

Gaps in women's labor force participation in Mexico

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Gaps in women's labor force participation in Mexico

The Book will offer selected contributions from researchers of the Universidad Autónoma de Nuevo León and Instituto Politécnico Nacional in its areas of Economic Sciences. In addition to having a complete evaluation, by the coordinators of the Universidad Autónoma de Nuevo León and Instituto Politécnico Nacional, of the quality and punctuality in its chapters, each individual contribution was refereed with international standards [V|LEX, RESEARCH GATE, MENDELEY, GOOGLE SCHOLAR y REDIB]. The Book thus proposes to the academic community recent reports on new progress in the most interesting and promising areas of Economic Sciences.

Gaps in women's labor force participation in Mexico

Books

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Preface

In this book, we analyze female labor participation in the remunerated labor market in Mexico. We focus on women's inequalities when deciding to work. Women work both inside and outside the house. Some women have no choice but to work in both, others have the choice to work in both, and others have the choice to work wherever they want.

Inequalities in labor participation are based on whether the work conditions are good enough to stay in the remunerated labor market. Working women also worry about whether other people will take good care of their young children, vulnerable relatives with disabilities, or old age. These factors are sometimes identified in labor market participation. Also, the international evidence that we provide lets us dimension the gender disparities. Part of the writing of this book took place in Finland, one of the countries with the lowest gender gap in participation.

As researchers and mothers, the authors of this book are not just studying the issue of gender disparities in labor participation but also living it. This personal experience has inspired us to provide a thorough analysis of this important topic, which is the primary focus of this book.

Dedicated to working mothers

*Caamal-Olvera, Cinthya. PhD
September, 2024*





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Gaps in women's labor force participation in Mexico

Brechas en la participación laboral de la mujer en México

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Key Books

The main contributions of this book were to analyze the gaps in women's labor participation in Mexico from different perspectives. The book offers a descriptive national and international overview, addressing the causes of the wide gap in women's participation compared to men, internal causes of the Mexican labor market, regional and international issues, education, care work performed by women, as well as perceptions of gender roles that make women's work in the home more favorable. In addition, an econometric analysis is included which incorporates information that allows us to dimension the causes for women not being in the labor force and that are related to care work, gender roles, and perceptions with respect to care work, in particular addressing the mental health reported by women and how they feel when they work outside the home. Key aspects to understand and apply to the generation of universal knowledge is that Mexico is a country with a wide labor participation gap for women of 30 percentage points (pp), double the gap of OECD countries (15.4 pp), and even higher than the estimated gap for Latin America (23.6 pp). The widest labor participation gaps are estimated at 48.4 pp when women report doing care work, and are reduced when they care for someone with a disability (22.6 pp), but increase when women report their perceptions of what is expected of them, as the gaps increase to more than 30 pp when they think that women are responsible for care (33 pp), when they like caring (37 pp), and the second widest gap is when they think that children suffer when their mothers work (38.2 pp). The conclusion of the book is that not only should public policies be aimed at improving the distribution of caregiving tasks, but also at improving women's working conditions by promoting jobs with good working hours, where they are adequately paid, with benefits, and flexibility to take time off to carry out procedures. Therefore, the recommendation is to implement effective public policies so that women can reconcile work and family, without feeling guilty or worried about the proper care that their children would receive if they are absent for work.

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Abstract


This book studies the gaps in labor participation between men and women in different countries to dimension the case of Mexico. The second chapter addresses labor participation, considering aspects of employability, the impact of COVID-19, informality, economic activity, and jobs performed by women. The third chapter addresses the work of care and attention to the family, focusing on the comparison of the gender gap in remunerated labor participation according to the activities carried out, whether they are caring for children, older adults, people with disabilities, or another type of care work or unpaid work, as well as aspects of women's health. In the fourth chapter, the econometric analysis quantifies why women work or decide not to participate, identifying the factors women consider when accepting, changing, or leaving paid employment.

Gaps in women's labor force participation in Mexico		
Objectives	Methodology	Contribution
 Analyze family care tasks and work  Child care and work  Female labor participation  Female labor inclusion and household chores	 Descriptive analysis of the female and male labor  International and regional gaps in the labor market  Education and childcare analysis  Econometric analysis controlling for gender roles and workload	 Labor force participation gap larger than the OECD average gap  Identify causes of the labor market inequality  Inequality in the labor care  Mental health and women's workload

Labor participation gaps, Non-remunerated work, Family and work conciliation, Employment

Resumen

El libro estudia las brechas de participación laboral entre hombres y mujeres en distintos países para dimensionar el caso de México. En el segundo capítulo se aborda la participación laboral considerando aspectos del mercado laboral como la empleabilidad, el impacto de la pandemia por COVID-19, la informalidad, la actividad económica y los trabajos realizados de mujeres. En el tercer capítulo se abordan las labores de cuidado y atención a la familia, el enfoque del libro fue comparar las brechas en la participación por género según actividades realizadas, si son de cuidado en niños, adultos mayores, personas con discapacidad u otro tipo de labor de cuidado o trabajo no remunerado, así como aspectos sobre la salud de las mujeres. En el cuarto capítulo el análisis econométrico cuantifica razones de mujeres que trabajan o deciden no participar, se analizan factores que consideran las mujeres para aceptar, cambiarse o dejar un empleo remunerado.

Brechas en la participación laboral de la mujer en México		
Objetivos	Metodología	Contribución
 Analizar el balance entre familia y trabajo  Cuidado de los hijos y el trabajo no remunerado  Participación laboral de mujeres en trabajo remunerado  Inclusión laboral de mujeres y atención al hogar	 Visión descriptiva de la participación laboral de mujeres y hombres  Causas de las diferencias laborales en México y evidencia internacional  Análisis de la educación, y labores de cuidado de las mujeres  Análisis econométrico controlando por roles de género en el hogar y sobrecarga	 Brecha de participación laboral superior al promedio de la OCDE  Identificar causas de la desigualdad en Trabajo  Desigualdad en labores de cuidado  Salud mental y sobrecarga de trabajo de mujeres

Brechas en la participación laboral, Trabajo no remunerado, Conciliación del trabajo y la familia, Empleo

Introduction

The study of labor participation gaps has been a topic that is sometimes left as irrelevant because it assumes a specialization of tasks, where men are mainly employed in the paid labor market and women in the unpaid labor market. Although the distribution of gender roles may occur for reasons of efficiency and specialization, it is necessary to consider that, on occasions, these divisions are unfair when, by choice or necessity, women are solely responsible for caregiving tasks.

This book does not make an estimate or comparison of the wage and income gaps between men and women, but rather the analysis is about a stage prior to the decision to enter or not enter the labor market. Women's decision is not independent of the family context, although both men and women report that unpaid care activities are not exclusive to women, the data indicate that labor participation rates between men and women change when considering care work, they also change when considering the informal market, when considering the COVID-19 pandemic, when considering gender roles, and they are also different when asked about their health and their perceptions of gender roles.

One fact that can be identified in this book is related to the mental health of working mothers, as they report that the children suffer when the mother works, and this is a factor that had not been clearly identified about how women feel when they have to choose between working at home taking care of the children or working outside the home.

Similarly, this book performs a comprehensive analysis of the labor participation of men and women, measuring the differences between these rates considering the international context, where there is a diversity of labor markets, public policies and gender roles that allow the comparison of labor participation gaps with bases that homologate the information obtained from the World Bank (WB) and the International Labor Organization (ILO), which allows us a comparison of a little more than thirty years.

For the case of Mexico, we consider national databases obtained from the National Institute of Statistics and Geography (INEGI) that allow us to measure at the micro data level such as the National Survey of Occupation and Employment (ENOE) for the years 2018 to 2023, the National Survey for the Care System (ENASIC) available for the year 2022 and the National Survey on Availability and Use of Information Technologies in Households (ENDUTIH) available for the year 2023. The use of different sources of information allows for a broad view of the variability of labor participation gaps.

The book allows an international and national comparison of the labor participation of men and women, considering aspects of the labor market according to their employability, whether they are subordinate paid employees, employers, self-employed, or unpaid workers. It also addresses the labor market according to informality, the economic activity in which they work, and the jobs performed by women, specifically how technology has led to a significant reduction in participation gaps.

The book's analysis provides a detailed view of the variability of the participation gaps when considering caregiving tasks depending on the presence of a caregiver, and how they are modified according to gender roles.

Finally, an econometric analysis is conducted to quantify the reasons why people decide to participate, both for men and women, and in particular, it addresses the reasons behind the probability that women do not want to change jobs, the probability that they remain in that job, or if family reasons could be behind the reasons for changing their schedule, as well as the probability that care work leads to a deterioration in women's health, and finally, the probability that perceptions about gender roles reduce the probability that women work.

Methodology

In the first three chapters, the methodology followed in this book consists of a descriptive analysis, at the international level with a comparison between countries, considering at least thirty years, and with particular emphasis on the period before and after the COVID-19 pandemic, since this phenomenon caused differentiated effects according to the sector of economic activity. The analysis is based on the measurement of labor participation gaps between men and women, defined as:

$$p_{trab}_{men} = \frac{Male\ EAP\ employed}{Total\ men\ over\ 15\ years} \times 100 \quad (1)$$

$$p_{trab}_{women} = \frac{Women\ EAP\ employed}{Total\ women\ over\ 15\ years} \times 100 \quad (2)$$

$$Gap = p_{trab}_{men} - p_{trab}_{women} \quad (3)$$

Equation [3] shows that, if the gap is positive, it means that there is a higher proportion of men working compared to the proportion of women working. This equation was calculated to compare parity in labor participation, considering that women could show a greater or lesser participation depending on the economic activities in which they work, or the care work they perform. The fourth chapter applies the methodology of probabilistic Probit models in order to estimate the reasons why women decide to participate in the labor market, as well as to quantify the reasons that contribute to the decision to remain in their jobs, change their jobs or change their schedule, as well as other aspects related to the deterioration of their health due to caregiving, and how perceptions about their role as mothers could affect their decision to participate in the paid labor market.

$$Prob(x) = G(\beta_0 + X\beta) \quad (4)$$

Where X represents a set of variables that are related to the likelihood of women working in the paid labor market, in particular, reasons such as good salary, flexible working hours, benefits, work environment, variables related to care activities for susceptible people, as well as gender role perception.

Results

The descriptive analysis presented in the book allows us to infer from the international evidence, from a little more than three decades, that the labor participation gaps between men and women have become more equal. Countries where incomes are higher are also where women's participation has increased, almost at the same rate as men's participation, and lower income countries have shown smaller reductions.

Low-income countries had the smallest reduction in the gender labor gap, in just over three decades it narrowed by six percent, and middle-income countries reduced their labor disparities by almost ten percent. On the other hand, lower middle-income and upper middle-income countries showed a similar reduction of 13.8 and 14.9 percent, respectively.

Unfortunately, Mexico is a country with a wide gap, higher than the Latin American average, although not as high as other countries where women play an intensive role in unpaid work, such as Iran and Afghanistan. During the COVID-19 pandemic, a period in which non-essential economic activities were suspended, the labor market was affected, particularly women, not only because of the type of work they performed but also because of the working conditions.

In Mexico, men show a higher labor participation than women, although the trend between years, the changes are small, from 2019 to 2020, the participation of men decreased by 7.9%, while the participation of women decreased more, by 12%, relative to their respective population. Post-pandemic, women's labor force participation increased more than men's, in 2021, it increased by 11% and men's increased by 6.4%, and in subsequent years the percentage increase is at least double the increase in men's participation. However, the labor market considering paid participation is mainly composed of men, employees, employers and self-employed workers, and it is mostly women who perform unpaid work.

In terms of informality in the commerce sector, there are negative participation gaps because more women than men are in the informal sector in the commerce sector, the gaps in the formality of the commerce sector are less than one percentage point, so it can be said that there are no differences between the sexes. In general, it can be observed that when technology is used in labor activities, the participation gaps between men and women are reduced. Therefore, it is important to continue with training in the use of Information and Communication Technologies so that women's labor participation is equal.

