition and the Ñopo decomposition.

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Introduction

In recent years, the Latin America and Caribbean region has seen a fundamental shift in the roles traditionally assigned to men and women: women have increased political representation; higher levels of education; and greater labor force participation. However, as Frisancho and Queijo von Heideken (2022) point out, women still face challenges in terms of labor inclusion and professional development opportunities.

On the topic of gender earnings gaps, Ñopo's 2012 study was groundbreaking. This study shows how women's political and labor participation has grown since the start of the 21st century, but it also sheds light on the significant differences between women's and men's earnings. This author also highlights the latent regional problem of occupational and hierarchical segregation, as women are more likely to work in the informal sector and hold a smaller share of managerial positions.

Meanwhile, Chioda (2011) demonstrates that even though Latin America's gender equality indicators have improved since the end of the 20th century, men still earn more for similar jobs in most countries. According to the International Labour Organization (ILO, 2019), this discrepancy is an indefensible form of inequality.

Bustelo, Suaya and Vezza (2021) analyze the impact of the COVID-19 crisis on this issue and find that it has had a significant impact on female labor force participation. They estimate that 13 million women in the region lost their jobs, and that the female labor force participation rate fell by 16 percentage points (versus 10 percentage points for men). The crisis exposed the fact that women work in more vulnerable sectors, and it aggravated gender gaps and reversed some of the progress that had been made.

This study delves into the current knowledge about the gender income disparity in LAC through a detailed analysis of the gender earnings gap in 18 countries.[1] Its methodology is similar to that of the analyses of Bolivia and Paraguay by Urquidi, Valencia and Durand (2021) and Urquidi, Chalup and Durand (2022), respectively. To analyze the data, the study uses two methodologies: the Blinder-Oaxaca decomposition and the Ñopo decomposition. One model is parametric and the other non-parametric, allowing us to compare gender earnings between countries and identify the main variables driving regional patterns in the gaps. This research also uses control variables similar to those used in past studies on gender earnings gaps in Latin America and the Caribbean, such as Ñopo and Hoyos (2010) and Ñopo (2012).

The analysis finds a gender earnings gap in which women earn less per hour than men in 15 of 18 countries covered by the analysis. The three exceptions are Costa Rica, Guatemala, and Nicaragua. The group of countries with a high gender earnings gap includes Bolivia, Chile, Ecuador, El Salvador, Honduras, Mexico, Paraguay, Peru, the Dominican Republic, and Venezuela. A second group of countries has a moderate earnings gap: Argentina, Brazil, Colombia, Panama, and Uruguay. Finally, the third group contains countries with a positive income gap (Costa Rica, Guatemala, and Nicaragua). The earnings gap favoring men found in 15 of 18 countries analyzed cannot be explained by factors that can be observed in surveys, like

[1] Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, the Dominican Republic, Uruguay, and Venezuela.

education or experience. The pay gap persists even when women have better professional profiles, so we assume it is related to regulatory factors, biases, and/or discrimination.

This study consists of five sections. Section 1 contains review of the literature on gender earnings gaps, with particular emphasis on research on LAC. Section 2 describes the data used and presents descriptive statistics on the earnings gap in the countries analyzed. Section 3 briefly describes the methodologies used to estimate the gender earnings gap, while section 4 presents the results of the analysis. Section 5 shares the study's conclusions and explores their implications.

1. Literature review

Atal, Ñopo, and Winder (2009) argue that the literature on the gender earnings gap distinguishes between the part of the gap caused by differences in people's individual characteristics and human capital endowments—which is the explained portion—and the part primarily associated with prejudices, biases, and gender discrimination—the unexplained portion.

New studies have also identified previously unanalyzed components of the gender earnings gap. For example, Bustelo, *et al*. (2021) analyze how people's choice of university major effects gender earnings gaps. They emphasize the role of STEM disciplines in explaining the gender earnings gap in developing countries. Based on data from Brazil's Universidad Federal de Pernambuco (UFPE), they find that choice of major explains 50% of the gender earnings gap, on average, and that STEM accounts for 30% of this difference. This effect is strongest at the middle of the income distribution.

Similarly, Bordón, Canals, and Mizala (2020) analyze gender differences in university applications in Chile and find that men apply to selective programs even when they are marginal candidates, while equally qualified female candidates tend to apply to those programs less frequently. These authors conclude that to successfully address the gender gap, it is necessary to both promote women's participation in STEM majors and at the same time increase men's willingness to consider non-STEM fields, which would not result in losses caused by how talent is distributed across different areas of knowledge.

There is also new research on the "motherhood penalty" and its effect on the earnings gap. Based on Danish administrative data from 1980 to 2013, and using an event study methodology, Kleven, Landais, and Søgaard (2019) demonstrated that most gender income inequality occurs when children are born. In the long term, the arrival of children creates a gender earnings gap of around 20%, created in similar proportions by labor force participation, hours worked, and wage rate. These authors find clear dynamic impacts from occupation, promotion to executive roles, economic sector, and the degree to which the firm respects family responsibilities. They also show that the motherhood penalty has increased drastically over time, from around 40% in 1980 to approximately 80% in 2013.

There is also a body of specialized research that analyzes how differences in socio-emotional skills affect the earnings gap. Based on survey data from 17 African countries, Ajayi, *et al* (2022) analyzed 10 self-reported socio-emotional skills and examined gender differences for each and their relationship to education and income. These authors find that in these African countries, men have an aggregate level of socio-emotional skills that is 0.151 standard deviations higher than

that of women, this difference is equivalent to the socio-emotional skills that a person gains over 5.6 years of education. They conclude that closing the gender gap in education would close 17% of the socio-emotional skills gap in these countries. These social and emotional skills are associated with higher income, especially for women. However, Ajayi, *et al* (2022) also find that the specific skills associated with higher income differ by gender. Based on these findings, the authors discuss how to best design interventions to hone women's socio-emotional skills for success in the labor market. The aim of these interventions would be to counter gender roles that could perpetuate the socio-emotional skills gap.

Ammerman and Groysberg (2021) made important contributions to a different area of research. These authors analyze the widespread organizational obstacles and institutional policies that give rise to the **glass ceiling** for women's professional development. They conclude that women continue to be underrepresented in high-power and high-status positions, and that jobs with poorer pay have a bigger gender imbalance. Even in fields with an approximately equal number of men and women, or with a majority of women, men continue to dominate the leadership positions. These authors also note women's limited opportunities for professional development, the dearth of successful female role models, and a lack of mentors, as well as biases in hiring, pay, and promotions, all of which lead to gender imbalances.

In the Latin American context, Frisancho and Queijo von Heideken (2022) compile a set of studies that document persistent gender inequality in Southern Cone countries.[2] They then explore how reducing these gaps would significantly boost economic growth and development in the region. These authors show that gender gaps in access to public and social services, to human capital accumulation, and to the labor market limit overall productivity and economic growth. Thus policies that mitigate these inequalities have the potential to advance economic development and well-being. They also show that women in the region continue to lag behind men in terms of labor market participation, hours of work, and earnings. Women spend three times more hours per week doing unpaid work than men. Frisancho and Queijo von Heideken also show that in 2019, the average unemployment rate for women in the Southern Cone was 49%, or 21 percentage points higher than the rate for men, and that women are also underrepresented in the best-paid occupations and overrepresented in the informal sector, which is notorious for its variable income and job insecurity.

Meanwhile, Cuberes, Saravia, and Teignier (2022) quantify the aggregate costs to the Southern Cone economies of the gender gaps in the labor market. When women have to overcome barriers in order to work in certain occupations, talent is not assigned efficiently, reducing the economy's aggregate efficiency and overall output. These authors argue that eliminating occupational barriers like wage discrimination, gaps in human capital accumulation, and gender-biased social norms would lead to considerable aggregate gains in this subregion of between 4 and 15%, depending on the country.

In the same study, Cuberes, Saravia, and Teignier (2022) also analyze the disappearance in the Southern Cone—and in Latin America and the Caribbean in general—of a long-running disadvantage for women: years of education. This variable has now become an advantage for women in most countries. However, there are major differences in the fields men and women choose at the post-secondary level. Women disproportionately go into sectors with lower pay, and evidence shows that in several countries in the region, they are paid less than men even

[2] Argentina, Brazil, Chile, Paraguay, and Uruguay.

when they have a higher level of education. As Aguirre, Matta, and Montoya (2022a) demonstrate, women in the fields of technology and engineering can experience greater labor market discrimination than those in other fields. This finding suggests that policies for effectively addressing gender gaps should go beyond merely encouraging more women to enter these fields, since this in itself does not resolve the labor market difficulties they will face when they attempt to succeed in a male-dominated discipline.

A different chapter by Aguirre, Matta, and Montoya (2022b) explains how only students of the same sex reap the positive effect of having high-performing classmates: same-sex peers with better academic performance have positive effects on graduation rate and future income, as well as negative effects on fertility, for both men and women. This finding suggests that investments in female human capital could have a multiplier effect on progress towards gender equality.

Finally, Carvalho Pereda *et al*. (2022) report significant increases in formal employment, especially among women, as a result of programs that reduce bureaucratic costs for micro-enterprises. They also found higher rates of formal employment for women with small children, possibly because they seek better social security benefits. This would show that women value benefits more than men, and that they seek greater social security for their family, underscoring how policies that help micro and small enterprises gain legal status play an important role in reducing gender gaps in the labor market.

In a classic analysis, Psacharopoulos and Tzannatos (1992) studied the gender earnings gap in 15 countries in LAC in the late 1980s. They found that women earned an average of 65% of what men earned for similar jobs. They also observed that two thirds of this difference was not explained by educational level or human capital, but could instead be associated with regulatory issues, prejudice, and/or discrimination.

Meanwhile, Chioda (2011) observes greater labor force participation rates for women in Latin America and the Caribbean starting in 1980, a shift facilitated by economic growth, trade liberalization, urbanization, lower fertility rates, and an increase in educational levels. As Gasparini and Marchionni (2015) conclude, this trend accelerated after 2000, as the region's high growth rates drove an increase in demand for labor that allowed more women to join the work force. Public policies that directly promoted female labor also sped up this change. However, Ñopo (2012) points out that women are still overrepresented in informal, low-paid jobs, and that the earnings gap remains significant.

More recent studies have relied on the two econometric techniques that allow researchers to use household surveys from different countries: the Blinder-Oaxaca decomposition, described in Oaxaca (1973), and the more recent Ñopo decomposition (2008)[3]. The analysis by Ñopo and Hoyos (2010) using those techniques found that the explainable gender earnings gap in Latin America and the Caribbean fell from 16% to 9% between 1992 and 2007. According to Chioda (2011) and Gasparini and Marchionni (2015), the increase in women's level of education explains a significant part of the reduction in the gender earnings gap.

Ñopo and Hoyos (2010) find that unlike the portion of the gender earnings gap that can be explained by changes in people's individual characteristics, the unexplained portion only declined from 34% to 30%. This unexplained portion was more present among workers at the lower end of the income distribution, or among those who have children at home, are self-employed, work

[3] Section 3 contains a detailed explanation of these techniques.

part time, and/or live in rural areas. These are the labor market segments that previously had higher gender disparities. Most of the decline in the unexplained component of the gap occurred within the different segments of the labor market rather than as a result of restructuring or overhauling labor markets.

In an analysis of a sample of 17 countries using the Ñopo decomposition technique, the ILO (2019) finds that between 2012 and 2017, the unexplained gap narrowed by an average of two to three percentage points. It also notes that the gap persists mainly among low-income and self-employed workers.

The research described above provides an overview of the literature on earnings gaps in Latin America and the Caribbean. Because of the importance of this issue and given the need for more up-to-date information for the region, this study aims to perform a thorough assessment of the current earnings gap using a method that allows it to compare the results for the different countries in the study.

2. Data and descriptive statistics

The data used in this study comes from the database of household surveys harmonized by the IDB. We used the information from the last household survey prior to the COVID-19 crisis available in each of the 18 countries analyzed[4] and applied a comparable data collection method. The study uses statistics through 2019 to keep the pandemic's effects on the labor market from distorting the analysis. The effects of the pandemic period deserve their own separate analysis.

To make the data from different countries truly comparable, the information from these surveys has to be harmonized. This information includes earnings, years of education, age, marital status, number of minors in the household, area of activity, occupational category, employment status, occupation, legal status of employment, setting (urban or rural), and region of residence.

The surveys have a similar design and level of representativeness, since almost all of them cover the countries' entire populations and main regions. The different surveys were successfully harmonized for almost all variables used in this study, with a few exceptions: (i) there is no marital status variable for Brazil and Panama; (ii) for Venezuela, information on the setting and person's area of activity is not available; (iii) Argentina only has representative information for urban areas; and (iv) Paraguay codes occupations differently from the other countries, which should not affect the calculations for this nation. These cases do not affect the analyses of the rest of the region because we perform independent regressions for each country.

Table 1 contains the samples for people age 25 to 65—the age range to be used in the analysis—as well as information on how representative these samples are of the entire population, disaggregating by gender and age group.