Considering the information on the caregiver population, according to the ENASIC data (2022) it was estimated at 31,652,134 people over 15 years of age, of which 75% were women and the rest were men. Fifty-five percent of the caregivers have reported some problem in performing caregiving tasks, 13.5% of the women report having had a deterioration in their physical health, 40.9% feel tired, 17% feel depressed, 24% have felt irritable, 33% have decreased their sleep time, these percentages are notably higher for women than for men. When people are asked if they consider that it is the exclusive responsibility of women to do care work, 10.8% of women agreed, and a lower percentage, 6.5%, of men agreed, the vast majority disagreed, assuming that the perception of gender roles is more or less similar between men and women, it is found that the participation gap is reduced.

On the other hand, the enjoyment of caregiving is another reason why women dedicate more time to these tasks, but if men also report that they enjoy dedicating time to household activities and caring for their daughters and sons, the gap between men and women in caregiving is reduced.

The analysis of a database on caregiving allowed us to infer that, regardless of the perception of gender roles, the most important factor for women to reduce the probability of paid work is the presence in the household of people who are susceptible to being cared for, such as people with disabilities, children from 0 to 5 years of age, and the elderly. On the other hand, the public policies implemented, such as social programs for the population groups most susceptible to being cared for, have not been sufficient to address care needs, since only the group of older adults has universal access to the support program. The data show that the other two groups, 0 to 5 years old and people with disabilities, have the lowest coverage of social programs, 3.45% for the former and 8.3% for the latter, with the case of households with female heads of household having the lowest coverage, since only 7.4% of households with people with disabilities have access to this social program. However, social programs could reduce the burden of care work by increasing their coverage, especially in female-headed households.

In order to econometrically identify the factors behind women's labor participation, and considering unpaid responsibilities, we analyze the factors that could be explaining the probability of women working. For this purpose, the ENASIC 2022 microdata base is used, since it is the one that allows us to evaluate the reasons why women increase the probability of participating in the labor market, or the reasons why they wish to change jobs, or why they would not like to change jobs, as well as whether they have reasons to change their work schedule. These reasons allow us to have a broader idea about women's labor participation, using the data that each woman responds.

Conclusions

From the first three chapters we conclude that labor participation gaps are wide, especially when considering care work and perceptions of gender roles. Table 1 presents a summary of the results obtained from the calculation of labor participation gaps under different contexts. It is concluded that the largest labor participation gap is estimated when women perform care work for children from 0 to 5 years of age, estimated at 48.4 percentage points (pp), although it is observed that, if the care is for people with disabilities, the labor participation gap is smaller, at 22.6 pp, which could indicate a greater participation of men in this type of care. On the other hand, the second widest gap is estimated when women consider that the children suffer if the mother works, and a gap of 38.2 pp is estimated. In general, the gaps in labor participation between men and women are estimated when considering perceptions of gender roles, and it is observed that even when both women and men agree that caregiving should be parity, the gap in participation continues to be high, estimated at 36.8 pp, and even increases when they say that they like to perform caregiving tasks, the gap rises to 37 pp.

On the other hand, in Table 1, when the gaps in labor participation in economic activity are analyzed, the gaps close, specifically when considering the paid and subordinate working population, where a gap of 20.1 pp is estimated, unfortunately when informality is considered, the gap between men and women is similar, estimated at 2.2 pp, that is, the informality of men and women is similar. Meanwhile, when comparing informal economic activities in the commerce and services sectors, the gaps are negative, indicating that it is women who are mostly employed in these sectors, specifically in the informal part. An encouraging result is that women who perform work that involves the use of computers have labor participation rates similar to those of men; therefore, the gap is 4.6 pp, a gap even lower than the labor participation gap in Finland, where the gap was estimated at 5.9 pp.

Box 1**Table 1**

Summary of labor participation gaps

Type of Gap	Percentage points (pp)
Overall Gap 2023	29.3
Type of Employability	
Paid subordinate employees	20.1
Informal paid subordinate work	2.2
Sector of economic activity	
Informal manufacturing	1.2
Informal commerce	-2.6
Informal services	-13.5
Uses computer at work	4.6
Care work 2022	
Gap in caregiving approach	37.0
Person with disability	22.6
Care of children 0 to 5 years old	48.4
Older adults	29.0
Perceptions of gender roles 2022	
Women are responsible for caregiving	33.0
Likes to do caregiving work	37.0
Caregiving should be equal between men and women	36.8
Children suffer if mother works	38.2
International comparison 2023	
Mexico	30.6
Latin American average	23.6
OECD average	15.4
Finland	5.9
Sweden	7.1
Iran	56.2
Afghanistan	63.8

Source: Own calculations based on data from the World Bank (2024), ENOE(2023), ENDITU(2023), and ENASIC(2022) obtained from INEGI

The conclusion of the book is that not only public policies should be aimed at improving the distribution of care work. Although women have concentrated on care work, and the time dedicated to unpaid work is disproportionate, it is necessary to consider the aspects that women refer to as the most important in order to contribute to the paid labor market. The econometric analysis allowed us to identify that the reasons why women keep their jobs or do not wish to change jobs are because they have good working hours, are well paid, and have benefits; although statistically it was not as relevant that the job is close to them, that it is a good working environment, that they like the work, or that they have a compassionate boss. This indicates that women, in order to work, value the monetary part of a job more than other aspects that would improve their work environment, which would be related to their mental health. Women's labor participation increases if their work allows them flexibility to take time off to carry out procedures, and to a lesser extent they value having time to breastfeed. It is identified that women's illnesses or situations that could deteriorate their health reduce the probability that women participate in the labor market, although the statistical effect of feeling depressed reduces the probability of working, the effect is not robust.

Finally, the two effects that reduce women's likelihood of working are whether they think that it is women who should learn about caregiving, or whether they think that their children suffer if their mother works. The effect on health status, especially when their health is poor, would seem to reduce women's labor participation, although the effect is not robust either.

These results lead us to think about the emotional and mental health burden that women tolerate in order to continue working in a paid job, and the concern they have when leaving their children thinking that they will suffer if they work, since they have no choice but to trust that they will be cared for in an adequate manner, on the other hand, there is another group of women who share this same concern and do not manage to enter the paid labor market.

The book is organized as follows: the first chapter studies the labor participation gaps between men and women in different countries in order to dimension the case of Mexico.

The second chapter deals with labor participation, considering aspects of the labor market such as employability, informality, economic activity and the jobs performed by women.

The third chapter deals with care and family care work, the focus of the book is to compare the gaps in participation by gender according to the activities performed, whether they are care for children, the elderly, people with disabilities or other types of care work or unpaid work, as well as aspects of women's health.

In the fourth chapter, the econometric analysis quantifies the reasons why women work or decide not to participate, as it analyzes the factors that women consider in order to accept, change or leave paid employment.

Chapter 1. Labor participation gaps in the world

Female labor participation refers to the percentage of women who are actively involved in the labor market, either working or looking for work (Shittu et al., 2024). The factors that favor women to enter the labor market are: education, marital status and living in conglomerate cities, as well as the number of children and being a young woman are aspects that favor a decrease in the probability of employment (Pérez and Lugo, 2022).

Evidence from 168 countries shows that female labor participation is an important factor that can influence women's political representation, as it facilitates the development of networks and skills necessary for politics, promotes awareness and activism around gender inequalities, which can advance gender equality in society (Bravo-Ortega et al., 2020).

Considering the experiences and perceptions of women in relation to their labor participation, it has been found that women have customs and personal decisions, which make them more inclined to take on the role of family care, as well as less education compared to men and some sociodemographic characteristics that affect their labor training (Sierra et al., 2021). In addition, women are vulnerable to machismo in their homes as many women have to negotiate their desire to work with their partners which has an impact on their economic and social dependence, which is very difficult to negotiate (Sierra et al., 2021).

There is a pattern between labor force participation and family dynamics related to child care, a study for China assessed how grandparent care influences maternal labor participation of married women aged 21-50, in the results they found that female labor participation is important to the labor force in relation to economic stability and growth (Wang and Zhao, 2022). However, when mothers participate in the labor force, they may have less time and energy to devote to childcare, which may discourage them from expanding their families with a larger number of children, so it is necessary to establish mediating roles for childcare. Therefore, it is essential to implement policies that strengthen family support, especially grandparent care, considering the inclusion of working mothers, to foster both economic growth and family well-being (Wang and Zhao, 2022).

Women's labor participation has contributed to decreasing income inequality, which improves their economic and social status and has an impact on reducing their economic dependency, and also facilitates household income. These findings were found mainly in Turkey, where the evidence was that the benefits extended to society at large, as economic disparities by gender were reduced (Leyla, 2021).

Urban-rural migration and fertility rates influence women's participation, for Turkey it is concluded that increased female labor participation fosters economic growth, women with high academic level are more likely to participate in the labor market and have higher wages, public policy making should include child care services, and the inclusion of women in the labor force also promotes gender equality and social welfare (Mukhammedova and Advisor, 2023).

Similarly, labor participation in the world is a phenomenon that is influenced by different factors that could be culture, habits and customs, but significantly due to the implementation of public policies in favor of more equal participation of women and men, as has happened in Scandinavian countries. The pandemic severely affected gender inequality in the labor market, so it is necessary to implement public policies that address this disparity and include measures to facilitate the reconciliation of work and family life, as well as initiatives that promote the inclusion of women in high demand and better paid sectors (Pérez and Lugo, 2022).

1.1 International comparison of labor force participation gaps

The COVID-19 pandemic caused disruptions by the temporary suspension of non-essential activities, and each country implemented a series of measures to cope with the health emergency. Cross-country comparisons provide us with different views of the impact of COVID-19 on women's labor force participation. In this sense, this chapter looks at changes in labor participation, measured in terms of labor participation gaps between men and women. For simplification purposes, the results will be shown in terms of changes, and based on World Bank data, the countries where the labor participation gap widened or narrowed the most in the pre- and post COVID-19 pandemic periods will be selected. Because this was a surprising change in economic activities, and because of labor specialization, not only of men and women, but of the economic activities in which these countries specialize.

In Uganda, female labor participation declined by 17%, after the government imposed strict confinement measures, especially in the early days of the economic shutdown. Moreover, this impact was more pronounced among women with children compared to those without children. Similarly, it was observed that the greatest impact was on women in the informal sector, since most of them were in situations of economic vulnerability, so that family income decreased and this led to an increase in the burden of unpaid work in the household (Mukoki et al., 2024). The relationship between fertility and female labor participation, with evidence for China and in Japan, has not shown a direct relationship (Kinugasa, 2020). Instead, it is suggested that the observed correlation can be attributed to a third factor, specifically female wages. This implies that policies that affect women's wages could have a more significant impact on labor participation than policies that attempt to directly influence the fertility rate (Kinugasa, 2020).

In Iran analyzing data before the pandemic, from 2006 to 2016, it was found that female labor participation has been historically low, and represents only a quarter of male participation, despite the fact that women have a high level of education and a low fertility rate, coupled with the fact that during the period of the COVID-19 pandemic. Female labor participation was further affected, with a significant drop in the female participation rate, which declined by approximately 15% in the spring of 2020 and by more than 20% in 2021, compared to a much smaller 3% drop in male participation (Dang et al., 2024). In addition, married women experienced a considerable decline in their labor participation as they bear the responsibility for the household and childcare, which limits working outside the home, while single and divorced women showed higher participation rates, around 40%. This suggests that marital status is an important determinant of women's labor participation in Iran (Dang et al., 2024). Similarly, it should be evaluated that women in Iran despite having a high level of education, their labor participation has been declining as in 2005 women with university education decreased their participation by about 70% and by 2021 it was 40%, which indicates that despite the level of schooling, job opportunities for women are limited which leads these women to be demotivated and, therefore, in the pandemic, they did not seek employment (Dang et al., 2024). In West Africa, with data from the World Bank and the International Labor Organization, the female labor participation rate was found to be lower compared to that of men (Shittu et al., 2024). For example, in 2018, the female labor participation rate was 54.3%, compared to 65.6% for men and it has been found in line with human capital theory that education and health increases labor market participation of women. However, women also face various barriers such as gender discrimination and lack of opportunities in the formal sector, so women have a high participation in economic activities in the informal sector (Shittu et al., 2024). In Peru, research was conducted from 2010 to 2020, also the participation of women in the labor market is lower than that of men, which was estimated at 41%, and that of men at 51%, it was also found that men perform heavier work (Manosalva Cruz et al., 2022). This information allows us to compare the reasons behind the participation gaps between men and women. Below is an international comparison with data from the World Bank, using the series standardized with the data provided by the countries, and with the definition of the International Labor Organization (ILO).