The samples' proportions are very close to those of the population they represent when we use the expansion factors, which are employed in the different regressions. Additionally, the sample is distributed evenly between genders, while the proportional differences in age groups align with

[4] The study uses the 2019 Household Surveys for Argentina, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Panama, Paraguay, Peru, Dominican Republic, and Uruguay. It uses data from 2018 for Mexico and Venezuela, from 2017 for Chile, and from 2014 for Nicaragua.

the population aging underway in some countries. The surveys from Argentina, Brazil, Chile, Colombia, Ecuador, El Salvador, Mexico, Peru, and Uruguay have the largest sample sizes, while the ones from Guatemala, Honduras, Paraguay, Dominican Republic, and Venezuela have smallest.

To give a preliminary idea of the gender earnings gap, Table 2 presents estimates of hourly earnings for women versus men. For this analysis, we used earnings from the main activity for employed people with income. We also used frequency weights to adjust for the sample's representativeness.

The analysis is disaggregated by age group, level of education, economic activity, occupation, setting (urban or rural), and legal status of employment. Additionally, table A1 in the appendix contains the distribution of the characteristics of the employed, income-earning population by level of education, age group, marital status, number of minors in the household, economic activity, setting, and legal status of employment, disaggregated by gender. This distribution provides insight into the general characteristics of both the men and women.

Table 1 Number of observations of employed, income-earning people, by gender and age group*

	ARG (2019)		BOL (2019)		BRA (2019)		CHL (2017)		COL (2019)		CRI (2019)		DOM (2019)		ECU (2019)		GTM (2019)	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	***N***	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Gender																		
Men	18,880	55%	7,492	59%	86,030	58%	42,387	57%	35,566	55%	6,838	60%	3,938	58%	11,141	60%	3,936	65%
Representativeness	4,226,407	50%	2,183,469	50%	42,309,133	50%	3,512,766	50%	9,794,014	50%	1,002,107	50%	1,933,507	50%	3,190,270	50%	3,045,087	50%
Women	15,382	45%	5,123	41%	62,384	42%	32,166	43%	29,024	45%	4,597	40%	2,897	42%	7,480	40%	2,148	35%
Representativeness	4,226,407	50%	2,183,469	50%	42,309,133	50%	3,512,766	50%	9,794,014	50%	1,002,107	50%	1,933,507	50%	3,190,270	50%	3,045,087	50%
Age																		
25–35	11,153	33%	4,294	34%	48,029	32%	22,030	30%	21,923	34%	3,811	33%	2,529	37%	5,534	30%	2,287	38%
Representativeness	2,492,849.	32%	1,246,972	34%	24,757,541	33%	1,994,355	32%	5,888,266	35%	564,179	33%	1,255,748	37%	1,640,976	31%	1,740,463	38%
36–45	10,576	31%	3,789	30%	46,058	31%	19,086	26%	18,076	28%	3,291	29%	2,003	29%	5,450	29%	1,832	30%
Representativeness	2,339,340	30%	1,060,654	29%	23,492,955	31%	1,601,786	25%	4,722,446	28%	484,519	29%	991,858	29%	1,601,896	31%	1,343,031	29%
46–55	8,028	23%	2,794	22%	36,106	24%	20,017	27%	15,403	24%	2,689	24%	1,518	22%	4,682	25%	1,282	21%
Representativeness	1,827,894	24%	818,863	23%	18,280,140	24%	1,636,824	26%	3,913,480	24%	396,040	23%	771,793	23%	1,229,647	24%	957,479	21%
56–65	4,505	13%	1,738	14%	18,221	12%	13,420	18%	9,188	14%	1,644	14%	785	11%	2,955	16%	683	11%
Representativeness	1,065,502	14%	511,569	14%	9,066,352	12%	1,097,903	17%	2,104,844	13%	241,182	14%	391,076	11%	758,546	15%	516,654	11%
Total	34,262.	100%	12,615	100%	148,414	100%	74,553	100%	64,590	100%	11,435	100%	6,835	100%	18,621	100%	6,084	100%
Representativeness	7,725,585	100%	3,638,058	100%	75,596,988	100%	6,330,868	100%	16,629,036	100%	1,685,920	100%	3,410,475	100%	5,231,065	100%	4,557,627	100%

Table 1 (Continued)

	HND (2019)		MEX (2018)		NIC (2014)		PAN (2019)		PER (2019)		PRY (2019)		SLV (2019)		URY (2019)		VEN (2018)	
	N	***%***	**N**	***%***	**N**	***%***	**N**	***%***	**N**	***%***	***N***	***%***	***N***	***%***	**N**	***%***	**N**	***%***
Gender																		
Men	2,077	54%	53,293	60%	4,946	55%	7,855	58%	23,317	57%	3,580	60%	11,296	56%	20,748	52%	3,076	63%
Representativeness	194,148	50%	25,028,895	50%	1,049,034	50%	777,612	50%	6,394,531	50%	1,405,221	59%	1,067,328	50%	717,099	50%	4,622,795	50%
Women	1,773	46%	35,954	40%	3,981	45%	5,779	42%	17,633	43%	2,426	40%	8,983	44%	18,990	48%	1,803	37%
Representativeness	194,148	50%	25,028,895	50%	1,049,034	50%	777,612	50%	6,394,531	50%	982,559	41%	1,067,328	50%	717,099	50%	4,622,795	50%
Age																		
25–35	1,373	36%	30,108	34%	3,670	41%	3,765	28%	11,082	27%	2,103	35%	7,451	37%	10,729	27%	1,675	34%
Representativeness	128,908	36%	14,434,218	34%	735,955	42%	388,619	28%	3,188,725	28%	947,461	40%	679,773	35%	382,077	29%	2,857,155	39%
36–45	1,110	29%	27,105	30%	2,528	28%	3,893	29%	11,683	29%	1,727	29%	6,172	30%	11,510	29%	1,479	30%
Representativeness	103,319	29%	12,788,383	30%	502,250	28%	386,832	28%	3,243,020	28%	696,664	29%	590,279	31%	401,358	30%	2,052,929	28%
46–55	869	23%	20,927	23%	1,843	21%	3,747	27%	10,853	27%	1,274	21%	4,467	22%	10,637	27%	1,195	24%
Representativeness	82,024	23%	10,140,466	24%	354,532	20%	376,524	27%	3,021,590	26%	467,655	20%	435,446	23%	343,229	26%	1,690,945	23%
56–65	498	13%	11,107	12%	886	10%	2,229	16%	7,332	18%	902	15%	2,189	11%	6,862	17%	530	11%
Representativeness	47,540	13%	5,397,220	13%	177,048	10%	219,979	16%	2,012,324	18%	276,000	12%	217,677	11%	192,943	15%	722,180	10%
Total	3,850	100%	89,247	100%	8,927	100%	13,634	100%	40,950	100%	6,006	100%	20,279	100%	39,738	100%	4,879	100%
Representativeness	361,791	100%	42,760,287	100%	1,769,785	100%	1,371,954	100%	11,465,659	100%	2,387,780	100%	1,923,175	100%	1,319,607	100%	7,323,209	100%

Source: Prepared by the authors based on household surveys harmonized by the IDB.

*Uses frequency weights.

Table 2 Women's hourly earnings versus men's*

	ARG (2019)	BOL (2019)	BRA (2019)	CHL (2017)	COL (2019)	CRI (2019)	DOM (2019)	ECU (2019)	GTM (2019)
Overall	-4.09%	-15.98%	-7.66%	-13.10%	-6.17%	1.74%	-24.00%	-12.87%	5.62%
Age									
25–35	-1.3%	-17.3%	-2.9%	-6.3%	-0.8%	5.4%	-23.6%	-5.1%	2.8%
36–45	-4.2%	-7.8%	-7.4%	-12.4%	-7.6%	4.3%	-21.0%	-14.6%	8.6%
46–55	-4.4%	-15.6%	-12.9%	-20.9%	-11.2%	-4.0%	-26.2%	-14.6%	3.9%
56–65	-12.9%	-27.6%	-10.7%	-19.0%	-12.0%	-6.9%	-32.4%	-24.6%	3.7%
Level of education									
None	7.6%	-19.1%	-13.0%	-11.6%	-28.9%	-16.0%	-42.9%	-26.6%	-1.2%
Primary	-22.1%	-15.8%	-23.1%	-19.0%	-28.1%	-18.7%	-42.1%	-22.9%	-8.9%
Secondary	-18.1%	-19.5%	-22.4%	-20.8%	-24.9%	-12.4%	-35.5%	-21.2%	11.7%
Tertiary	-6.5%	-4.6%	-27.5%	-23.6%	-14.5%	-11.3%	-24.7%	-11.2%	-21.8%
					-25.4%		-15.6%		
Economic Sector									
Agriculture, hunting, forestry, and fishing	-11.0%	-46.0%	-20.7%	-14.0%	-20.1%	-11.4%	11.5%	-32.8%	-31.8%
Mining and quarrying	30.9%	8.4%	37.8%	1.5%	-80.2%	n.d.	-53.2%	29.9%	ins. data
Manufacturing	-35.5%	-22.9%	-40.2%	-26.4%	-45.9%	-32.7%	-24.3%	-39.1%	-57.3%
Electricity, gas, and water	13.9%	-56.0%	24.6%	-3.8%	23.0%	23.7%	-1.7%	-64.7%	-68.0%
Construction	39.1%	0.7%	49.1%	18.1%	58.8%	29.5%	24.1%	51.0%	27.7%
Retail, restaurants, and hotels	-24.9%	-34.1%	-19.8%	-24.4%	-32.8%	-22.2%	-34.8%	-29.1%	-42.4%
Transportation and storage	14.0%	11.9%	-25.0%	3.7%	18.4%	33.1%	-34.4%	25.4%	48.2%
Banking, insurance, and real estate	1.4%	-3.0%	-30.1%	-5.5%	11.7%	-1.5%	19.8%	-12.6%	11.8%
Social and community services	-17.9%	-14.9%	-31.0%	-32.9%	-42.9%	-11.3%	-29.8%	-33.0%	-33.1%
	4.1%		-23.4%	-11.3%		3.9%			
Occupation									
Professional and technical	0.7%	0.4%	-15.4%	-22.0%	7.7%	4.9%	-15.9%	-5.0%	-4.3%
Director or senior officer	ins. data	-17.6%	-25.4%	-61.0%	-8.2%	-8.8%	14.9%	-7.7%	13.8%
Administrative and intermediate level	-4.1%	-8.7%	-14.0%	-14.5%	-1.1%	2.0%	-44.4%	-2.1%	-2.9%
Merchants and vendors	-25.6%	-44.3%	-25.6%	-19.0%	-35.6%	-33.8%	-35.7%	-30.3%	-48.5%
Services	-11.3%	2.0%	-19.9%	-16.6%	-41.4%	-55.9%	-22.9%	-36.8%	-45.5%
Agricultural workers	6.3%	-45.4%	-20.4%	-13.5%	-28.1%	-37.1%	-0.3%	-36.3%	-27.0%
Non-agricultural laborers, machinery operators, and transportation services	-40.7%	-31.6%	-29.7%	-33.2%	-40.1%	-9.2%	-50.0%	-43.8%	-47.8%
Armed forces	-0.2%	91.3%	0.6%	-16.8%	ins. data	ins. data	-23.1%	ins. data	ins. data
Other	3.8%	ins. data	-5.9%	-4.7%	-14.2%	4.9%	45.9%	-9.3%	-70.0%
Members of the executive, legislative, and judicial branches and staff.	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data
Scientific and intellectual professionals	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data
Technicians and mid-level professionals	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data
Office employees	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data
Service workers and retail and market sales workers	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data
Farmers, ranchers, and fishers	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data
Tradespeople, operators, and craftspeople	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data
Plant and machine operators and assemblers	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data
Unskilled workers	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data	ins. data
	-3.3%								
Setting									
Rural	ins. data	-39.6%	-0.4%	-6.1%	-25.4%	3.6%	-28.7%	-21.8%	16.1%
Urban	ins. data	-15.9%	-12.6%	-15.8%	-12.9%	-2.2%	-24.0%	-14.3%	-7.6%
Legal Status of Employment									
Informal	-10.5%	-20.9%	-6.6%	-14.7%	-15.8%	-5.8%	-49.0%	-23.9%	-1.5%
Formal	3.1%	1.9%	-11.2%	-10.8%	6.3%	12.1%	-0.6%	-4.5%	19.5%

Table 2 (Continued)

	HND (2019)	MEX (2018)	NIC (2014)	PAN (2019)	PER (2019)	PRY (2019)	SLV (2019)	URY (2019)	VEN (2018)
Overall	-48.26%	-20.23%	6.22%	-5.57%	-29.98%	-12.63%	-23.58%	-8.30%	-32.28%
Age									
25–35	-27.8%	-15.9%	4.9%	7.6%	-21.0%	-13.6%	-19.0%	-4.2%	-26.2%
36–45	-55.0%	-22.2%	4.5%	-9.2%	-27.9%	-11.8%	-27.0%	-6.2%	-32.3%
46–55	-60.6%	-22.7%	7.7%	-9.7%	-35.3%	-7.5%	-22.1%	-12.0%	-37.4%
56–65	-60.5%	-26.1%	12.3%	-16.3%	-39.2%	-27.5%	-34.9%	-14.5%	-48.0%
Level of education									
None	-63.8%	-28.2%	10.9%	-32.1%	-15.4%	-22.5%	-29.6%	-20.4%	33.8%
Primary	-81.2%	-32.3%	-18.9%	-31.0%	-29.6%	-33.9%	-27.5%	-25.4%	-17.4%
Secondary	-47.6%	-14.3%	-9.4%	-21.8%	-34.6%	-6.9%	-17.1%	-12.2%	-36.3%
Tertiary	-25.9%	-9.3%	-71.1%	-15.0%	-21.0%	-0.4%	-15.2%	-17.5%	-80.4%
								15.4%	-76.4%
Economic Sector									
Agriculture, hunting, forestry, and fishing	-23.0%	-70.4%	11.6%	10.6%	-6.1%	-39.0%	-14.0%	-10.6%	ins. data
Mining and quarrying	ins. data	17.5%	-3.6%	5.6%	-31.1%	ins. data	-10.7%	48.7%	ins. data
Manufacturing	-104.7%	-56.8%	-21.1%	-67.0%	-72.7%	-22.7%	-36.7%	-33.0%	ins. data
Electricity, gas, and water	-72.1%	24.1%	15.9%	-8.1%	-7.1%	42.3%	-22.8%	-10.1%	ins. data
Construction	-82.6%	58.2%	72.7%	58.4%	0.6%	60.0%	39.3%	9.8%	ins. data
Retail, restaurants, and hotels	-73.8%	-46.0%	-32.3%	-17.6%	-67.5%	-39.8%	-30.9%	-28.7%	ins. data
Transportation and storage	16.3%	42.4%	34.0%	18.6%	24.1%	35.7%	14.0%	8.6%	ins. data
Banking, insurance, and real estate	73.8%	-36.3%	3.9%	15.6%	-21.8%	2.5%	19.5%	-14.4%	ins. data
Social and community services	-31.9%	-26.2%	-30.4%	-26.8%	-28.3%	-29.8%	-43.1%	-19.9%	ins. data
	-54.6%	54.9%	-1.6%						
Occupation									
Professional and technical	-0.5%	10.2%	-17.6%	-9.9%	-11.7%	ins. data	4.9%	-7.5%	-26.6%
Director or senior officer	-25.4%	-7.1%	25.5%	-7.8%	3.9%	ins. data	-22.1%	-16.6%	-126.6%
Administrative and intermediate level	3.0%	-4.5%	-0.7%	-9.7%	-16.3%	ins. data	4.2%	-9.7%	-28.3%
Merchants and vendors	-61.8%	-51.8%	-51.7%	-50.5%	-71.7%	ins. data	-35.6%	-26.9%	-40.0%
Services	-14.5%	-25.6%	-32.3%		-31.1%	ins. data	-25.1%	-15.7%	ins. data
Agricultural workers	-30.6%	-73.0%	25.6%	-5.5%	-4.0%	ins. data	-20.7%	-14.2%	-32.9%
Non-agricultural laborers, machinery operators, and transportation services	-117.8%	-46.8%	-40.6%	-13.8%	-74.7%	ins. data	-36.5%	-40.6%	-54.3%
Armed forces	-44.2%	-4.2%	ins. data	ins. data	7.0%	32.2%	36.6%	4.6%	-32.4%
Other	ins. data	-20.3%	-3.4%	-27.4%	ins. data	ins. data	ins. data	13.5%	ins. data
Members of the executive, legislative, and judicial branches and staff.	ins. data	ins. data	ins. data	ins. data	ins. data	-11.6%	ins. data	ins. data	ins. data
Scientific and intellectual professionals	ins. data	ins. data	ins. data	ins. data	ins. data	-14.0%	ins. data	ins. data	ins. data
Technicians and mid-level professionals	ins. data	ins. data	ins. data	ins. data	ins. data	-19.6%	ins. data	ins. data	ins. data
Office employees	ins. data	ins. data	ins. data	ins. data	ins. data	-4.9%	ins. data	ins. data	ins. data
Service workers and retail and market sales workers	ins. data	ins. data	ins. data	ins. data	ins. data	-44.4%	ins. data	ins. data	ins. data
Farmers, ranchers, and fishers	ins. data	ins. data	ins. data	ins. data	ins. data	-32.6%	ins. data	ins. data	ins. data
Tradespeople, operators, and craftspeople	ins. data	ins. data	ins. data	ins. data	ins. data	-45.1%	ins. data	ins. data	ins. data
Plant and machine operators and assemblers	ins. data	ins. data	ins. data	ins. data	ins. data	-49.2%	ins. data	ins. data	ins. data
Unskilled workers	ins. data	ins. data	ins. data	ins. data	ins. data	2.0%	ins. data	ins. data	ins. data
			48.2%						0.2%
Setting									
Rural	-66.7%	-32.0%	18.4%	-7.1%	-27.3%	-19.0%	-28.9%	-12.1%	ins. data
Urban	-41.7%	-20.6%	-17.3%	-9.8%	-37.4%	-15.2%	-23.4%	-8.9%	ins. data
Legal Status of Employment									
Informal	-58.3%	-26.0%	2.1%	-25.9%	-34.3%	-24.4%	-28.5%	-22.3%	-25.3%
Formal	-0.6%	-2.5%	2.7%	7.3%	1.4%	14.2%	6.0%	-6.7%	-61.9%

Source: Prepared by the authors based on household surveys harmonized by the IDB.

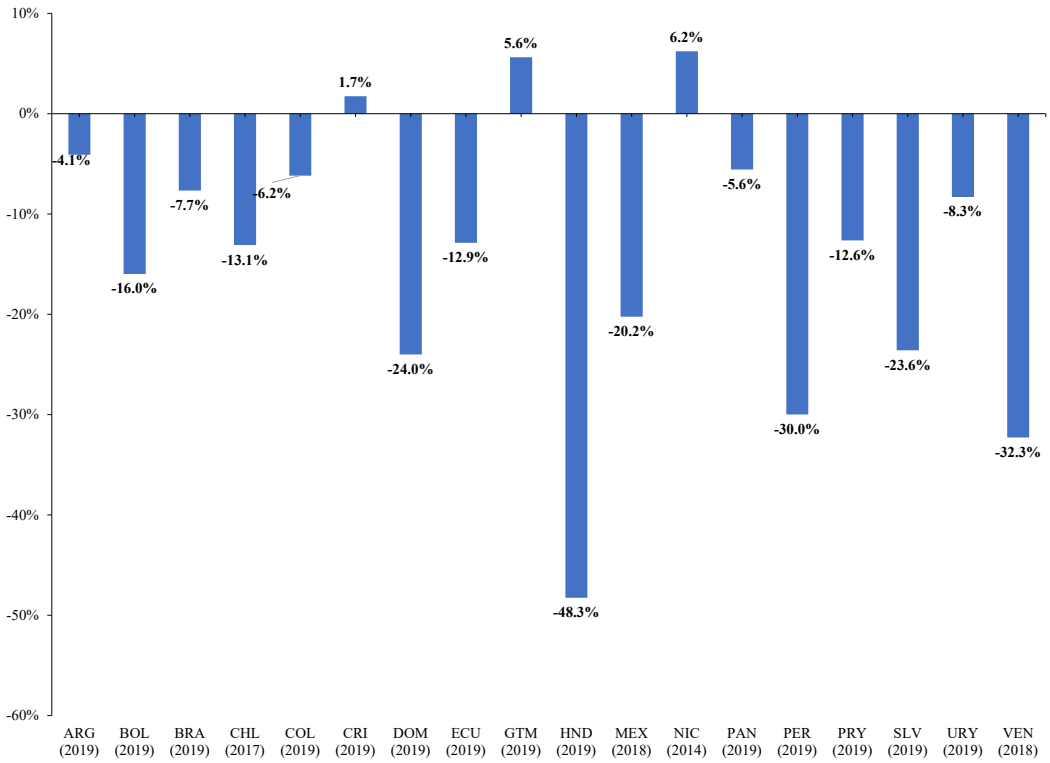
n.a.= not applicable. The survey categories are incompatible.

ins. data= insufficient data. There is not enough data to calculate the percentage.

*Uses only employed, income-earning people and frequency weights.

Graph 1 shows the gap in hourly earnings between women and men for the countries listed in Table 2. In most cases, the earnings gap is negative, which means that women's income is lower. This is not the case in Costa Rica, Guatemala, and Nicaragua. The countries with the worst earnings gap for women are El Salvador, Honduras, Mexico, Peru, the Dominican Republic, and Venezuela.

Graph 1. Women's hourly earnings relative to men's*



Source: Prepared by the authors based on household surveys harmonized by the IDB.
*Uses only employed, income-earning people and frequency weights.

3. Methodology

As discussed above, we used two methodologies to estimate the gender earnings gap: the Blinder-Oaxaca decomposition and the Ñopo decomposition.

The Blinder-Oaxaca Decomposition

This first strategy for quantifying changes in the gender earnings gap breaks the gap down into two parts. The first is the part explained by the different control variables used to measure human capital, such as education, work experience, and occupation. The second is the part these variables cannot explain, which could reflect gender-differentiated regulations, such as prejudices, biases, or discrimination of the type described by Becker (1957). This unexplained gap is generated by personal or statistical preferences, where employers use group characteristics to evaluate individual attributes. For example, suppose companies believe that

women of childbearing age are more likely than older women to have babies and, therefore, to have interruptions in their careers. Based on this assumption, they would pay lower wages to women of childbearing age to compensate for the higher probability of losing the worker, as Hoyos, Ñopo and Peña (2010) assert. The Blinder-Oaxaca method uses Mincer-type wage equations (1974), which, as explained in Jann (2008), divide the earnings difference into:

i) a part explained by group differences and individual characteristics such as education or work experience.

ii) a second unexplained residual component.

These equations have two groups, men (M) and women (W), the explained variable Y, which is the logarithm of income per hour from the main labor activity, and a group of explanatory variables X, such as education, experience, etc. The aim is to ascertain the average difference in earnings between the two groups that is explained by the explanatory variables X.

$$EGap = E(Y_H) - E(Y_M) \tag{1}$$

$E(Y_g)$ refers to the expected logarithm of earnings, which is the variable of interest, and *g* can be M if the equation is calculated for men or W if it is calculated for women. A Mincer-type equation is used to explain the income as follows: $Y_g = \alpha_g + \sum_{i=1}^{k} X_{ik}\ \beta_{gik} + \varepsilon_{gi}$. This expression can be substituted into equation [1]:

$$EGap = E\left(\alpha_H + \sum_{i=1}^{k} X_{ik}\beta_{Hik} + \varepsilon_{Hi}\right) - E\left(\alpha_M + \sum_{i=1}^{k} X_{ik}\beta_{Mik} + \varepsilon_{Mi}\right) \tag{2}$$

$$EGap = \widehat{\alpha_H} + \sum_{i=1}^{k} \overline{X_{ık}}\,\widehat{\beta_{Hık}} - \widehat{\alpha_M} - \sum_{i=1}^{k} \overline{X_{ık}}\,\widehat{\beta_{Mık}} \tag{3}$$

By rearranging, we can identify the contribution of the explanatory variables to the differences between the groups:

$$\mathrm{EGap} = (\widehat{\alpha_H} - \widehat{\alpha_M}) + \sum_{\mathrm{i=1}}^{\mathrm{k}} \overline{\mathrm{X_{ık}}}\left(\widehat{\beta_{Hık}} - \widehat{\beta_{Mık}}\right) + \sum_{\mathrm{i=1}}^{\mathrm{k}} (\overline{X_{Hık}} - \overline{X_{Mık}})\widehat{\beta_{Hık}} \tag{4}$$

The last component of this equation represents the part of the earnings gap explained by the explanatory variables, while the first two components represent the unexplained differences.

The model was estimated using the following specification:

$$yhora_i = \beta_0 + \sum_{i=1}^{3} \beta_i\, gaedu_i + \beta_4 exp_i + \beta_5 exp_i^2 + \sum_{i=6}^{9} \beta_i\, gedad_i + \beta_{10} casado_i + \beta_{11} men6_i + \beta_{12} cnt\_prop_i + \sum_{i=13}^{20} \beta_i rama_i + \sum_{i=21}^{28} \beta_i ocupa_i + \beta_{29} formal_i + \beta_{30} zona_i + \sum_{i=31}^{n} \beta_i region_i + \epsilon_i \tag{5}$$

Where:

- $yhora_i$ is the logarithm of nominal hourly earnings;
- $gaedu_i$ are the dichotomous variables indicating the three maximum educational levels people have achieved, as listed in Table 2. The base category is no education at all.
- exp_i are the estimated years of experience, calculated as age minus years of education.
- $gedad_i$ are four dichotomous variables indicating the age groups in Table 2, using the 15–25 age group as the base category.
- $casado_i$ is a dichotomous variable that takes a value of 1 if the person is married.
- $men6_i$ is a dichotomous variable that has a value of 1 if children under six years old live in the household.
- cnt_prop_i is a dichotomous variable that takes a value of 1 if the person is self-employed or an independent contractor.
- $rama_i$ are the dichotomous variables that refer to people's different economic activities, using agriculture, hunting, forestry, and fishing as the base category.
- $ocupa_i$ are six dichotomous variables that refer to people's different occupations.
- $formal_i$ is a dichotomous variable that takes a value of 1 if the person is formally employed.
- $zona_i$ is a dichotomous variable with a value of 1 if the person lives in an urban area.
- and $region_i$ are dichotomous variables for the different regions of the country.