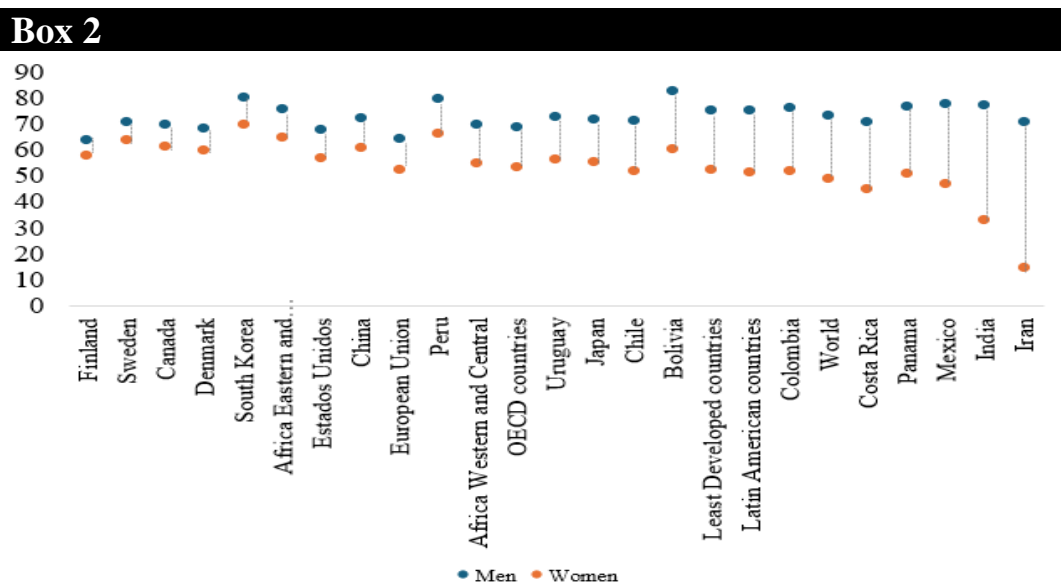


Figure 1

International Comparison of Participation Gaps 2023

Source: Information obtained from World Bank (2024a) and (2024b), on female and male labor force participation for persons aged 15 and older. Estimates and projections modeled from ILO database, ILOSTAT, in World Bank (2024a)

For the purposes of this book, the labor participation gap will be defined as the difference between the labor participation of men and women over 15 years of age, reported by each country in a given year, where the information is harmonized by the ILO using its ILOSTAT statistics (World Bank, 2024a). The data shown in Figure 1 correspond to 2023 data, and it can be seen that male labor force participation is higher than female labor force participation in all selected countries. The countries are ordered according to their participation gap, Scandinavian countries such as Finland, Sweden and Denmark are the ones that show the smallest labor participation gaps between men and women, Canada shows an even smaller gap than Denmark, a difference of between 5 and 8 percentage points (pp), while South Korea also stands out for having a gap in equal participation of 10 pp.

The United States, on the other hand, shows a similar gap, although the absolute participation rate is higher in countries such as South Korea, Peru and Bolivia, where the percentages are around 80%, and only in the case of Bolivia is the female participation rate low compared to the other countries, but its gap is 22 pp. In China, participation is high for both men and women, and the gap is 11.5 pp, although in relative terms, the participation gap is similar to that of the European Union, estimated at 11.8 pp. Both the participation gap and the relative percentages are similar between West and Central Africa with a gap of 14.9 pp, the countries of the Organization for Economic Cooperation and Development (OECD) with a gap of 15.4 pp, while Uruguay and Japan have a gap of 16.7 pp; and Chile shows a gap of 19 pp. On the other hand, the average of the least developed countries, Latin America and the Caribbean, Colombia, and even the world average, have a similar gap between 22 and 24 percentage points. Latin American countries such as Costa Rica and Panama have participation gaps of 25.8 and 26, respectively, and Mexico is the one with the widest gap of 30.5 pp, only below India with a gap of 44.1 and Iran, with the largest gap of the selected countries, estimated at 56.2 pp.

1.2 Evolution of international participation gaps over time

Although this vision for the year 2023 gives us an idea of the differences in labor participation between men and women, it would also be interesting to see how the gaps have closed over time. The World Bank data allows us to assess which countries have managed to close these gaps. The international comparison shown in Figure 2 is possible from 1991 to 2023. Comparing by region, Latin America is where the widest labor participation gaps between men and women were observed in 1991, with a difference of almost 40 pp, and where the trend in disparities has clearly closed, reaching an estimated average of 23.5 pp by the end of 2023. Meanwhile, the average participation gap between men and women in the least developed countries is 27.6 pp, very similar to the world average of 28 pp. The European Union and OECD countries show the smallest gaps of 22.5 pp and 25.5 pp, and in both regions there has been a clear tendency to continue reducing these disparities in participation, achieving 11.8 pp and 15.4 pp. Figure 2 shows the evolution by region.

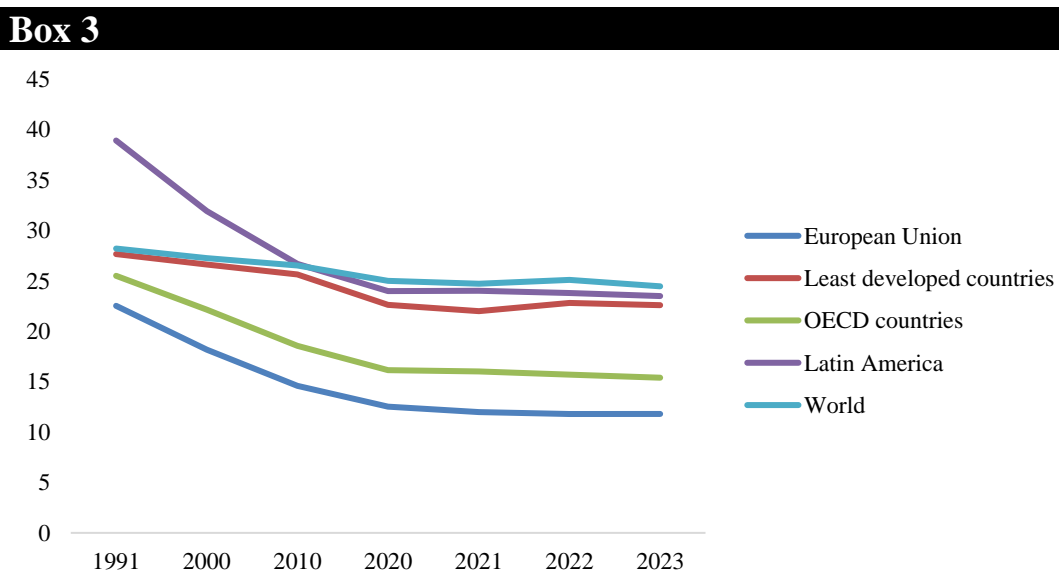


Figure 2

Evolution of labor participation gaps by region 1991-2023

Source: Gap calculations obtained from World Bank (2024a) and (2024b) data on female and male labor force participation for persons aged 15 and older. Estimates and projections modeled from ILO database, ILOSTAT, obtained February 6, 2024. ilostat.ilo.org/data.

As observed from Figure 2, the Latin American region is the one that has shown the highest participation gaps, the gaps are even larger than in some regions of Africa, and substantially larger than Asian countries such as South Korea, China and Japan. Figure 3 shows some Latin American countries, although the trend was decreasing, before the COVID-19 pandemic, most countries continued to close labor participation gaps between men and women. However, after 2020, Peru clearly increased the participation gap, and Colombia and Bolivia showed slight increases in the gap. Subsequently, most of the countries showed a reduction in the gap, only with the exception of Mexico, Colombia and Chile, from 2020 to 2021 showed an increase in the labor participation gap, which then decreased until 2023. On the other hand, at the end of the period analyzed, it is observed that Costa Rica and Uruguay show an increase in the labor participation gap, whose increasing trend is observed after the COVID-19 pandemic.

Box 4

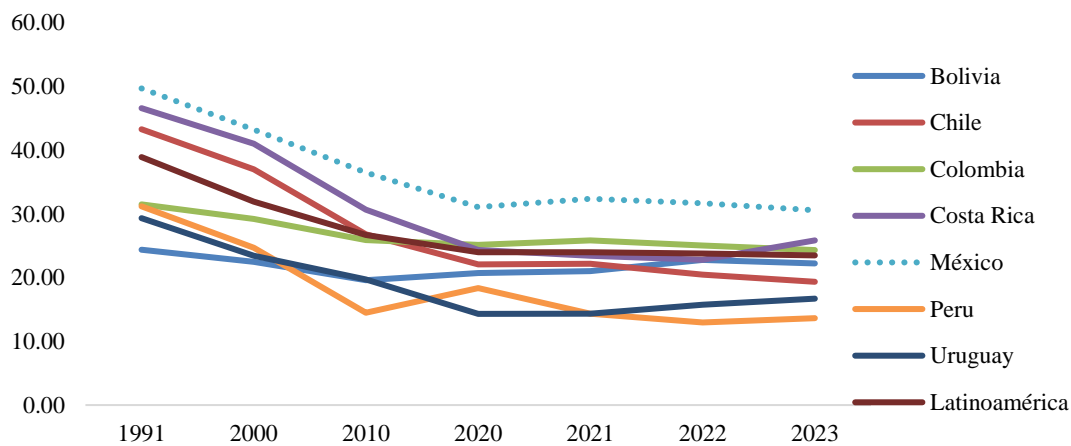


Figure 3

Evolution of labor participation gaps in Latin America 1991-2023

Source: Gap calculations obtained with information from World Bank (2024a) and (2024b), on female and male labor participation for people over 15 years old. Estimates and projections modeled from ILO database, ILOSTAT, obtained February 6, 2024. ilostat.ilo.org/data

A final comparison of labor participation gaps in four Scandinavian countries is presented in Figure 4, which shows that, in 1991, the widest gap was for Norway, a trend that decreased over time to coincide with the value for Sweden. Finland is the country with the smallest labor participation gap, estimated at 5.9 pp; the second lowest gap is estimated at 6.9 pp for Norway. In 1991, Sweden was the country with the highest parity in labor participation between men and women, and the gap has steadily narrowed to 7.1 pp.

Box 5

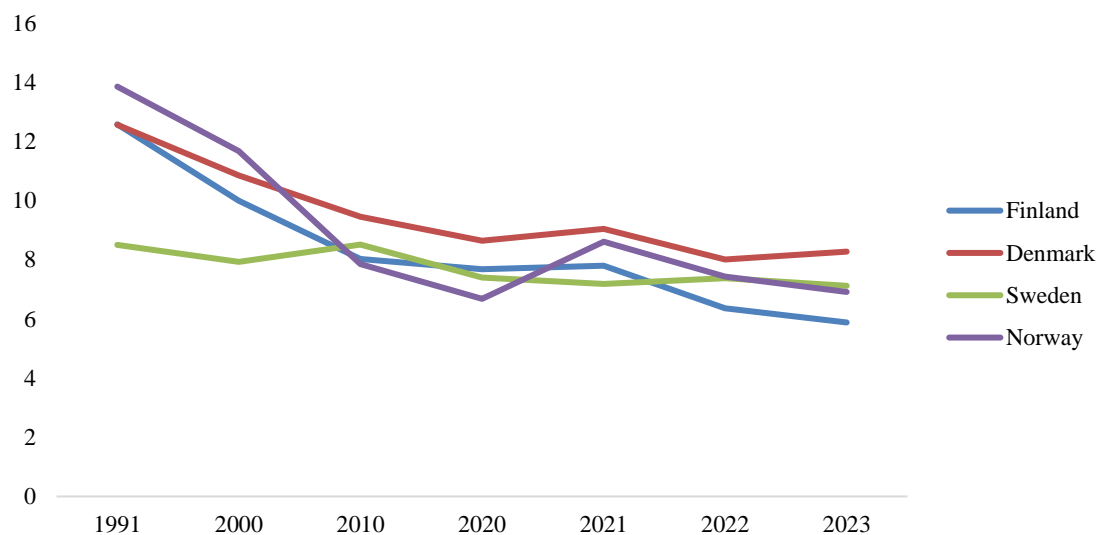


Figure 4

Evolution of participation gaps in Scandinavian countries

Source: Gap calculations obtained with information from World Bank (2024a) and (2024b), on female and male labor participation for people over 15 years old. Estimates and projections modeled from ILO database, ILOSTAT, obtained February 6, 2024. ilostat.ilo.org/data

After the COVID-19 pandemic, in most countries the labor participation gap increased, the most evident case being Norway, only Sweden did not show a wide gap. Still, the Scandinavian region shows the most equal labor participation gaps. The effect of the COVID-19 pandemic was an event that affected labor participation, since for some months labor activities were suspended, with the exception of Sweden, where activities continued without interruption, for this reason no evident change in the labor trend is observed. The changes in labor participation in the selected countries, where either little change in the participation gaps before or after COVID-19 have been observed, are shown in Table 2.