This decomposition is carried out independently for women and men.

Although this method is prevalent in the literature, it has some limitations. First, it assumes a relationship between explanatory characteristics and earnings that might not necessarily be true. Second, the model provides information about how the gap is decomposed but does not imply a causal relationship. Finally, the method does not limit comparability to individuals with similar characteristics. Ñopo's (2008) model was created as an attempt to overcome the first and third limitations.

The Ñopo Decomposition

Ñopo (2008) presents a non-parametric decomposition. Pursuing the same objective as the Blinder-Oaxaca model, it takes into account income disparities over the entire income distribution, not just in the average.

The Ñopo model limits the comparison of differences to only men and women with comparable characteristics (common support). This feature allows it to generate a synthetic counterfactual of individuals by matching men and women with identical observable characteristics, without the need to assume any functional form of the relationship between the explanatory variables and income.

The matching is done using discrete characteristics and thus does not require the use of propensity score matching or any other notion of distance between the characteristics of men and women (Ñopo 2008).

This procedure generates three groups:

(i) Women and men who are matched (common support).

(ii) Women with observable characteristics for whom there are no comparable men, a scenario that the methodology has termed the Maid Effect.

(iii) Men for whom there are no comparable women, which the method calls the CEO Effect.

The method causes men and women with identical characteristics to form part of a common support. The difference in income of this group is then broken down by observed and unobserved attributes. Meanwhile, the Maid Effect and CEO Effect are calculated for those who ended up outside this common support. The Maid Effect refers to women who, because of their characteristics, have no male peers for comparison. This is traditionally associated with women with jobs with low hierarchical status that complement their home duties. In contrast, the CEO Effect refers to men with no female peers with comparable traits—traditionally those with high-status jobs.

Therefore, the model decomposes the income gap—more specifically, the difference in the logarithm of hourly income from the main labor activity—into four elements:

$$\delta = \delta_X + \delta_F + \delta_M + \delta_0 \tag{6}$$

Where δ represents the total difference in earnings by gender, δ_X represents the difference in earnings related to observable characteristics, δ_F reflects the CEO Effect, δ_M reflects the Maid Effect, and δ_0 represents the unexplained difference in earnings, which, as noted above, could be related to biases and discrimination. The unexplained component of this model follows the same logic as the Blinder-Oaxaca model, so we can compare their estimates.

The Ñopo model has its limitations. Like Blinder-Oaxaca's model, Ñopo's method only provides information on how the gap decomposes; it does not imply a causal relationship. Furthermore, since the matching is built on discrete variables, for both men and women, the probability of finding a person with the same characteristics and endowments declines as the number of explanatory

variables increases. This means that the common support decreases, as Enamorado, Izaguirre, and Ñopo (2009) point out, a phenomenon referred to as the curse of dimensionality. For this reason, researchers using Ñopo's model must carefully analyze whether to include new variables to explain differences in earnings.

Another methodological limitation of both Blinder-Oaxaca and Ñopo is that they can only handle observable characteristics, which in this study, are only those included in the household surveys harmonized by the IDB. Therefore, the gender earnings gap could also be affected by variables not included in the survey, such as attitude, effort, or preferences for tasks in the labor market or the household. These variables could be omitted from the analysis, which would skew the estimators by leaving out a relevant factor. For example, Chioda (2011) shows that men and women may not have identical preferences and attitudes towards work performed in the labor market.

We decided to perform both estimates in the study for better comparability and consistency. This approach will allow us to compare our estimates to those of studies that use either of the two methodologies. Additionally, the results of the two methodologies can be compared to each other since they follow the same logic. The two models used hourly income as a dependent variable, allowing us to calculate the earnings gap by gender. The explanatory variables used in the Ñopo model are:

$$gaedu_i, gedad_i, casado_i, men6_i, cnt\_prop_i, rama_i, ocupa_i, formal_i, zona_i.$$

It is worth noting that we refrained from adding the variables that measure experience in order to keep the common support high, that is, to avoid the curse of dimensionality. We also made this decision because this variable is constructed with information on age and education, which form part of the regression's explanatory variables, and because the model already controls for whether the person lives in an urban or rural area.[5]

For the Blinder-Oaxaca estimates, we used robust standard errors and probability weights for consistency with the survey structure. In contrast, we used frequency weights for the Ñopo decomposition model, since that is what the methodology calls for.

Both models may suffer from a selection bias, since they include only the observed wages of employed people. Given that labor force participation is higher among men than among women, women with lower earning potential may more frequently decide not to join the workforce, while earning potential may have less of an impact on men's labor force participation. If this is the case, the models presented in this study underestimate the gap. However, the increase in female participation could be mitigating this bias, which could make the comparison over time more difficult.

This research also uses control similar to those presented in past studies on gender earnings gaps in Latin America and the Caribbean, such as Ñopo and Hoyos (2010) and Ñopo (2012).

[5] Calculations not included in the model showed that adding these variables significantly decreased the common support and increased the standard deviation of the variables, without modifying the overall results.

4. Findings

Table 3 and Graph 2 present the results of the Blinder-Oaxaca decomposition estimates. We estimate the statistical models independently for each country, so the relationship between variables observed and earnings is unique for each one. Table 3 shows a statistically significant gender earnings gap in most countries in the region. In other words, women's hourly earnings are lower[6] than men's in 14 of the 18 countries analyzed in this study.[7] The four exceptions are Costa Rica, Guatemala, Nicaragua, and Venezuela. In Costa Rica, Guatemala, Nicaragua,[8] the gender earnings gap was positive, favoring women, but not statistically significant, while in Venezuela the gap is negative but could not be confirmed due to the data's high level of statistical variance.

In all countries except Bolivia, El Salvador, Honduras, Mexico, Peru, and Venezuela, the explanatory variables used in the analysis help close the gap in the region. In El Salvador, Honduras, and Peru, their effect is negative and statistically significant, meaning that in these countries, these variables widen the gender earnings gap, in favor of men.

Table 4 decomposes the gap into the different explanatory variables used. It shows that the gap explained by education is positive and statistically significant. In other words, since women have a higher average level of education than men, their hourly earnings should be higher in all countries in the region except Bolivia, Peru, and Venezuela. In these three countries, employed, income-earning women have fewer years of education than employed, income-earning men, as shown in Table A1 in the appendix. This gap in education does not exist if all women are analyzed, but the fact that employed women have a lower level of education than men in these countries could be due to the fact that the labor participation of high educated women is less than that of high educated men. Therefore, we can conclude that a significant portion of educated women tend not to enter the labor market.[9]

Meanwhile, personal and family characteristics like age, marital status, and the presence of minors in the household have a negative and statistically significant effect on the earnings gap, meaning that they widen that gap, in Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Peru, Paraguay, the Dominican Republic, and Uruguay.

The occupational category variable (dichotomous for self-employed workers) has a negative and statistically significant effect on the gap in Bolivia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Peru, Paraguay, the Dominican Republic, and Venezuela. Meanwhile, in Brazil, Costa Rica, and Uruguay, this factor closes the gap.

[6] With a significance level of 1%.
[7] The gender earnings gap is estimated as the difference in the logarithmic mean of hourly earnings for men and women.
[8] The significance levels used for these analyses of Blinder-Oaxaca decompositions were 0.1%, 1% y 5%.
[9] For example, Jiménez Restrepo and Restrepo (2009) report that in Colombia when women from higher social classes and with higher levels of education decide to enter the labor market, they have a higher opportunity cost or reservation wage (encouraged worker effect). The negative effect that education has on the likelihood of accepting occupations that are not well-paid sheds light on this dynamic.

Table 3 Blinder-Oaxaca Decomposition
Logarithm of hourly earnings*

	ARG (2019)	BOL (2019)	BRA (2019)	CHL (2017)	COL (2019)	CRI (2019)	DOM (2019)	ECU (2019)	GTM (2019)	HND (2019)	MEX (2018)	NIC (2014)	PAN (2019)	PER (2019)	PRY (2019)	SLV (2019)	URY (2019)	VEN (2018)
Differential																		
Estimate for women	4.903***	2.526***	2.203***	7.625***	8.317***	7.567***	4.343***	0.669***	2.329***	3.277***	3.116***	3.129***	1.203***	1.378***	9.255***	0.327***	5.065***	-0.132
	(0.00996)	(0.0191)	(0.00469)	(0.00625)	(0.0103)	(0.0134)	(0.0167)	(0.0141)	(0.0253)	(0.0393)	(0.00848)	(0.0205)	(0.0151)	(0.0115)	(0.0213)	(0.0116)	(0.00569)	(0.0707)
Estimate for men	4.943***	2.685***	2.281***	7.756***	8.379***	7.550***	4.583***	0.797***	2.273***	3.761***	3.320***	3.067***	1.259***	1.677***	9.383***	0.563***	5.148***	0.0262
	(0.00828)	(0.0133)	(0.00424)	(0.00545)	(0.00780)	(0.0103)	(0.0116)	(0.0105)	(0.0184)	(0.0364)	(0.00618)	(0.0270)	(0.0120)	(0.00845)	(0.0159)	(0.00808)	(0.00496)	(0.0583)
Difference	-0.0405**	-0.159***	-0.0778***	-0.131***	-0.0612***	0.0170	-0.240***	-0.129***	0.0562	-0.484***	-0.204***	0.0616	-0.0557**	-0.300***	-0.127***	-0.236***	-0.0830***	-0.158
	(0.0130)	(0.0233)	(0.00632)	(0.00830)	(0.0129)	(0.0169)	(0.0204)	(0.0176)	(0.0313)	(0.0536)	(0.0105)	(0.0339)	(0.0193)	(0.0142)	(0.0265)	(0.0141)	(0.00755)	(0.0916)
Decomposition																		
Explained	0.0854***	-0.00596	0.153***	0.0655***	0.137***	0.133***	0.0458**	0.0804***	0.255***	-0.182***	0.0115	0.192***	0.164***	-0.0738***	0.0670***	-0.0578***	0.101***	0.0771
	(0.00986)	(0.0179)	(0.00491)	(0.00637)	(0.0104)	(0.0134)	(0.0161)	(0.0128)	(0.0268)	(0.0469)	(0.00757)	(0.0285)	(0.0147)	(0.0108)	(0.0193)	(0.0109)	(0.00611)	(0.0467)
Unexplained	-0.126***	-0.153***	-0.231***	-0.197***	-0.198***	-0.116***	-0.286***	-0.209***	-0.199***	-0.302***	-0.215***	-0.130***	-0.220***	-0.226***	-0.194***	-0.178***	-0.184***	-0.235*
	(0.0127)	(0.0245)	(0.00568)	(0.00779)	(0.0109)	(0.0133)	(0.0191)	(0.0163)	(0.0272)	(0.0534)	(0.00926)	(0.0323)	(0.0176)	(0.0132)	(0.0251)	(0.0135)	(0.00700)	(0.0989)
Decomposition (as a percentage of women's hourly earnings)																		
Total	-4%	-16%	-8%	-13%	-6%	2%	-24%	-13%	6%	-48%	-20%	6%	-6%	-30%	-13%	-24%	-8%	-16%
Explained	9%	-1%	15%	7%	14%	13%	5%	8%	26%	-18%	1%	19%	16%	-7%	7%	-6%	10%	8%
Unexplained	-13%	-15%	-23%	-20%	-20%	-12%	-29%	-21%	-20%	-30%	-22%	-13%	-22%	-23%	-19%	-18%	-18%	-24%
Observations	33784**	12613	147139	73804	64412	11420	6827	18621	6084	3844	87923	8911	13634	40950	5593	20270	39735	3565

t-statistic in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Prepared by the authors based on household surveys harmonized by the IDB.

*Uses only employed, income-earning people and probability weights.