Box 6

Table 2

Participation rates and gaps at the beginning of COVID-19

Country	Men			Women			Participation gaps		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Sudan (South)	70.93	70.26	70.43	70.10	69.43	70.03	0.83	0.82	0.41
Uganda	72.59	71.90	72.13	67.50	66.86	67.57	5.10	5.05	4.56
Norway	67.34	66.91	70.33	60.60	60.24	61.72	6.74	6.68	8.61
Sweden	69.07	69.09	69.37	62.31	61.69	62.19	6.76	7.40	7.18
Luxembourg	65.44	64.56	65.67	55.84	57.02	58.15	9.60	7.54	7.52
France	59.67	58.81	59.84	51.26	50.63	52.20	8.41	8.18	7.64
United Kingdom	68.17	67.17	66.15	58.46	58.61	58.35	9.71	8.56	7.81
Denmark	66.86	66.39	67.11	57.99	57.75	58.07	8.87	8.64	9.04
Denmark	69.87	69.33	69.34	59.81	59.89	60.63	10.06	9.44	8.71
Austria	66.72	65.95	66.44	56.15	55.90	56.10	10.57	10.05	10.34
New Zealand	75.44	75.45	75.61	65.82	65.20	66.13	9.62	10.25	9.48
Spain	63.20	61.87	62.53	52.14	51.09	52.58	11.06	10.78	9.95
Switzerland	73.64	73.39	72.68	62.97	62.51	62.23	10.67	10.88	10.45
Vietnam	81.07	78.99	77.85	70.52	67.91	68.25	10.56	11.08	9.61
United States	68.56	67.12	67.04	56.89	55.70	55.59	11.67	11.42	11.46
Peru	84.90	78.26	79.25	70.09	59.92	64.89	14.80	18.34	14.36
Argentina	71.01	65.95	70.87	50.02	46.51	50.28	20.99	19.44	20.59
Brazil	74.72	70.95	72.79	55.14	50.19	52.31	19.59	20.76	20.48
World average	73.13	71.74	72.23	47.96	46.75	47.51	25.17	24.99	24.72
Honduras	81.97	72.96	75.29	47.06	47.52	49.40	34.91	25.45	25.89
Dominican Republic	77.64	73.46	75.45	52.14	47.28	50.93	25.50	26.18	24.52
El Salvador	75.97	72.17	75.31	45.83	43.20	45.08	30.15	28.96	30.24
United Arab Emirates	91.90	90.05	92.02	56.80	60.99	52.79	35.10	29.06	39.23
Mexico	78.12	72.57	76.71	45.34	41.49	44.35	32.78	31.08	32.36
Turkey	71.76	68.00	70.14	34.22	30.77	32.76	37.55	37.23	37.37
Afghanistan	69.23	66.69	67.70	18.40	16.46	14.79	50.83	50.23	52.92

Source: Gap calculations obtained with information from World Bank (2024a) and (2024b), on female and male labor participation for people over 15 years old. Estimates and projections modeled from ILO database, ILOSTAT, obtained February 6, 2024. ilostat.ilo.org/data

It is interesting to compare the participation rates of African countries, where the gaps in labor participation are the minimum, since women in South Sudan and Uganda work in the same percentage as men, even surpassing Norway, which is where they observe the most equal participation gaps during the time of the beginning of COVID-19.

France is the country where labor participation is the lowest of all the countries considered, before the pandemic, in 2019 the labor participation of men was estimated at 59.67%, and although it was reduced to 58.81% in 2020, for the following year it increased to 59.84%, meanwhile, the participation of women is also similar, as it is between 51.26%, and in the COVID-19 period it was marginally reduced to 58.63%, that is, there was no substantial reduction in women's labor force participation in France, and by the following year, 2021, participation increased to 52.2%. This implies that the gaps remained with a decreasing trend, even in 2019, to have a gap of 7.64 pp between men and women. On the other hand, in Latin American countries, higher labor participation rates for men are observed than in countries with more equal gaps, for example, Peru with almost 85% labor participation of men and only 70.09% labor participation of women. Argentina, Brazil, Honduras, Dominican Republic, El Salvador, and Mexico, which show wide relative gaps in labor participation of men relative to women. The world average indicates that 73.13%, in 1991, of men were working in paid employment, and by 2023, this participation was reduced during 2020, subsequently recovered, to levels even higher than those previously observed.

Vietnam (81.07%), Honduras (81.97%) and the United Arab Emirates (91.9%) are those with the highest pre-pandemic male participation rates. Vietnam is the only one of these three countries where female labor parity (70.52%) is almost as high as that of men. Meanwhile, in Honduras the participation rate is 47.06%, and in the United Arab Emirates female labor participation is 56.8%, and it is the one with a gap of 35.1 percentage points difference, in the pre-pandemic period.

Likewise, Mexico is the country with a high labor participation gap between men and women in pre-pandemic times, estimated at 32.78 percentage points, followed by Turkey (37.55 pp) and Afghanistan (50.83 pp) in the gaps stake. In these three countries, during 2019 to 2021, the participation gaps did not change substantially, although a slight increase was identified in 2020 due to the suspension of activities, but this did not have an obvious impact on this gap.

Figure 5 shows the changes in participation rates in the selected countries because they have shown lower or higher participation rates it is observed that in general in countries with equal labor parity gaps, there were no substantial changes in the rates. of participation between men and women.

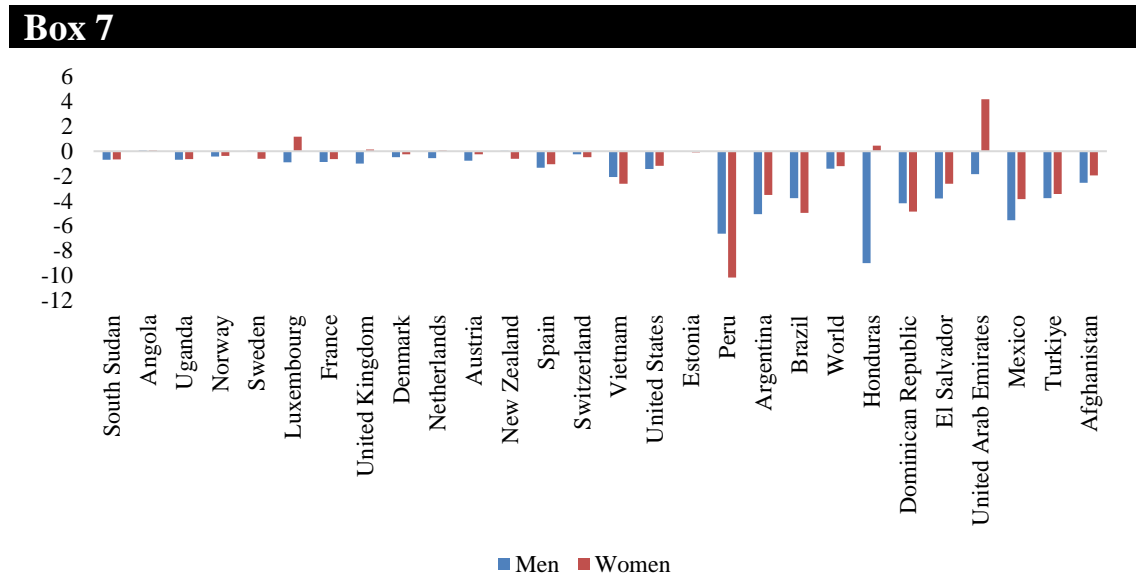


Figure 5

Changes in participation rates 2019-2020

Source: Gap calculations obtained with information from World Bank (2024a) and (2024b), on female and male labor participation for people over 15 years old. Estimates and projections modeled from ILO database, ILOSTAT, obtained February 6, 2024. ilostat.ilo.org/data

On the other hand, in countries where the participation gap was greater than 14 percentage points, for example, the countries ranked after Peru, substantial reductions are observed in the participation rate between men and women, and although there is no clear pattern. In most countries, men reduced their participation more than women, after the closure of activities due to COVID-19. In some countries, women reduced their labor participation, even more than proportionally than men, especially observed in countries such as Sweden, Vietnam, Peru, Brazil, and the Dominican Republic. On the contrary, in some countries women increased their labor participation between 2019 and 2020, such as Luxembourg, Honduras and the United Arab Emirates.

Women, during the COVID-19 pandemic, faced an increase in domestic workload due to school closures and the need to care for children, which led to problems maintaining a balance between paid work and family responsibilities at home (Lorenzen et al., 2023). Confinement measures, such as the cancellation of local festivities and the closure of markets, severely affected women's economic activities, such as retail trade, craft production and services; which caused a loss of income for women who depended on these activities (Lorenzen et al., 2023). Women with dependent children showed a more significant decrease in their labor supply in the first months of the pandemic, although they later recovered more quickly compared to those without children (Viollaz et al., 2022).

The COVID-19 pandemic caused a greater impact on women due to the loss of informal jobs and, consequently, their income. The activities in which women contributed to the reduction of poverty and economic growth, which underlines the importance of their role in the informal economy (Hualde Alfaro and Ayala Correa, 2022).

The pandemic exacerbated gender inequalities in the workplace, with a disproportionate impact on women, since as household responsibilities increased, many women were forced to reduce their hours of paid work or leave the workforce altogether (Lorenzen et al., 2023).

Female labor participation in the context of the COVID-19 pandemic in Mexico has shown significant trends. Additionally, demand for jobs adaptable to teleworking is higher in ads aimed at women compared to those aimed at men, implying that women could be facing new digital challenges in the labor market during and after the pandemic (Campos-Vazquez et al., 2021).

1.3 Changes in labor participation gaps 1991-2023

The gaps in labor participation between men and women have closed over time; the comparison of just over three decades, between 1991 and 2023 (Figure 6), shows that, in almost all regions, they were reduced, only with except for West and Central Africa, where the gaps widened by 18.7 percent. The region where the largest reduction in labor participation disparity was observed was Australia, where the gap was reduced by 56 percent, and although the gap was reduced less in East Asia and the Pacific, estimated at 9.7 percent percent, compared to the European Union, which was reduced by 47.6 percent, or compared to the gap in eastern and southern Africa, which was 31 percent, or even in Latin America, where the gap closed in these three decades analyzed at almost 39 percent.

Box 8

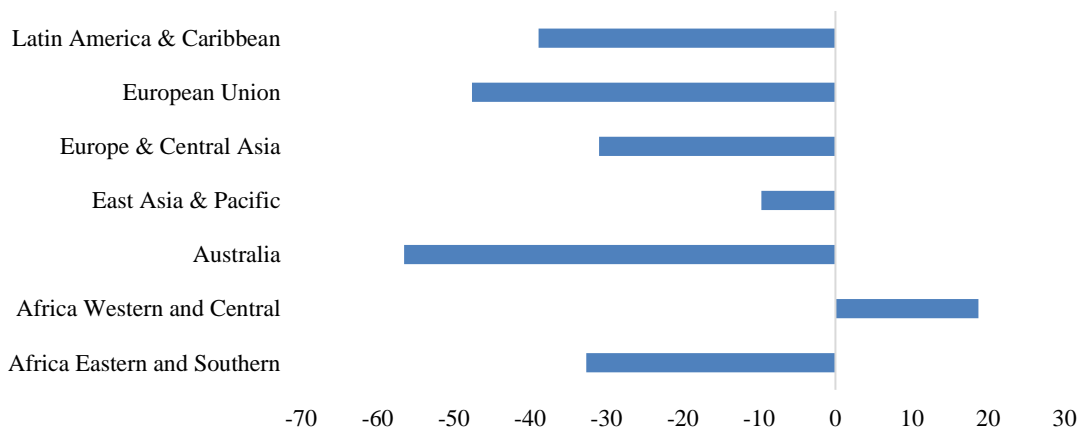


Figure 6

Participation gaps by region in the world 1991-2023

Source: Gap calculations obtained with information from World Bank (2024a) and (2024b), on female and male labor participation for people over 15 years old. Estimates and projections modeled from ILO database, ILOSTAT, obtained February 6, 2024. ilostat.ilo.org/data

Although the relative changes between 1991 and 2023 give us an idea of the progress in terms of equal participation between men and women (Table 3), the absolute values of labor participation between countries would give us a clearer reflection that, not only it is the change but the values of participation in each country. Although the reduction in the gap is the smallest in the East Asia and Pacific region, it is one of the regions with the lowest labor participation gap, 16.6 percentage points (pp) in 1991 and the reduction by 2023 was 15.05 pp.

The labor force participation of women in Eastern and Southern Africa is almost as high as that of men, in 1991, 79.7% of men worked and 64.07% of women, this participation is lower only than that of women in East Asia and the Pacific estimated at 66.37%. In this region of Africa there is an equal gap of 10.53 pp in 2023, only above the gap in Australia, which, as observed in the estimated change between 1991 and 2023, was the region with almost 60 percent reduction in the gap of labor participation.

Box 9

Table 3

Labor participation rates in the regions 1991 - 2023

Region	Men		Women		Gap		Change
	1991	2023	1991	2023	1991	2023	
East and Southern Africa	79.70	75.23	64.07	64.70	15.63	10.53	-32.64
West and Central Africa	72.42	69.32	59.90	54.45	12.52	14.87	18.73
Australia	74.60	71.36	51.96	61.52	22.65	9.85	-56.52
East Asia and Pacific	83.03	73.60	66.37	58.55	16.66	15.05	-9.70
Europe and Central Asia	71.04	66.42	49.51	51.56	21.53	14.86	-30.96
European Union	68.65	63.94	46.13	52.14	22.52	11.80	-47.62
Latin America and the Caribbean	81.14	74.66	42.54	51.08	38.60	23.58	-38.90

Source: Gap calculations obtained with information from the World Bank (2024a) and (2024b), on female and male labor participation for people over 15 years of age. Estimates and modeled projections from the ILO database, ILOSTAT, obtained on February 6, 2024. ilostat.ilo.org/data

The gaps in labor participation are reduced when a comparison is made by averaging the countries according to their income level. Although differences are observed depending on the level, it is evident that the greatest reduction was observed in high-income countries, a reduction of 38 percent. Figure 7 also shows that, on average, the world improved in terms of labor participation gaps, since even including lower-income countries, the reduction was 13.3 percent. Low-income countries were the ones that had the smallest reduction in the employment gap between men and women, in just over three decades it was reduced by 6 percent, and middle-income countries reduced their employment disparities by almost ten percent. On the other hand, lower middle-income and upper middle-income countries showed a similar reduction, of 13.8 and 14.9 percent, respectively.

Box 10

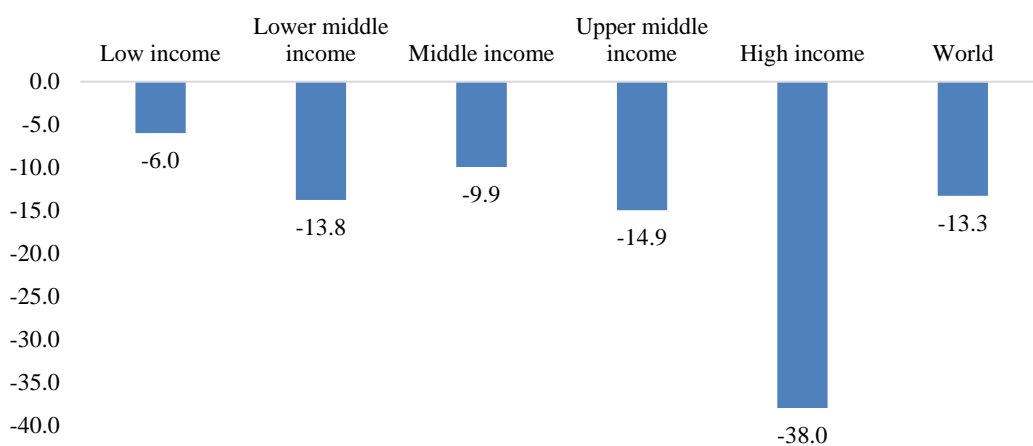


Figure 7

Reduction of gaps according to income level 1991-2023

Source: Gap calculations obtained with information from World Bank (2024a) and (2024b), on female and male labor participation for people over 15 years old. Estimates and projections modeled from ILO database, ILOSTAT, obtained February 6, 2024. ilostat.ilo.org/data

Conclusion

International evidence has shown that in just over three decades, on average, around the world, labor participation gaps between men and women have become more equal. Countries with higher incomes are also where women's participation has increased, almost at the same time as men's participation, and lower-income countries have shown smaller reductions. The COVID-19 pandemic had an effect that reduced women's labor participation, in some countries the largest reductions were estimated, of almost ten percent, such as Peru, followed by a lower percentage in Brazil, the Dominican Republic, and Mexico. The countries that had an increase in labor participation between 2019 and 2021 were Luxembourg, Honduras and the United Arab Emirates. The international comparison allows us to understand the international context to evaluate the situation in Mexico in terms of inequality in labor participation.

Chapter 2. Participation gaps in paid work in Mexico

In the previous chapter we presented information on international labor participation, and one fact that stood out was that Mexico is a country with a wide gap, similar to other Latin American countries, but comparable to countries where women have an intensive role in unpaid work, such as Iran and Afghanistan. Fortunately, the gap has narrowed over time. For this reason, this chapter addresses the situation of paid work faced by women compared to men in Mexico. Labor inclusion and organizational equity are important as key elements for post-pandemic economic recovery; therefore, companies must commit to promoting gender equity in their labor practices (Vázquez-Parra et al., 2023).

For this purpose, the National Occupation and Employment Survey (ENOE) will be used and a time period from 2018 to 2023 is analyzed, this in order to identify whether the gaps in paid work have been reduced over time. On the other hand, it is interesting to analyze the jobs that women have done and which has been the predominant one, if there is any specialization in any occupation, if they obtain jobs in informality or formality compared to men. A subsection will analyze how technology could explain some change in the activities or occupations performed by women using the Information Technology Survey, considering the technological advancement that could be a factor that equalizes the gaps in labor participation.

The analysis of employment from 2018 to 2023 (Figure 8), shows that the population over 15 years of age increased from 92.5 to 100.6 million people, where a slight majority of women, 53%, and the remaining 47%, is composed of men. Of this total, it is estimated that, on average, 57% of the population corresponds to the economically active and employed population. The lowest participation rate in 2020, due to the COVID-19 pandemic, was estimated at 52.74%. Prior to the pandemic, labor participation followed an increasing trend, as in 2018, it reached a rate of 58.21%, after 2020, the trend recovered to reach 58.81% which is estimated in 2023.

While the overall trend in labor force participation does not show significant changes, with the exception of 2020 when the COVID-19 pandemic occurred, Figure 8 shows a difference between the participation rate of men and women. Males demonstrate higher labor participation than females, although the trend between years, the changes are small, from 2019 to 2020, male participation decreased by 7.9%, while female participation decreased more, by 12%, relative to their respective population. Post-pandemic, women's labor force participation increased more than men's, in 2021, it increased by 11% and men's increased by 6.4%, and in subsequent years the percentage increase is at least double the increase in men's participation.

Box 11

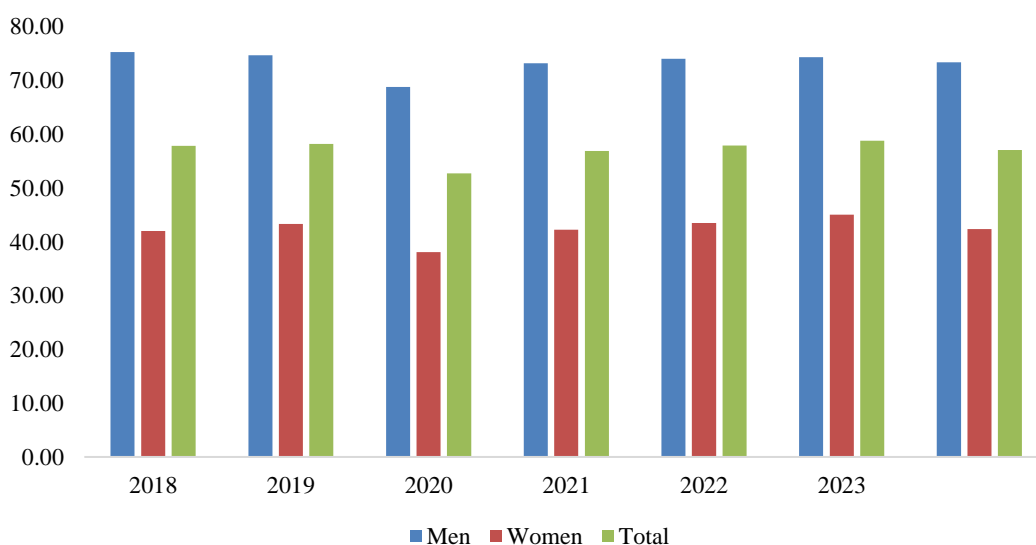


Figure 8

Labor participation Employed EAP

Source: Own calculations based on the third quarter of each year of ENOE 2018 to 2023 (ENOE, 2023), for the Economically Active and Employed Population over 15 years old

2.1 Labor participation by employability

Most of the population is employed as paid subordinate workers, on average between 68% and 69%, and these percentages have been estimated between the period analyzed 2018-2023, without any noticeable change over time, and no differences are found either in the relative percentage of men or women who are paid and subordinate workers with respect to the employed EAP population.

Subordinate and paid workers are those who have a boss or superior, and it is estimated that by 2023 there will be 40.5 million workers, of which 24 million are men and 16.5 million are women. Employers are those who hire workers, and they amount to 2.6 million people, being 77% men, self-employed workers are 13.1 million people and also the majority are men, 58.4%, and on the contrary, when comparing the working population that does not receive a salary, then, the majority is represented by women, 67%.

These data indicate that most of the paid participation is made up of men, as well as employers and self-employed workers, and women are the ones who are mostly engaged in unpaid work.

Table 4 presents the labor participation gaps between men and women, which continued to narrow, even in the pandemic year, and are estimated to be 29.29 percentage points (pp) by 2023. The overall participation gap, for each year, is disaggregated for the four types of employability: subordinate, employer, self-employed and unpaid worker. In particular, the labor participation gaps of the subordinate and paid population account for most of the overall gap, followed in importance by self-employed workers, in the latter men are in the majority. On the other hand, the smallest labor participation gap between men and women is estimated for employers, although there is an increasing trend after the pandemic, and finally, the labor participation gap for unpaid workers, where women are in the majority, even the gap is negative, confirming that relative labor participation is higher for women than for men. This type of work could be related to care work.