Table 4 Components of the explained difference, Blinder-Oaxaca
Logarithm of hourly earnings*

	ARG (2019)	BOL (2019)	BRA (2019)	CHL (2017)	COL (2019)	CRI (2019)	DOM (2019)	ECU (2019)	GTM (2019)	HND (2019)	MEX (2018)	NIC (2014)	PAN (2019)	PER (2019)	PRY (2019)	SLV (2019)	URY (2019)	VEN (2018)
Explained difference	0.0854***	-0.00596	0.153***	0.0655***	0.137x***	0.133***	0.0458**	0.0804***	0.255***	-0.182***	0.0115	0.192***	0.164***	-0.0738***	0.0670***	-0.0578***	0.101***	0.0771
Education	0.0394***	0.00157	0.0861***	0.0288***	0.0521***	0.0705***	0.0821***	0.0267***	0.0321***	0.0765***	0.0129***	0.0332***	0.0932***	-0.00322	0.0181***	0.00672*	0.0532***	0.0770
Experience	0.00958***	-0.0155***	-0.000938	0.0294***	0.0232***	0.0183***	-0.00721	0.0111**	-0.00208	-0.00230	0.00212	0.00806	0.00326	-0.00888***	0.00368	-0.00836**	0.00793***	0.0598
Personal and family characteristics	-0.00668**	-0.00504	-0.00703***	-0.0343***	-0.0181***	-0.0273***	-0.00717***	-0.0188***	-0.0215**	-0.0146	-0.0174***	-0.0134	-0.00251	-0.00762**	-0.0127**	-0.00660	-0.00875***	-0.00133
Occupational category	0.000871**	-0.00273*	0.00218***	0.00207***	0.000860	0.0111***	-0.0340***	-0.0208***	-0.0367***	-0.149***	-0.0334***	-0.0102	0.00246	-0.0200***	-0.0125**	-0.0254***	0.00498***	-0.0820***
Economic activity	0.0209***	0.00574	0.0262***	-0.00590	0.0272**	0.0241***	-0.0546***	0.00278	0.145***	-0.101**	0.0202***	0.0127	0.00259	-0.0366***	0.0280*	0.0126	0.00926**	ins. data=
Occupation	0.0201**	0.0156	0.0221***	0.0413***	0.0134	0.0472***	0.0520***	0.0623***	0.125***	0.0179	0.0382***	0.125***	0.0559***	-0.0130	0.0309*	-0.0219*	0.0208***	0.0419
Region	0.00411**	-0.00127	0.00816***	0.00515***	0.0113***	0.00338***	-0.00243	ins. data=	0.00511**	-0.00501	-0.00578***	ins. data=	-0.000360	0.00416	0.00597*	0.000453	0.00464***	-0.0214
Legal status of employment	-0.00286	-0.00384	0.00816***	-0.00334***	0.000528	-0.0182***	0.0145***	0.00916**	0.00786	-0.00983	-0.00973***	0.0103***	0.00365	-0.00679***	0.000759	-0.0207***	0.00687***	0.00301
Setting	ins. data=	-0.000536	0.00846***	0.00220***	0.0266***	0.00419***	0.00263**	0.00790***	ins. data=	0.00617	0.00438***	0.0266***	0.00589***	0.0182***	0.00475*	0.00540***	0.00161***	ins. data=

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Prepared by the authors based on the household surveys harmonized by the IDB.

ins. data= insufficient data. There is not enough data to calculate the percentage.

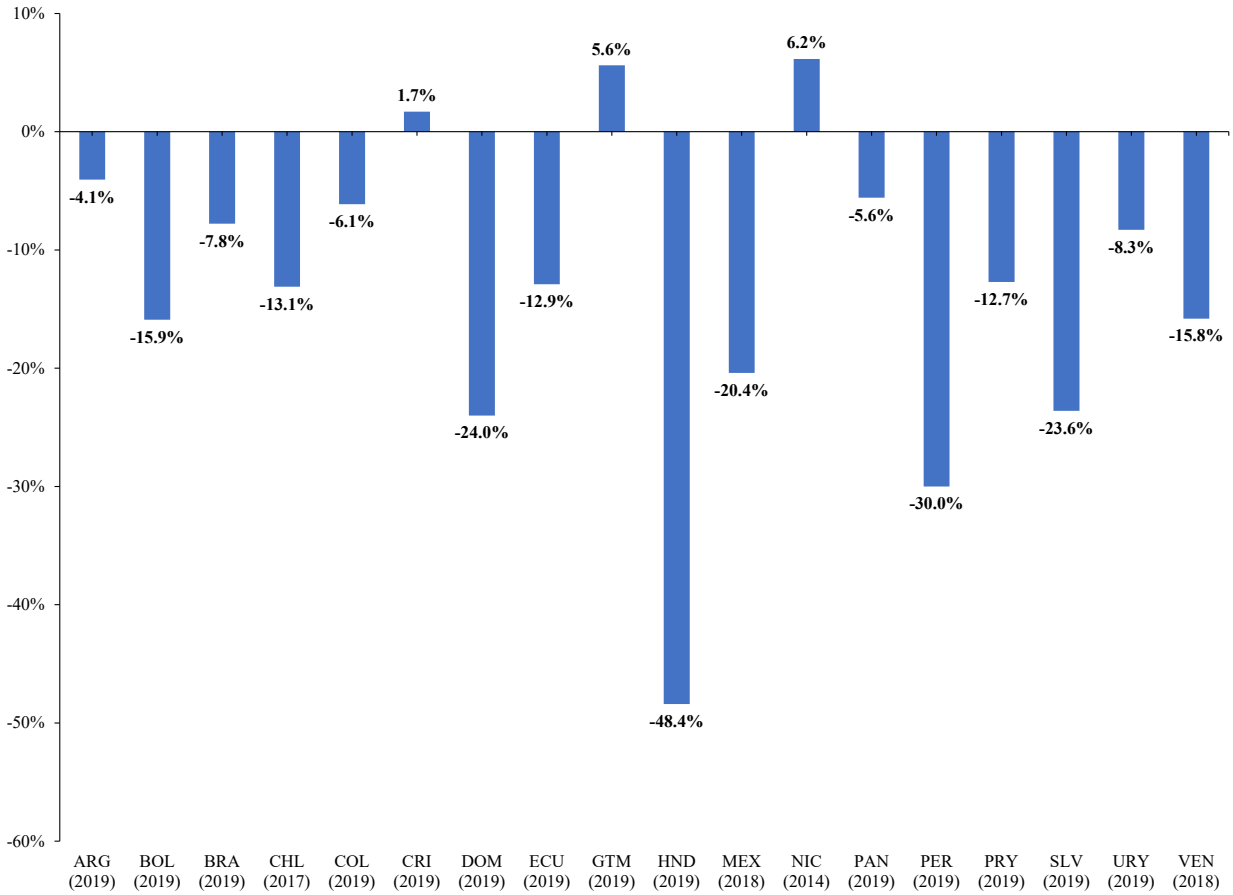
* Uses only employed, income-earning people and probability weights.

The occupation factor helps reduce the gap in most countries in the region. We did not find occupation to have a statistically significant effect on the gap in Bolivia, Colombia, Honduras, Peru, and Venezuela. In El Salvador, this factor widens the gap.

The sectors in which women and men work narrow the gender earnings gap in a statistically significant way in Argentina, Brazil, Colombia, Costa Rica, Guatemala, Mexico, Paraguay, the Dominican Republic, and Uruguay. Meanwhile, in Bolivia, Chile, Ecuador, El Salvador, Nicaragua, and Panama, we found no statistically significant effect from this factor, and in Honduras and Peru, this aspect significantly increased the gender earnings gap.

The distribution between formal and informal employment generates a statistically significant gap favoring men in Chile, Costa Rica, El Salvador, Mexico, and Peru, but this distribution narrows the gap in Brazil, Ecuador, Nicaragua, the Dominican Republic, and Uruguay.

Graph 2. Total gap in hourly earnings, estimated using the Blinder-Oaxaca decomposition*



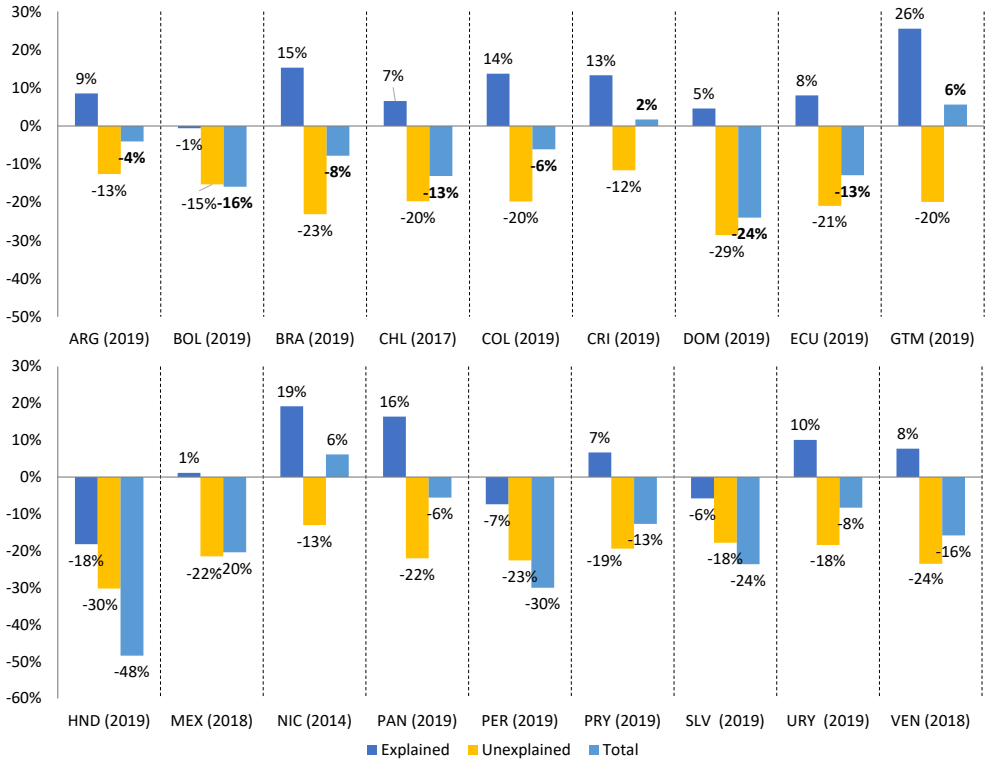
Source: Prepared by the authors based on household surveys harmonized by the IDB.
*Uses only employed, income-earning people.

The region of the country where workers live (men and women) has a statistically significant positive effect on the gender earnings gap in Argentina, Brazil, Chile, Colombia, Costa Rica, Guatemala, Paraguay, and Uruguay, while in Mexico it widens the gap for women. Finally, the

setting (urban or rural) where workers live has a positive and statistically significant effect on the gap. The greater proportion of female workers in urban areas, as shown in Table A-1 in the appendix, reduces gender income inequalities in most countries. The exceptions are Bolivia, Honduras, and Paraguay, where we found no statistically significant effect from this variable.[10]

As shown in Graph 3, the most important component generating the gender earnings gap to the detriment of women is the one not explained by the model. This means that most of the gap and its patterns are not explained by the variables analyzed above, but are rather caused by an unexplained component that is likely related to regulatory factors, biases, or discrimination, as Becker (1957) argues.

Graph 3. Decomposition of the gender gap in hourly earnings, estimated using the Blinder-Oaxaca model*



Source: Prepared by the authors based on household surveys harmonized by the IDB.
*Uses only employed, income-earning people.

Table 5 presents the results of the Ñopo decomposition. It shows that women have lower hourly earnings than men, just because they are women, in 14 of the countries observed. The exceptions are Colombia, Costa Rica, Guatemala, and Venezuela.

[10] We cannot analyze the relationship between a variable and the gender earnings gap in some cases because there is no data for some categories. For example, and as explained in section 2, some countries only have information on people living in urban areas.

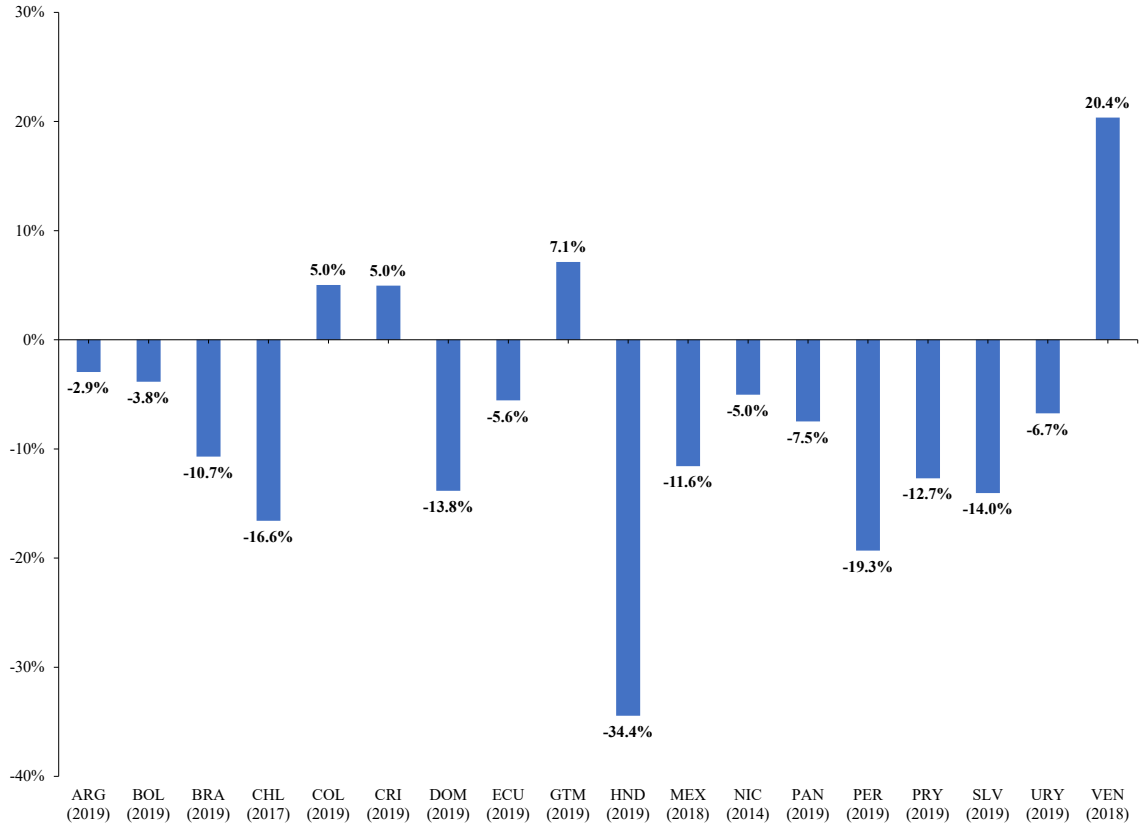
Table 5 Ñopo Decomposition
Hourly earnings*

	ARG (2019)	BOL (2019)	BRA (2019)	CHL (2017)	COL (2019)	CRI (2019)	DOM (2019)	ECU (2019)	GTM (2019)	HND (2019)	MEX (2018)	NIC (2014)	PAN (2019)	PER (2019)	PRY (2019)	SLV (2019)	URY (2019)	VEN (2018)
(Total)	-3%	-4%	-11%	-17%	5%	5%	-14%	-6%	7%	-34%	-12%	-5%	-7%	-19%	-13%	-14%	-7%	20%
(Unexplained)	-11%	-12%	-21%	-21%	-9%	-15%	-25%	-14%	-10%	-10%	-8%	11%	-17%	-9%	-18%	-15%	-13%	19%
(Maid Effect)	-1%	-1%	0%	-1%	-5%	-7%	-4%	-2%	-11%	4%	0%	-2%	-2%	-1%	-1%	0%	-2%	-7%
(CEO Effect)	5%	1%	3%	3%	8%	16%	0%	-1%	-3%	-17%	-2%	-4%	2%	-6%	5%	0%	4%	5%
(Explained)	4%	9%	8%	3%	11%	11%	15%	11%	32%	-11%	-2%	-10%	9%	-4%	1%	1%	4%	4%
% Men	93%	77%	99%	92%	89%	76%	63%	75%	58%	47%	95%	65%	86%	92%	58%	78%	89%	91%
% Women	72%	56%	90%	79%	71%	51%	41%	62%	42%	34%	84%	49%	61%	71%	37%	55%	73%	83%
Standard Error	1%	2%	1%	2%	1%	2%	3%	2%	3%	10%	1%	10%	3%	1%	8%	2%	2%	18%

Source: Prepared by the authors based on household surveys harmonized by the IDB.
*Uses only employed, income-earning people and frequency weights.

Using this method, we found a group of countries with a large income gap, or a difference of over 10% between the hourly earnings of men and women. This group consists of Brazil, Chile, El Salvador, Honduras, Mexico, Paraguay, Peru, and the Dominican Republic. There is also a group of countries with a moderate earnings gap of less than 10%, made up of Argentina, Bolivia, Ecuador, Nicaragua, Panama, and Uruguay. Finally, there is a third group where the earnings gap is positive. This group is composed of Colombia, Costa Rica, Guatemala, and Venezuela. Since this gap is not explained by factors like education or experience but rather occurs even when women have better professional profiles, it is therefore due to regulatory and legal factors, and to prejudices, biases, and/or gender discrimination. Graph 4 shows the results of the estimate.

Graph 4. Gender gap in hourly earnings, estimated using the Ñopo decomposition*



Source: Prepared by the authors based on household surveys harmonized by the IDB.
*Uses only employed, income-earning people.

The Ñopo model allows us to decompose the earnings gap into four elements.[11] The first is the difference in earnings explained by observable characteristics and people's decisions. This study used variables like age, level of education, marital status, presence of minors in the household, area of economic activity, main occupation, legal status of employment, self-employment status, and setting (urban or rural), to create a "common support."

The common support found for the 18 countries in this study ranges from 37 to 99% of the sample of men and women, with an average of 70%. This value is similar to that of the models for Latin American and Caribbean countries created by Ñopo and Hoyos (2010) and Ñopo (2012), which use control variables similar to those used in this study. Based on the impact of these variables on earnings, women should be earning more than men in 14 of 18 countries, particularly because of their higher level of education and because they are engaged in areas of activity that provide a better economic return. However, as we described previously, we find that men's hourly earnings are higher than women's in most countries. Notable cases include Colombia, Costa

[11] The standard deviation of the components of the estimates from the 18 countries ranges from 1% to 18% (Venezuela), with an average of 4%.

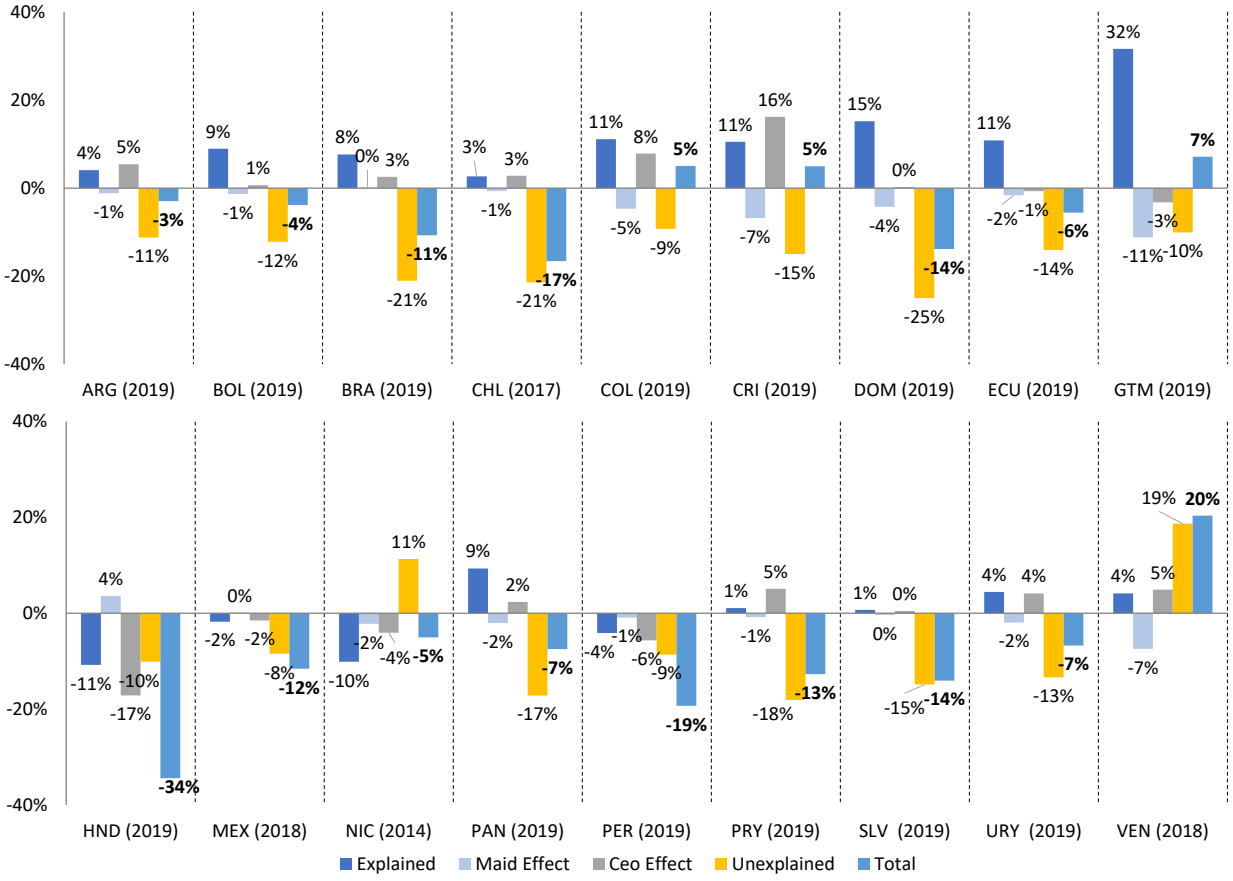
Rica, Ecuador, Guatemala, and the Dominican Republic, where women's observable characteristics should generate an earnings gap of over 10% in their favor.

The second and third components of the model—called the Maid Effect and the CEO Effect—reflect the part of the earnings gap that is explained by women or men who do not have peers of the other gender with similar personal and professional characteristics with whom their earnings can be compared. These components are related to traditional labor patterns in which women tend to be concentrated in certain occupations like nursing or services, while men work in hazardous occupations or managerial positions with more opportunities for professional growth. These components do not explain most of the earnings gap in the countries, with the exception of a few cases like Guatemala, which had an earnings gap due to the Maid Effect of about 11%, or Honduras, which had a CEO Effect of 17%.

The final component of the analysis is the part not explained by the model, or the portion that none of the variables listed above can account for. This gap is the most significant in most countries in the region and generates an earnings gap favoring men in 16 countries. This means that the gendered discrepancy in earnings in the region is due to non-observable factors related to poorly designed laws, cognitive biases, discrimination, or labor costs associated with child rearing.

Graph 5, for example, shows how Argentina has a total gender earnings gap of -2%, which can be decomposed into an explained earnings gap of 4%, a Maid Effect of -1%, a CEO Effect of 5%, and an unexplained gap of -11%. When the values for the gap are positive, it means the gap favors women, at least for that component. The average hourly earnings gap in the 18 countries analyzed is -7%.

Graph 5. Decomposition of the gender gap in hourly earnings, estimated using the Ñopo model*



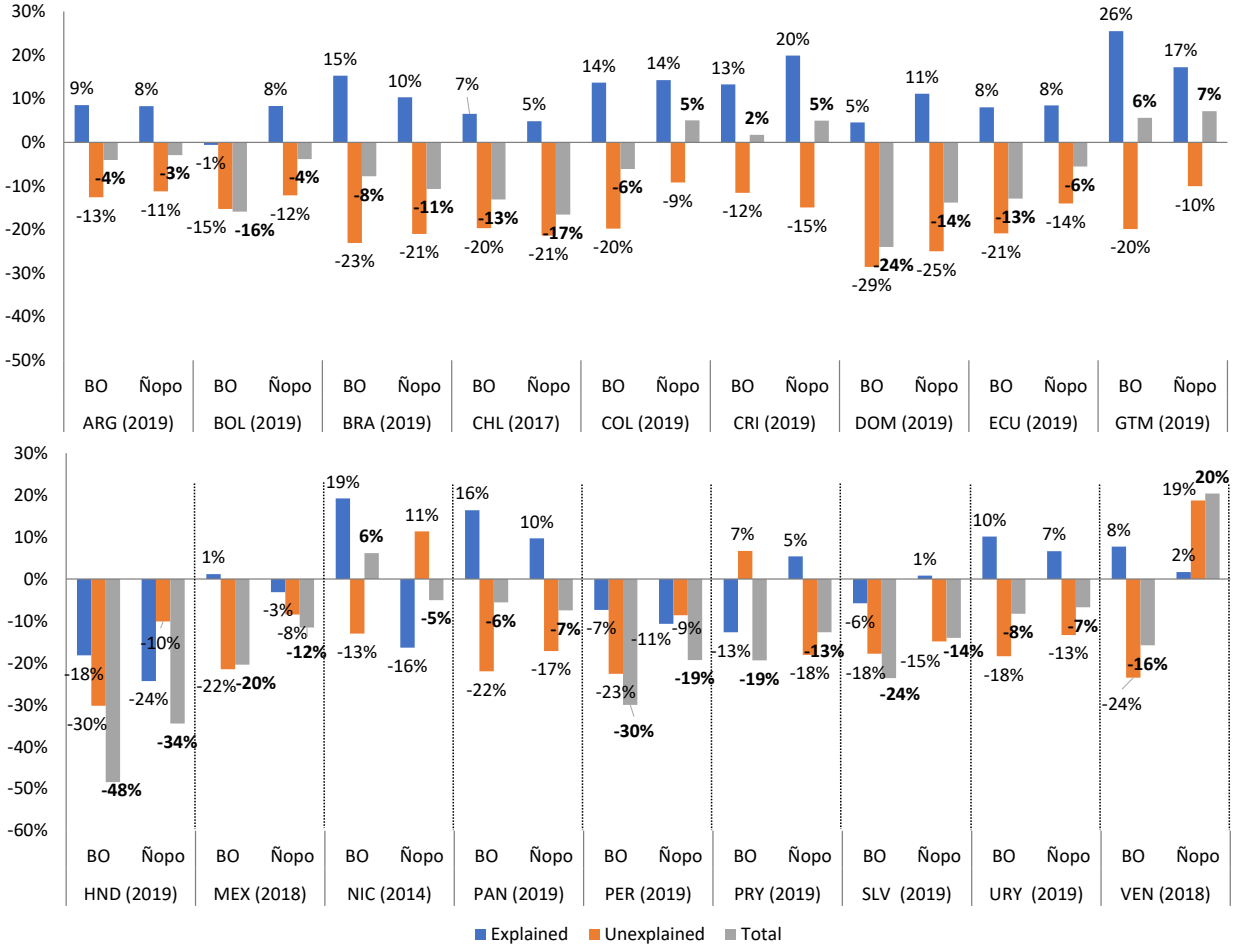
Source: Prepared by the authors based on household surveys harmonized by the IDB.
*Uses only employed, income-earning people.