Box 12

Table 4

Labor participation gaps between men and women by type of employability

Year	General	Subordinate	Employer	Self-employed	Unpaid worker
2018	33.24	22.54	3.60	7.58	- 0.48
2019	31.38	22.17	3.63	6.10	- 0.51
2020	30.71	20.89	3.07	6.90	- 0.16
2021	30.91	21.02	3.67	6.68	- 0.46
2022	30.53	20.73	3.65	6.70	- 0.54
2023	29.29	20.11	3.85	5.98	- 0.66

Source: Own calculations based on the third quarter of each year from ENOE 2018 to 2023 ENOE (2023), applying expansion factors. The general labor participation gap is the difference between the percentage of employed EAP with respect to the population over 15 years of age, the four categories must add up to the general participation rate

2.2 Labor participation according to informality

Informal work occurs in the absence of a formal contract and the absence of labor benefits, such as access to social security, paid maternity leave and other labor rights, which creates a precarious situation for informal workers and greater economic vulnerability (Goodman et al., 2024). Women are the most affected by the need to care for their children. This is especially true for low-income women, which gives them few opportunities to belong to the formal sector. During the COVID-19 pandemic, it was observed that women were affected by the loss of informal jobs and consequently their income. This affects Mexico's economy, as the informal activities in which women participate contribute to poverty reduction and economic growth, underscoring the importance of their role in the informal economy (Hualde Alfaro and Ayala Correa, 2022).

Although informal workers in Mexico generally have less education and lower wages than their formal counterparts, informality is not exclusive to less educated workers, as a significant proportion of educated workers are also in the informal sector, reflecting a duality in the labor market that spans all income strata and educational levels (Alvarez and Ruane, 2024).

In Mexico from 1998 to 2013, the proportion of workers employed in informal firms increased from 32% to 49%, due to an increase in the number of informal firms (Alvarez and Ruane, 2024). Informality includes non-salaried workers and family members working in a family business (Zarate, 2022). In the context of Mexico, informality is a significant problem, affecting a high percentage of the labor force and firms, as 57% of the labor force and 78% of firms in Mexico are informal (Zarate, 2022). The crisis caused by the COVID-19 pandemic led to a significant increase in labor informality. Because many workers, having lost their formal jobs, were forced to resort to informal jobs as a form of subsistence (Acevedo et al., 2021). Informality presented a challenge for public policies, as informal workers were more difficult to identify and locate, which limited their access to support measures implemented by governments during the crisis (Acevedo et al., 2021).

Public policies have not been sufficient to enforce labor and maternity rights for women, and if women enter the informal sector, employers and workers are not aware of these laws (Goodman et al., 2024). Labor informality is associated with a “subsistence pole”, where the modalities of the social and solidarity economy play an important role. Sources of income in this context vary from social programs to marginal economic activities (Delgado Wise, et al., 2023).

The high rate of informality in Mexico, which is one of the highest in Latin America, is associated with several problems, such as tax evasion and the creation of distortions in the labor market that affect welfare and total factor productivity (TFP). Informal workers also tend to live in areas with limited access to formal jobs, which aggravates their situation, and should be complemented by increasing access to public transportation, as this could help reduce informality by better connecting informal workers with formal employment opportunities (Zarate, 2022). In Mexico during the COVID-19 pandemic, more than ten million informal jobs were lost in the first months, and by the end of 2021, there was a higher rate of informality than before the pandemic, as many informal workers faced precarious working conditions, received lower wages, and lacked access to health services and social protection (Hualde Alfaro and Ayala Correa, 2022).

To measure informality among the working population, we will use the definition, which follows international standards according to INEGI, and whose variable is available in the ENOE (2023). Figure 9 shows that, in absolute terms, subordinate and paid workers are mainly in formality, including women in formal jobs, rather than in informality. An increasing trend is observed in the formal population from 2018 to 2023, although this also identifies an increasing trend in the case of women, which only decreased in the year of the COVID-19 pandemic, in 2020.

Box 13

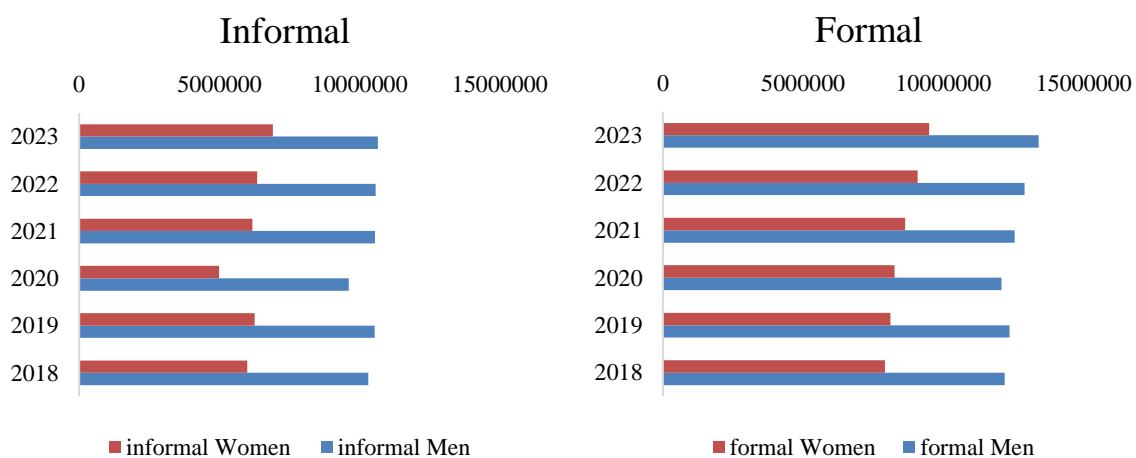


Figure 9

Distribution of subordinate workers between informality and formality

Source: Own calculations based on the third quarter of each year of ENOE 2018 to 2023 (ENOE, 2023), for the Economically Active and Employed Population over 15 years old, applying expansion factors, subordinate and paid workers

The total working and subordinate population, increased from 36.4 million people in 2018 to 40.5 million people, while the informal population increased from 16.3 to 17.5 million and formal workers increased from 20.1 to 23 million. In formality, is where a clearer growing trend is observed. For the last year, 2023, the informal population is estimated at 10.6 million men and 7 million women; meanwhile, the formal population of men is 13.4 million and women are 9.4 million. Table 5 shows that, although in absolute terms it was estimated that women workers were mostly in the formal sector, in relative terms, there is a percentage of between 37% and 43% in relative informality. The comparison with the other types of workers shows that women employers are in greater proportion in informality, and for self-employed workers, the highest percentages of workers in informality are estimated, although the difference between men and women is small.

Informal workers face unfavorable working conditions, such as the absence of contracts, little job security, and scarce social security services, which translates into lower income levels compared to formal jobs (Ovando-Aldana et al., 2021). In Mexico more than 55% of jobs are informal, which means that many people do not have access to formal financial products, for example, the proportion of people who have at least one financial product is between 94.6% and 96.8% for formal workers, while for informal workers it is only between 55.6% and 59.1% (Cassimon et al., 2022). The percentages of self-employed workers are those who are mainly in informality, and instead of showing a reduction from 2018 to 2023, as in the case of subordinate workers, a slight increase or an inertia in the relative percentage of self-employed or independent workers is observed, as it reaches values of 87.30% for male workers and 86.13% for female workers by 2023 (Table 5).

Box 14

Table 5

Percentage of informal workers according to type of employability

Year	Subordinates		Employers		Self-employed workers	
	Men	Women	Men	Women	Men	Women
2018	45.82	43.11	39.16	42.09	86.91	86.75
2019	46.01	43.53	39.96	44.99	86.31	84.74
2020	44.31	37.63	42.07	47.57	87.55	86.04
2021	45.69	41.67	44.71	48.44	87.75	86.64
2022	45.04	41.12	43.08	47.30	87.33	85.69
2023	44.29	42.11	41.59	47.16	87.30	86.13

Source: Own calculations based on the third quarter of each year of ENOE 2018 to 2023, for the Economically Active and Employed Population over 15 years of age, applying expansion factors

The informality gaps are calculated from the difference in labor participation between men and women, for each type of employability, and its trend is plotted to know its evolution from 2018 to 2023, Figure 10 shows that the informality gap is higher for subordinate and paid workers. There is a higher percentage of male workers in informality than female workers, while the differences in the informality gap for self-employed workers are positive, indicating that men are the ones who are mostly in informality, although the difference with respect to women is less than two percentage points. In contrast, when looking at employers, we find that the gap is negative, indicating that there is a greater informal labor participation of women as employers, relative to men as employers. These differences pose challenges for women's employability, because, on the one hand, it is inferred that women, despite having a lower labor force participation than men, in percentage and absolute terms, are higher in the formal sector.

Box 15

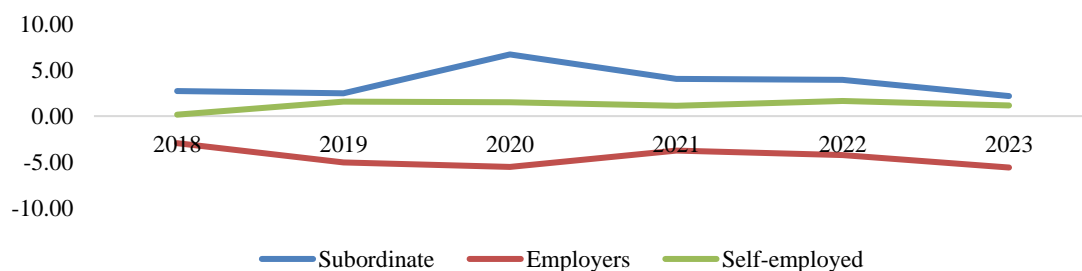


Figure 10

Gaps in informality by type of employability

Source: Own calculations based on the third quarter of each year of ENOE 2018 to 2023 (ENOE, 2023)

The above data reflect that, if women decide to work, they would seek to be in formal employability, rather than informality. This is a hypothesis that will be investigated considering the activities performed by women compared to men, and could be explaining why informality is lower in women compared to men. Considering subordinate and paid labor participation, and when analyzing the economic activities performed by women, in terms of relative distribution, no differences are found over time in labor participation by economic activity, although in absolute terms the working population increased. Therefore, this distribution will be shown for the year 2023. Figure 11 shows that the majority of the population is in services, and it is in this population where most women are employed. Based on this information, the labor participation gaps between men and women by economic activity will be calculated for the period 2018 and 2023.

Box 16

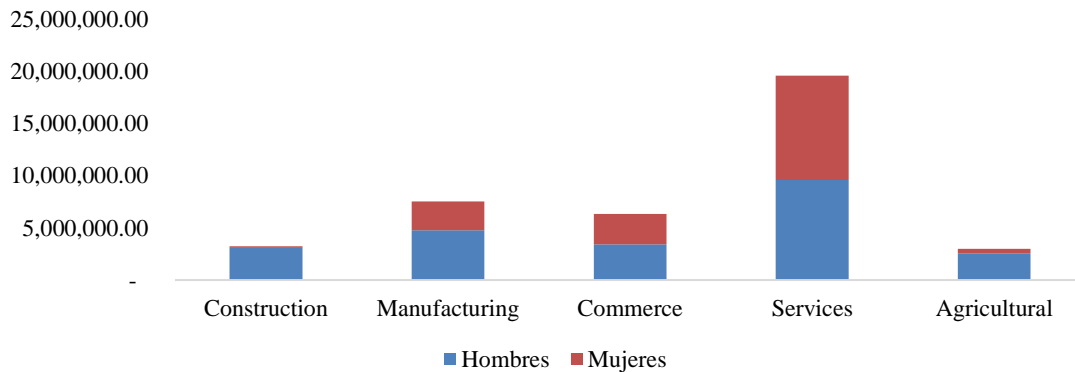


Figure 11

Distribution of the subordinated working population by economic activity

Source: Own calculations based on the third quarter of each year of ENOE 2018 to 2023 (ENOE, 2023)

2.3 Labor participation by economic activity

In Mexico, labor informality is associated with economic and educational barriers that limit access to financial services. Socioeconomic characteristics, such as level of education and income, are key determinants in the probability of owning formal financial products. It is considered relevant to reduce informality and improve financial education to increase financial inclusion in Mexico and, therefore, foster economic growth and social equity (Cassimon et al., 2022). Labor informality is seen as a maneuvering space for capital accumulation, where informal workers often perform necessary jobs, although they operate outside authorized legal frameworks (Delgado Wise et al., 2023).