On the one hand, the average explained gap is 5%. This means that if only observable characteristics are taken into account, women should be earning 5% more than men. Meanwhile, the average Maid Effect is -2%, while the CEO effect is 1%, so these two components are not key factors when explaining the earnings gap in these countries. On the other hand, the average unexplained earnings gap is -11%. This component is therefore the most important for determining the roots of the discrepancy in earnings between men and women in the region.

Graph 5 shows results that are consistent with and support the findings of the Blinder-Oaxaca decomposition model. However, there are small differences between the Blinder-Oaxaca and Ñopo estimates, most of which are related to the structure of the models.[12] Graph 6 compares the results from the two methods.

[12] The differences between the estimates in this document and in the documents of the literature review are due to slight variations in the analysis methodology.

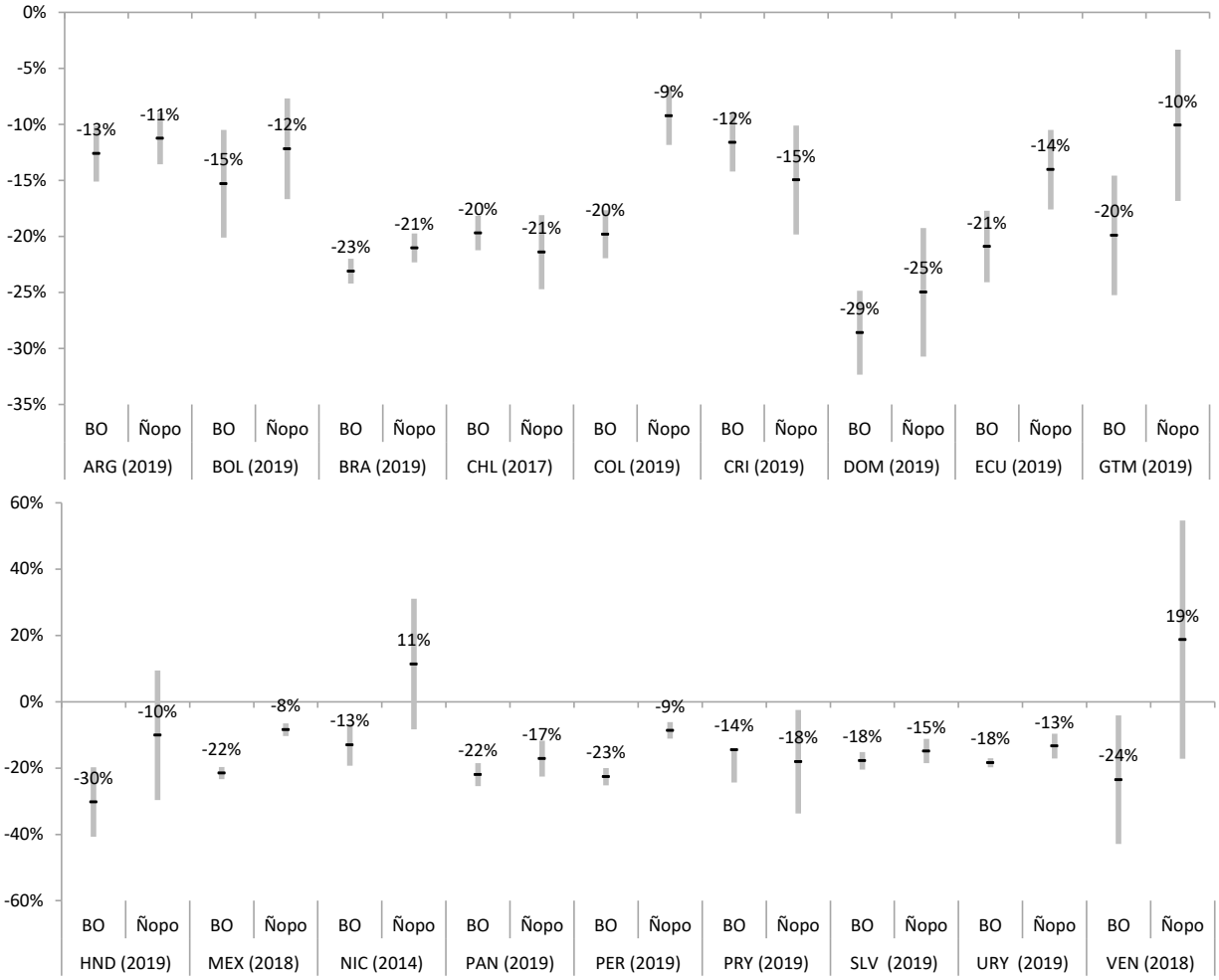
Graph 6. Gender gap in hourly earnings, estimated using the Blinder-Oaxaca (BO) and Ñopo decomposition models*



Source: Prepared by the authors based on household surveys harmonized by the IDB.
*Uses only employed, income-earning people.

In qualitative terms, most of the results point to the same conclusions, with the exception of Bolivia (where the Ñopo decomposition finds a positive explained gap), Colombia (where Ñopo finds a positive overall gap), El Salvador (where Ñopo finds a positive explained gap), Mexico (where Ñopo finds a negative explained gap), Nicaragua (where Ñopo finds a negative overall gap), Paraguay (where Ñopo finds a positive explained gap and a negative unexplained gap), and Venezuela (where Ñopo finds a positive overall gap).

Graph 7. Unexplained gender gap in hourly earnings, estimated using the Blinder-Oaxaca (BO) and Ñopo decomposition models*



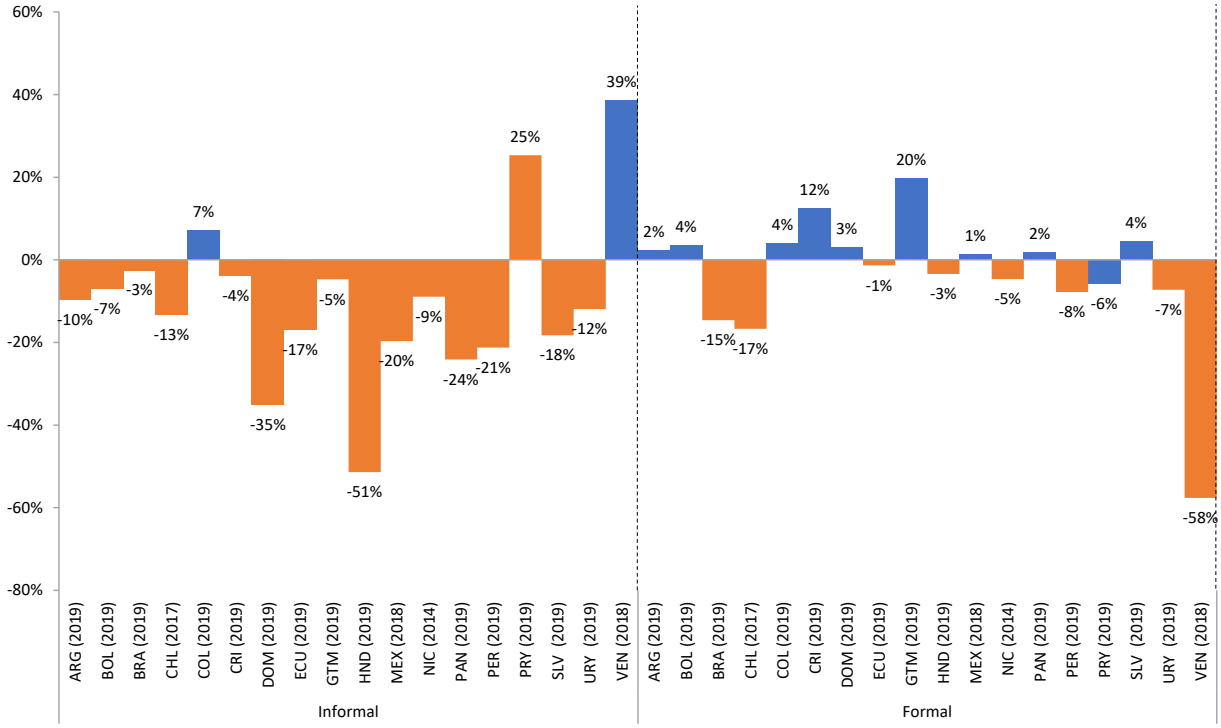
Source: Prepared by the authors based on household surveys harmonized by the IDB.
*Uses only employed, income-earning people and probability and frequency weights.
Note: The bars show the unexplained component with a 95% confidence interval.

Graph 7 compares the unexplained gap in the different countries estimated using Blinder-Oaxaca and Ñopo. This graph includes 95% confidence intervals above and below the estimator. With the exception of Honduras, Nicaragua, and Venezuela under the Ñopo model (where the confidence intervals are too broad), both methodologies find a statistically significant unexplained earnings gap in the countries in the region, at the 95% confidence level. Since the Ñopo model only allows us to draw comparisons between men and women with similar characteristics (common support), its confidence intervals are generally wider than those of the Blinder-Oaxaca model.

Additionally, the Ñopo decomposition can disaggregate the earnings gap by the different explanatory variables used. Graph 8 shows the total earnings gap by legal status of employment. There is a clear distinction between people who are formally employed and those who work informal jobs. Women in the informal sector experience a higher income gap, while in the formal

sector the difference is smaller and even favors women in several countries. The gap in the informal sector could be due to the lack of labor laws governing these working relationships, as well as to the prevailing business practices in the sector. The high levels of informal labor in the region make this phenomenon even more relevant.

Graph 8. Overall earnings gap estimated using the Ñopo decomposition, by legal status of employment*



Source: Prepared by the authors based on household surveys harmonized by the IDB.
*Uses only employed, income-earning people.

5. Conclusions

This study finds an important and statistically significant aggregate earnings gap between men and women in most countries in the region. This gap is primarily explained by factors that cannot be observed in household surveys. This means that variables like experience, personal and family characteristics, economic sector and activity, region, and setting (rural or urban) are not the main factors explaining the gap. Most of the gap is therefore generated by issues related to regulations, biases, motherhood penalties, professional development difficulties, discrimination, or other factors explained in the literature review.

Furthermore, in most countries, observable variables help close the gap. Based on observable characteristics, women should be earning more than men, especially due to their higher level of education and greater involvement in activities with higher economic returns.

Table 6 Effect of the different variables on the earnings gap

Countries/variables	Biases / discrimination (BO)	Aggregate of explanatory variables (BO)	Education	Experience	Personal and family characteristics	Occupational category	Economic activity	Occupation	Region	Legal status of employment	Setting	*Maid Effect*	*CEO Effect*
ARG	-	+	+	+	-		+	+	+		ins. data=		+
BOL	-			-		-							
BRA	-	+	+		-	+	+	+	+	+	+		+
CHL	-	+	+	+	-	+		+	+	-	+		
COL	-	+	+	+	-		+		+		+	-	+
CRI	-	+	+	+	-	+	+	+	+	-	+	-	+
DOM	-	+	+		-	-	-	+		+	+		
ECU	-	+	+	+	-	-		+	ins. data=	+	+		
GTM	-	+	+		-	-	+	+	+		ins. data=	-	
HND	-	-	+			-	-			-			-
MEX	-		+		-	-	+	+	-	-	+		
NIC	-	+	+					+	ins. data=	+	+		
PAN	-	+	+					+			+		
PER	-	-		-	-	-	-			-	+		-
PRY	-	+	+		-	-	+	+	+		+		
SLV	-	-	+	-		-		-		-	+		
URY	-	+	+	+	-	+	+	+	+	+	+		+
VEN	-					-	ins. data				ins. data		

Source: Prepared by the authors based on household surveys harmonized by the IDB.
Uses a significance level of 5%.
- means that the variable has an effect that increases the earnings gap favoring men.
+ means that the variable has an effect that helps decrease the earnings gap favoring men.
ins. data = insufficient data. There is not enough data to calculate the percentage.

Table 6 presents the effect of each of the variables on the earnings gap in the countries in the region. Education drastically reduces the income gap, since female workers have a higher average level of education than male workers. Another variable that clearly helps decrease the gender income gap in the region is the occupations in which women are beginning to work. Being self-employed or an independent contractor generally increases the income gap in countries. People's area of activity helps reduce the gap in most countries. The setting (urban or rural) where workers are located generates a statistically significant reduction in the gap. The greater proportion of female workers in urban areas reduces gender income inequalities in most countries. As shown in Graph 8, there is a clear distinction between people working in the formal and informal sectors: the earnings gap is higher among people working in the informal sector. In contrast, in the formal sector, the gap is smaller and even favors women in some countries. Finally, the Maid and CEO effects are not a fundamental part of the explanation for the earnings gap in most of the region's countries.