Table 6 shows that labor participation gaps between men and women, in general, did not evidently change over time. Although it is observed that, in the construction sector, services, and in agriculture and livestock showed a tendency to reduce from 2018 to 2023, contrary to what is observed in the commerce sector, in absolute value it increased, but as it is negative it implies that the gap favors women. In the case of manufacturing, the gap is in favor of men and followed a growing trend that slowed down with the COVID-19 pandemic, such that, by 2021, the participation gap between men and women reached the lowest value, even the lowest value of all the estimated positive gaps between the sectors of economic activity.

Box 17

Table 6

Labor participation gaps according to economic activity or economic sector

Year	Construction	Manufacturing	Commerce	Services	Agricultural
2018	12.15	3.35	-2.49	-23.82	9.36
2019	11.62	3.84	-2.83	-23.68	9.84
2020	11.04	3.60	-2.56	-22.33	8.79
2021	11.32	2.85	-2.45	-21.83	8.79
2022	11.50	3.17	-2.29	-22.18	8.41
2023	11.74	3.11	-3.40	-20.95	8.17

Source: Own calculations based on the third quarter of each year from ENOE 2018 to 2023 (ENOE, 2023), applying expansion factors.

The three sectors in which the subordinate working population is mainly employed are the manufacturing, commerce and services sectors, and these are also sectors in which women are participating, almost in the same proportion as men. In this sense, the informality situation in the sectors will be analyzed for men and women, and then the informality gaps by economic activity will be shown.

Table 7 shows the comparison of labor participation gaps according to the sector of economic activity, if the difference is positive it indicates that there is a higher percentage of male workers, relative to women, for example for the manufacturing sector, the informality gaps are very low. Although there is a tendency to be around one percentage point, the differences tend to be greater in the formal population, indicating something contrary to what was previously observed in the absolute data of general formality. Because the formal gap is positive implying that there is a higher percentage of men employed in formality in manufacturing, compared to women, although the differences are not so wide and a trend of around two percentage points is observed, this gap in formality in favor of men is greater than in women. On the other hand, the gaps in both commerce and services are negative, indicating that a higher percentage of women are in these activities.

Box 18

Table 7

Gaps in informal labor participation by economic activity

Year	Manufacturing Gaps		Trade gaps		Services gaps	
	Informal	Formal	Informal	Formal	Informal	Formal
2018	0.48	2.87	-1.75	-0.73	-14.87	-8.95
2019	1.04	2.80	-2.07	-0.75	-14.90	-8.78
2020	1.45	2.15	-1.68	-0.88	-10.65	-11.67
2021	0.73	2.12	-1.84	-0.61	-12.94	-8.89
2022	0.94	2.23	-1.80	-0.49	-12.75	-9.43
2023	1.19	1.92	-2.61	-0.79	-13.48	-7.47

Source: Own calculations based on the third quarter of each year from ENOE 2018 to 2023 (ENOE, 2023), applying expansion factors.

In terms of informality in the commerce sector, the negative gaps have a greater absolute value in informality, indicating that more women are in informality in the commerce sector than men, the gaps in formality in the commerce sector are less than one percentage point, so it can be said that there are no differences between sexes. Finally, the gaps in services are also negative, and have a greater magnitude, in absolute value, when analyzing the services sector in informality, only in the year of the pandemic by COVID-2019, the negative gap was greater in formality, indicating that women were more in formality in the services sector, relative to men in this same sector. Post-pandemic, service sector gaps in informality remained larger than gaps in formality, indicating that women are primarily employed in informality, relative to men working in the same sector.

2.4 Jobs performed by women

Labor participation in six countries in Latin America and the Caribbean: Bolivia, Chile, Costa Rica, Panama, Mexico and Uruguay has been low, as shown in Figure 3. A study by Arias et al. (2023), which included 338 companies in the energy sector found that female labor participation in the renewable energy sector in Latin America and the Caribbean presents higher relative efficiency in the labor-capital ratio. However, this participation of women is still lower than the sectoral average. It was found that, in terms of roles, women occupy mainly non-technical positions, and their participation decreases in occupations that require more technical skills. In addition, it was found that women represent 36% of employees in STEM (science, technology, engineering and mathematics), 39% in non-STEM positions and 48% in unskilled jobs. In addition, women constitute 24% of board members and 22% in management roles within renewable energy generation companies (Arias et al., 2023). In Colombia, the role of Information and Communication Technologies (ICT) was found to be a key tool for labor inclusion and empowerment of vulnerable women, through a qualitative methodology with experiences of 26 women on barriers and successes of empowerment and access through ICT. The results found that the barriers to entering the labor market are: physical and mental well-being and socioeconomic factors that affect women's empowerment. On the other hand, in order to promote labor inclusion, the following are required: governmental support, use of ICTs for empowerment.

Thus, they indicated the importance of ICTs as a relevant component for the integration of women in the labor market (Jaramillo et al., 2024). In India, based on the experiences of low-income women and in a context where women face patriarchal systems that influence their use of technology and their participation in work, the use of ICTs in their work showed a positive impact on their lives and income, as well as on their autonomy; however, tensions and conflicts continue due to patriarchal norms (Varanasi et al., 2022).

For Mexico, considering the National Survey on Availability and Use of Information Technologies in Households (ENDUTIH, 2022), the access that women have to technology is obtained, specifically in the use of electronic devices for their work, for example, computer, tablet, or even cell phone. With this information, it will be evaluated, if the gaps in labor participation are closed with the use of these technologies. The ENDUTIH (2022) identifies information for 119 million people, with the expanded sample, of which it is estimated that 70.6% of the Economically Active Population (EAP) is a computer user, population estimated at 25.9 million people.

The use of the internet from 2015 to 2022 has expanded in all reasons self-reported by people, as considering the use of the computer for work activities from 36.7% in 2015 to reach 50.1% of computer users, they use it for their work. This information, for the year 2022, reflects the reasons provided by people about the use of the computer, they use the computer to perform school activities, in 46.8%, training activities 30%; for entertainment 65.4%, and to access the internet in 86.1% of mentions. Although there is a growing pattern in the use of the Internet and its reasons, when we review the proportion of people who have not had access to the computer for economic reasons, we can see that this percentage has decreased. In absolute numbers, in 2001 there were 13.8 million people who did not have access to a computer due to lack of resources, representing 66.8%. By the year 2022, the population that does not report not having access to a computer is 10.4 million people, representing 49.5% of the population, so there has not been a large reduction in just over two decades.

The information in Figure 12 provides evidence that there has been a reduction in the percentage of people who do not have access to computers due to lack of economic resources, although the reduction could be different between men and women. Computer access may be related to the type of work performed by women and men, so it is relevant to compare participation rates and gaps.

Box 19

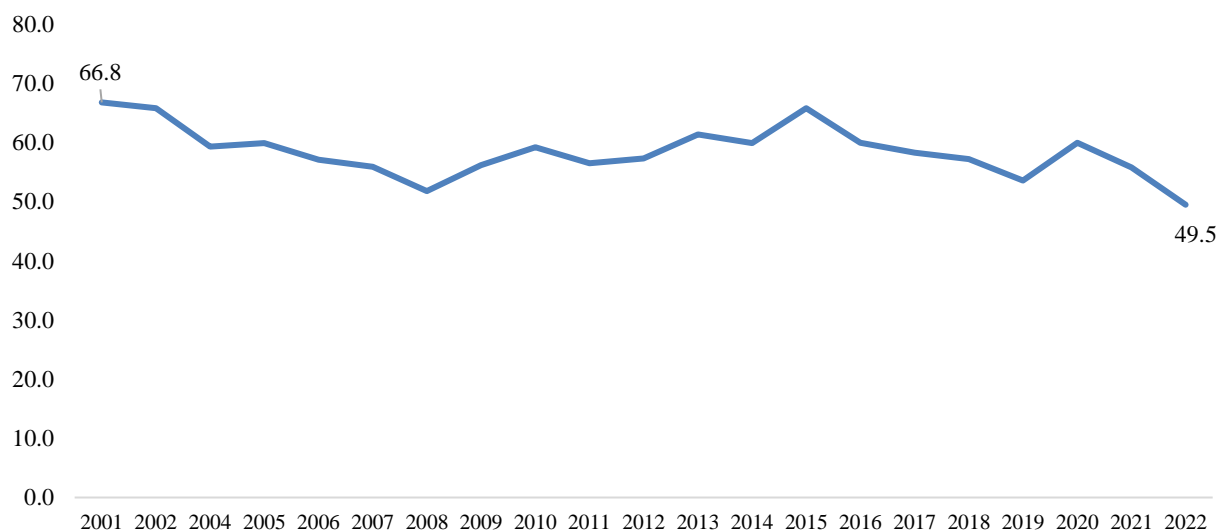


Figure 12

Lack of access to computers 2001-2022

Source: Tabulations of the National Survey on ICT Availability and Use in Households, (ENDUTIH 2022), INEGI

Table 8 shows that the labor participation gap between men and women closes to a greater extent when computers or tablets are used for work activities, as the gap is 4.55 percentage points, while the widest gap is when the computer is not used for work activities. The use of cell phones for work also seems to close the labor participation gap, by 7.12 pp, and the use of computers for training closes the labor participation gap between men and women by 10.22 pp.

Box 20**Table 8**

Labor gap according to the use of electronic devices 2022

Activity use	Use	Men	Women	Gap
Average		71.25	44.48	26.77
Computer Use for Work activities	Do use	94.37	89.82	4.55
	Do not use	62.31	31.7	30.61
Computer Use for training activities	Do use	79.06	68.84	10.22
	Do not use	70.10	41.42	28.68
Cell phone use for work	Do use	94.19	87.07	7.12
	Do not use	52.95	26.71	26.24

Source: Own calculations from microdata of the National Survey on ICT Availability and Use in Households, ENDUTIH 2022, INEGI (ENDUTIH, 2023)

In general, it is observed that when these technological devices are not used for work activities, the participation gaps between men and women widen. Therefore, it is important to continue with training in the use of Information and Communication Technologies so that women's labor participation is equal. Therefore, it is concluded that technology has led to greater labor participation of women.

Chapter 3. Caregiving and family care work

The role of women in caregiving is a factor that reduces the opportunity for women to participate in the labor market, the double workday of women performing paid and unpaid work. The presence of two adults who dedicate time to the paid labor market would provide two sources of monetary resources that would improve the earning capacity and, in general, the welfare of the household, although with the disadvantage that household chores must be performed equally, shopping and food preparation, laundry, and childcare, is an unavoidable aspect in all households.

Women's labor participation depends on household size, educational level and age of children. With results for China, it is estimated that the probability of women participating in the labor market increases by 2.3% for each unit increase in household size (Yang et al., 2023). However, younger women, those with lower educational levels, and those with younger children tend to participate less in paid work, due to the demands of human capital investment and family responsibilities. On the other hand, other non-occupied members living in the household could also support in care work, for example, the woman's mother, but the father-in-law's activity could also be influencing, it is estimated that the father-in-law's retirement increases by 58.9% the probability that the daughter-in-law participates in the labor market, indicating that the reduction of family responsibilities may allow women to work more. However for women with primary education there is an opposite effect on their labor participation after the father-in-law's retirement, as their wages tend to be lower and therefore it is more economical for them to take care of children and elderly (Yang et al., 2023).

Household chores should not be exclusive to women; however, in the sources of information analyzed, regardless of whether they focus on caregiving, there is a specialization of tasks, with men performing work-related tasks and women taking care of children. The information from the National Survey for the Care System (ENASIC, 2022) conducted by INEGI, provides an overview of the main groups that are susceptible to care, where it is estimated that 58.6 million people are susceptible to care and represents 45.5% of the total national population of 128.9 million people, of which 65% of the population that required care received it, a breakdown according to the group that required care is shown in Table 9.