This study groups countries into three categories, based on their earnings gap. The first is composed of countries with a large gap (Bolivia, Chile, Ecuador, El Salvador, Honduras, Mexico, Paraguay, Peru, Dominican Republic, and Venezuela). The second consists of nations where the gap is moderate (Argentina, Brazil, Colombia, Panama, and Uruguay), and the third category

contains the countries where the earnings gap is small and even favors women (Costa Rica, Guatemala, and Nicaragua).

For the most part, these conclusions coincide with the literature on gender earnings gaps in the region. In line with the studies of Ñopo and Hoyos (2010) and Ñopo (2012), this study finds that the unexplained gap remains highly significant in Latin America and the Caribbean. It also aligns with the findings of authors like Chioda (2011) or Gasparini and Marchionni (2015), who also identified education as a relevant factor in closing the gap, given the increase in the proportion of women who have finished secondary school. In agreement with the ILO (2019), this study finds a persistent unexplained gap that is primarily present among informal workers. Additionally, higher female labor force participation in urban areas and the differences in their earnings compared to those of workers in rural areas also decrease the overall earnings gap between genders.

This document helps assess the status of the gender earnings gap in Latin America and the Caribbean. The study's conclusions are relevant as reliable input that those in charge of designing evidence-based public policy can use when making their decisions.

In future analyses, these conclusions could be expanded with more detailed disaggregation and an in-depth exploration of the earnings gap in groups of people with different specific characteristics. They could also be refined by using new resources to better quantify the earnings gap and its determinants based on different hypotheses about the unexplained earnings gap. Finally, we see a need for a separate study on the consequences that the pandemic had and continues to have on the earnings gap in the region.

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Appendices

Table A1. Distribution of the population's characteristics, by gender, men (M) and women (W)*

	ARG (2019)		BOL (2019)		BRA (2019)		CHL (2017)		COL (2019)		CRI (2019)		DOM (2019)		ECU (2019)		GTM (2019)		HND (2019)		MEX (2018)		NIC (2014)		PAN (2019)		PER (2019)		PRY (2019)		SLV (2019)		URY (2019)		VEN (2018)	
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
Years of Education	11.4	12.5	10.7	10.2	10.0	11.8	12.2	12.9	9.3	10.9	9.6	11.3	9.4	10.9	9.4	10.5	6.5	6.9	7.3	8.5	9.9	10.3	6.9	8.7	10.8	12.4	10.6	10.1	10.0	10.6	8.7	8.4	10.0	11.4	10.3	12.3
None	3%	2%	22%	29%	23%	14%	6%	4%	16%	9%	11%	6%	19%	13%	39%	31%	41%	41%	29%	24%	12%	11%	40%	27%	7%	5%	10%	17%	16%	17%	26%	30%	4%	2%	14%	6%
Primary	33%	23%	23%	18%	52%	48%	26%	20%	29%	22%	46%	38%	38%	29%	14%	13%	32%	25%	43%	36%	49%	44%	32%	30%	41%	28%	24%	22%	36%	29%	41%	35%	63%	50%	42%	24%
Secondary	43%	40%	37%	30%	3%	4%	43%	42%	33%	34%	31%	33%	33%	36%	37%	38%	22%	27%	22%	27%	31%	36%	27%	42%	34%	34%	42%	33%	39%	41%	26%	25%	20%	26%	41%	65%
Tertiary	21%	35%	19%	23%	21%	33%	26%	34%	22%	35%	12%	23%	10%	22%	10%	18%	5%	7%	7%	13%	8%	8%	1%	2%	18%	34%	24%	28%	9%	13%	7%	9%	13%	23%	3%	6%
Years of experience	24.6	23.6	24.9	25.7	25.9	23.6	25.3	23.6	26.2	24.3	26.8	24.1	25.4	24.2	27.1	25.6	28.4	27.3	27.7	27.4	25.9	25.2	26.7	25.6	26.5	24.8	26.9	27.6	24.7	23.4	25.9	27.3	26.9	25.2	24.3	21.9
25–35	34%	31%	35%	34%	33%	33%	31%	33%	35%	36%	33%	35%	38%	36%	31%	31%	38%	39%	38%	33%	34%	34%	44%	38%	29%	27%	29%	27%	39%	40%	38%	32%	29%	29%	40%	38%
36–45	29%	32%	29%	29%	30%	32%	25%	26%	28%	29%	28%	30%	28%	30%	30%	32%	29%	30%	28%	30%	29%	31%	27%	31%	27%	30%	28%	29%	28%	30%	29%	33%	30%	31%	26%	32%
46–55	23%	24%	22%	23%	24%	24%	26%	26%	24%	23%	23%	24%	22%	24%	24%	23%	21%	21%	21%	24%	24%	24%	19%	22%	27%	28%	26%	27%	20%	19%	22%	24%	26%	26%	23%	23%
56–65	14%	13%	14%	15%	13%	11%	19%	15%	13%	12%	16%	12%	12%	11%	15%	14%	12%	10%	13%	13%	13%	12%	10%	10%	17%	15%	18%	17%	13%	10%	11%	11%	15%	14%	11%	7%
Married	70%	58%	79%	61%	ins. data	ins. data	68%	51%	70%	56%	65%	48%	64%	56%	74%	56%	82%	54%	76%	57%	76%	58%	79%	55%	0%	0%	71%	57%	75%	65%	70%	47%	73%	66%	68%	60%
Children under 6 years old in the household	27%	24%	36%	30%	23%	20%	24%	25%	30%	28%	21%	21%	28%	28%	33%	29%	42%	34%	40%	36%	32%	28%	48%	41%	28%	28%	33%	29%	40%	37%	32%	26%	22%	22%	33%	33%
Agriculture, hunting, forestry, and fishing	1%	0%	21%	14%	12%	3%	11%	5%	21%	4%	14%	3%	7%	1%	25%	13%	37%	7%	24%	5%	15%	7%	37%	5%	11%	2%	25%	13%	19%	7%	15%	2%	11%	3%	ins. data	ins. data
Mining and quarrying	1%	0%	3%	0%	1%	0%	3%	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	0%	2%	0%	ins. data	ins. data	0%	0%	0%	0%	ins. data	ins. data
Manufacturing	14%	7%	11%	10%	13%	9%	12%	6%	11%	13%	12%	9%	12%	8%	11%	10%	10%	16%	15%	21%	17%	15%	11%	12%	8%	8%	10%	9%	13%	9%	15%	17%	13%	7%	ins. data	ins. data
Electricity, gas, and water	1%	0%	1%	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	1%	1%	1%	1%	0%	1%	1%	1%	0%	1%	0%	1%	1%	0%	0%	1%	0%	1%	1%	2%	1%	ins. data	ins. data
Construction	15%	1%	16%	1%	13%	1%	16%	1%	11%	1%	10%	1%	14%	0%	12%	0%	12%	0%	13%	0%	13%	1%	9%	0%	18%	2%	12%	1%	14%	0%	14%	0%	13%	1%	ins. data	ins. data
Retail, restaurants, and hotels	21%	19%	13%	39%	18%	18%	20%	27%	21%	31%	20%	23%	21%	19%	19%	32%	18%	36%	19%	39%	15%	22%	17%	39%	19%	30%	15%	42%	24%	31%	21%	42%	20%	20%	ins. data	ins. data
Transportation and storage	9%	1%	14%	1%	13%	8%	11%	3%	12%	3%	7%	2%	19%	12%	11%	2%	6%	1%	10%	1%	8%	1%	6%	1%	13%	2%	15%	2%	6%	1%	9%	1%	9%	2%	ins. data	ins. data
Banking, insurance, and real estate	11%	11%	1%	2%	2%	2%	2%	3%	3%	3%	3%	4%	2%	3%	7%	8%	2%	2%	6%	4%	1%	1%	1%	1%	3%	5%	1%	1%	7%	7%	8%	5%	10%	11%	ins. data	ins. data
Social and community services	27%	60%	20%	33%	27%	59%	24%	53%	17%	44%	31%	59%	22%	56%	14%	34%	16%	38%	11%	30%	30%	53%	16%	40%	26%	51%	21%	33%	17%	44%	16%	32%	22%	54%	ins. data	ins. data
Urban	ins. data	ins. data	70%	78%	87%	93%	87%	92%	76%	88%	73%	81%	83%	86%	71%	78%	47%	54%	65%	67%	77%	81%	58%	77%	74%	80%	80%	85%	64%	72%	65%	70%	84%	87%	ins. data	ins. data
Formal	52%	51%	28%	27%	66%	69%	73%	70%	43%	43%	79%	71%	43%	50%	44%	47%	23%	24%	22%	20%	37%	34%	25%	31%	56%	58%	27%	22%	28%	29%	37%	25%	78%	81%	16%	23%

Source: Prepared by the authors based on household surveys harmonized by the IDB.

ins. data=insufficient data. There is not enough data to calculate the percentage.

* Uses only employed, income-earning people and frequency weights.

Table A2. Percentage of women by occupation (%), and average hourly income (national currency)*

	ARG (2019)		BOL (2019)		BRA (2019)		CHL (2017)		COL (2019)		CRI (2019)		DOM (2019)		ECU (2019)		GTM (2019)		HND (2019)		MEX (2018)		NIC (2014)		PAN (2019)		PER (2019)		SLV (2019)		URY (2019)		VEN (2018)	
	(%)	(NC)	(%)	NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)	(%)	(NC)
Professional and technical	51%	262	47%	34	55%	24	54%	4897	46%	16454	48%	5155	61%	199	53%	5	48%	38	54%	185	42%	79	54%	60	57%	8	46%	14	47%	4	55%	346	60%	23
Director or senior officer	ins. data	ins. data	28%	37	38%	27	43%	4697	46%	22881	42%	8592	38%	392	42%	12	36%	44	50%	294	38%	112	40%	90	50%	9	33%	28	45%	4	36%	447	33%	1
Administrative and intermediate level	61%	197	55%	21	65%	11	64%	2285	58%	7760	55%	2646	62%	93	54%	3	50%	24	46%	336	59%	45	55%	38	73%	4	51%	10	43%	2	64%	219	63%	4
Merchants and vendors	50%	108	74%	15	55%	9	62%	1853	57%	4795	51%	1720	53%	71	58%	2	64%	13	75%	47	59%	30	70%	32	59%	3	75%	5	70%	2	62%	124	36%	33
Services	65%	119	79%	19	71%	8	68%	1859	71%	3993	18%	1298	69%	70	62%	2	57%	10	82%	43	65%	28	82%	28	ins. data	ins. data	69%	6	63%	2	71%	143	ins. Data	ins. Data
Agricultural workers	16%	146	30%	9	15%	8	26%	1485	11%	2729	10%	1316	5%	72	25%	2	9%	5	13%	32	24%	14	9%	92	13%	2	30%	4	9%	1	16%	207	7%	4
Non-agricultural laborers, machinery operators, and transportation services	14%	112	17%	16	15%	8	13%	1851	17%	3913	7%	1511	14%	66	19%	2	14%	10	32%	29	24%	24	20%	27	3%	4	16%	4	24%	1	13%	128	8%	4
Armed forces	24%	175	5%	77	12%	31	6%	3275	ins. Data	ins. Data	ins. Data	ins. Data	9%	110	ins. Data	ins. Data	ins. Data	ins. Data	31%	40	0%	39	ins. Data	ins. Data	ins. Data	ins. Data	10%	12	6%	3	6%	169	34%	9
Other	9%	159	ins. Data	ins. Data	19%	8	39%	2932	12%	4751	43%	1462	22%	119	7%	2	13%	8	ins. Data	ins. Data	31%	38	41%	26	32%	3	ins. Data	ins. Data	ins. Data	ins. Data	23%	163	ins. Data	ins. Data
Total	**45%**	**177**	**40%**	**20**	**44%**	**14**	**45%**	**2932**	**41%**	**6985**	**41%**	**2826**	**43%**	**107**	**39%**	**3**	**33%**	**17**	**46%**	**82**	**41%**	**41**	**41%**	**38**	**43%**	**5**	**44%**	**7**	**45%**	**2**	**46%**	**213**	**37%**	**19**

	PRY (2019)	
	(%)	(NC)
Members of the executive, legislative, and judicial branches and staff.	41%	28477
Scientific and intellectual professionals	66%	32069
Technicians and mid-level professionals	40%	20484
Office employees	48%	15787
Service workers and retail and market sales workers	59%	11086
Farmers, ranchers, and fishers	24%	8698
Tradespeople, operators, and craftspeople	15%	10362
Plant and machine operators and assemblers	4%	15308
Unskilled workers	53%	10583
Armed Forces	19%	40082
Total	**41%**	**15894**

Source: Prepared by the authors based on household surveys harmonized by the IDB.
Ins. Data=insufficient data. There is not enough data to calculate the percentage.
NC=National currency.
* Uses only employed, income-earning people and frequency weights.