In absolute terms, the older population that requires care is the group from 6 to 17 years of age; this group corresponds to the school-age group that corresponds to basic and high school education, so it is inferred that they spend most of their time in school. On the other hand, the younger age groups, such as 0 to 5 years old, people with disabilities and people over 60 years old, are more likely to be at home, and their care situation is more intensive for some of the household members. As in the case of the 0 to 5 age group, although only 9.6% of the population requires care, it is estimated that all of them received care support, Table 10 confirms that it is mainly the mother who takes care of people who have a disability or are under 17 years of age.

Box 21

Table 9

Population susceptible to care

Susceptible population	Required care	Received support	Relative to the total population requiring care	Relative to the referred population that received support
People with disabilities	5,625,946	3,458,357	9.6	61.5
People from 0 to 5 years old	10,273,924	10,170,314	17.5	99.0
People from 6 to 17 years old	25,388,900	20,168,628	43.3	79.4
Persons 60 years of age and older	16,977,714	3,799,034	29.0	22.4
Foster care	700,330	700,330	1.2	100.0

Source: Calculations obtained from available tabulations for ENASIC 2022, the estimated total population susceptible to care is 58,594,471 people, using the population expansion factor

Women are evidently the main caregivers of children 0 to 5 years old, who are also cared for by grandmothers and other people, and although fathers also care for their children, the survey adds them to other groups of caregivers, because in absolute terms there are very few of them. Although in the 6 to 17 age group it is also the mothers who perform caregiving tasks, the participation of fathers in caregiving stands out, as 6.6% state that they have supported them in their care (Table 10).

Box 22**Table 10**

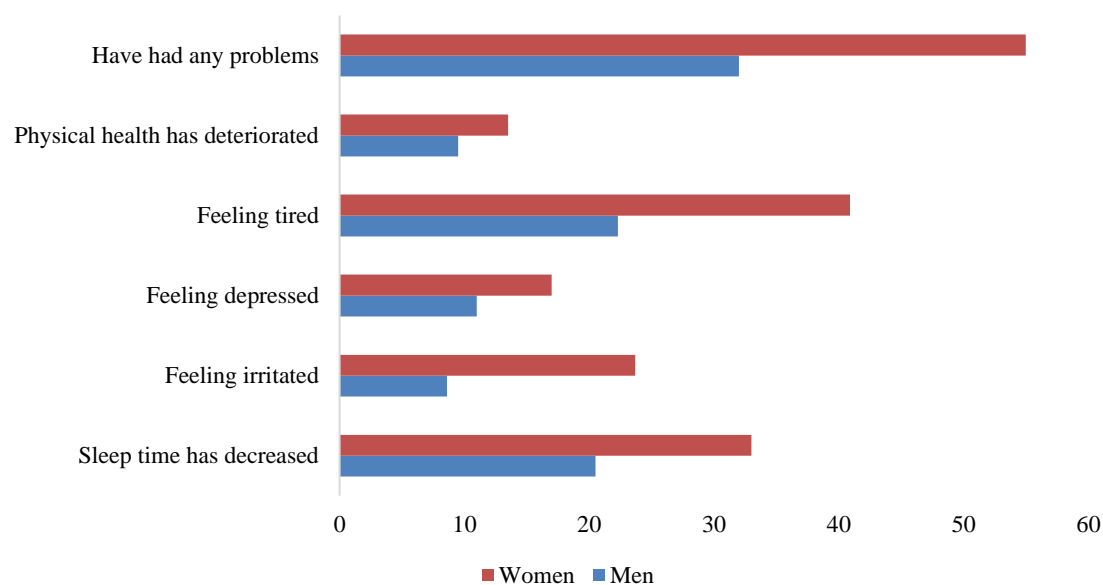
Main caregiver by susceptible group in percentages

Type of person	Disabilities % ¹	Group of 0 a 5 years old % ²	Group of 6 a 17 years old % ³	Persons of 60 years old % ⁴
Mother	30.7	86.3	81.7	
Father			6.6	
Spouse or partner	19.9			42.2
Daughter	33.8			33.4
Son				10.43
Grandmother		7.6	6.3	
Other	15.5	6.1	5.4	13.9
Total	100.0	100.0	100.0	100.0

Source: Information obtained from available tabulations for the ENASIC (2022). The total estimated population susceptible to care is 58,594,471 people, using the population expansion factor. Information for the category of Other1 Includes parent, grandparent, grandchild, child, among others. 2 Includes parent, grandparent, aunt, aunt(s), among others. 3 Includes parent, grandparent, aunt, aunt(s), among others. 4 Includes granddaughter, sister, daughter-in-law, daughter-in-law, son-in-law, and others

On the other hand, adults over 60 years of age are cared for by their spouse or partner, and the second highest percentage is reported for daughters; therefore, it is still women who perform caregiving tasks.

The caregiver population according to ENASIC data (2022) is estimated at 31,652,134 people over 15 years of age, of which 75% are women and the rest are men. Fifty-five percent of the caregivers have reported some problem in performing caregiving tasks, 13.5% of the women report having had a deterioration in their physical health, 40.9% feel tired, 17% feel depressed, 24% have felt irritable, 33% have decreased their sleep time, these percentages are notably higher for women than for men. As shown in Figure 13.

Box 23**Figure 13**

Have you had any problems due to caregiving?

Source: Information obtained from the available tabulations for the ENASIC (2022) on the main caregiver of a household member

Seventy percent of the caregiving population is between 20 and 49 years old, where 7 out of 10 caregivers are women, 50% have basic education, according to ENASIC data (2022). When women are asked if they would increase their paid hours, almost 90% of women in the Economically Active Population (EAP) say they would not, only 10.2% say they would increase them, while 15.7% of men say they would increase them (Table 11).

Box 24**Table 11**

Caregiver population by economic activity status

Type of population	Men	Women
Economically active population	88.0	52.8
Yes would increase working hours	10.2	15.7
Would not increase their working hours	89.8	84.3
Non-economically active population	12.0	47.2
Available	32.8	35.2
Not available	67.2	64.8

Source: Information obtained from the tabulations available for the ENASIC (2022)

3.1 Care work and paid work

Regarding paid labor participation, according to Table 11, it is evident that the participation of men in the paid labor market, since 88% corresponds to the EAP (Economic Active Population), is higher than that of women, estimated at 52.8%, i.e. a gap of 35.2 percentage points (pp) is estimated. Based on the ENASIC (2022) microdata, it is possible to make a more detailed approach to labor participation gaps, considering the activities that people performed in the past week. With this information, the labor participation gaps are estimated at 36.6 percentage points, in favor of men, since 81.12% of men worked at least one hour, while of the total number of women, only 44.11% worked (Table 12). On the other hand, the care gap is unfavorable for women, since they are the ones who mainly perform these tasks, the gap is -43.79%. Although there are differences in the other activities to which they are dedicated, they are not as wide as in the two activities related to paid and unpaid work, where there is a clear specialization between men and women.

On the other hand, women are performing both activities in similar proportions, that is, the gap between paid work 44.1% and unpaid work 49.13% is narrow, which implies specialization in this type of work. The opposite is the case for men, since the gap between paid and unpaid work is 78.3 pp.

Box 25**Table 12**

Activities carried out last week

Activity	Men	Women
Did you work for at least one hour?	81.12	44.11
Did you have a job, but did not work?	2.53	1.44
Did you look for a job?	1.85	0.39
Are you a pensioner or retiree?	6.22	1.71
Are you a student?	2.97	2.12
Do you do household chores or care for your children?	2.86	49.13
Do you have a permanent physical or mental limitation that prevents you from working?	1.21	0.73
Were you in a situation other than the above?	1.24	0.37
Total	100	100

Source: Own calculations from ENASIC microdata (2022), for people over 12 years old and using the expansion factors

3.2 Labor participation gaps

The participation gap in paid work shown in Table 13 changes when considering roles in care work, and it is observed that the smallest participation gap is observed when considering that there is a person with a disability in the household, since it is the smallest gap, with a value of 22.6 pp. This implies that men reduce their labor participation in paid work, since the gap in unpaid work between men and women is also the smallest, in relative terms, with a value of -42.2 pp. It can be inferred that when there is a person with a disability, the labor gaps are reduced. On the other hand, when there is the presence of older adults for care work, the paid labor participation gap is 29 pp, a situation similar to the case when there is a person with a disability in the household, the participation gap in unpaid work is reduced to incorporate the fact that men would be involved in this type of work. On the contrary, the labor participation gap in paid work is greater when there are children from 0 to 5 years of age in the household, whose care is performed to a greater extent by women, and likewise, the participation gap in unpaid work is also greater. These results confirm that women are the ones who spend more time caring for their children, widening, in turn, the labor participation gap in paid work.

Box 26**Table 13**

Gap in paid labor participation according to activities performed

Last week...	General	Disability	Child care 0 to 5 years	Older adults
Did you work for at least one hour?	37.0	22.6	48.4	29.0
Did you have a job, but did not work?	1.1	-0.1	2.2	1.4
Did you look for a job?	1.5	6.1	0.4	3.9
Are you a pensioner or retiree?	4.5	7.7	2.8	15.8
Are you a student?	0.9		-0.2	2.2
Do you do household chores or care for your children?	-46.3	-42.2	-55.1	-53.1
Do you have a permanent physical or mental limitation that prevents you from working?	0.5	6.1	1.3	-1.1
Were you in a situation other than the above?	0.9	-0.3	0.3	1.9

Source: Own calculations from ENASIC microdata (2022), for people over 12 years old and using the expansion factors. The paid labor participation gap is measured as the difference between men and women

On the one hand, the information on labor participation allows us to analyze how the gaps in labor participation in paid and unpaid work change when contrasted with the opinions on care work, in this sense, the perceptions would allow us to understand why men and women perform the activities they report. When people are asked if they consider that it is the exclusive responsibility of women to perform caregiving tasks, 10.8% of women agreed, and a lower percentage, 6. Therefore, considering the people who mentioned that they agreed that women are the ones who should perform caregiving tasks, we observe a smaller gap in paid labor participation, since men's participation is reduced because the men who think this way are retired or pensioned, 13% of the total number of men, while a smaller percentage corresponds to women. The pleasure of performing caregiving tasks is another reason why women dedicate more time to these tasks, and although the gap in paid work participation is greater, at 37 pp, the gap in unpaid work participation is the smallest, which implies that if men like to dedicate time to household activities and care for their children, the gap between men and women in caregiving tasks will be reduced (Table 14).

Box 27**Table 14**

Paid labor participation according to activities performed and perceptions of gender roles

Last week...	Woman is responsible	Likes to take care	Equal care	Children suffer
Did you work for at least one hour?	33.0	37.0	36.8	38.2
Did you have a job, but did not work?	5.4	1.1	1.1	1.4
Did you look for a job?	1.2	1.5	1.5	1.9
Are you a pensioner or retiree?	12.6	3.7	4.4	5.2
Are you a student?	-0.5	1.0	1.0	0.7
Do you do household chores or care for your children?	-55.0	-45.6	-46.4	-49.6
Do you have a permanent physical or mental limitation that prevents you from working?	0.2	0.6	0.5	1.1
Were you in a situation other than the above?	3.3	0.8	1.0	1.1

Source: Own calculations from ENASIC microdata (2022), for people over 12 years old and using the expansion factors

We would expect greater equality in the gaps in paid and unpaid labor participation between men and women, if they agree that caregiving tasks should be performed equally by both, although both men and women agree in 95% of the total for each, the participation gap, both paid and unpaid, continues to be wide, that is, the perception of equality in tasks does not manage to reduce the labor gaps between men and women.

Finally, when asked if they consider that when a mother has a paid job, daughters and sons suffer, 61% of men agree, while a higher percentage, 71% of women agree. Having this perception, both men and women could indicate two things, the first is that men would increase and women would reduce their labor participation in paid work, which would imply a widening of the gaps between men and women. The result is that we obtain the largest gap in paid participation and the second gap in unpaid participation, since the gap was larger when people affirmed that it is women who should dedicate themselves to care work.

In order to test whether this participation gap becomes more or less unfavorable for women, the analysis focuses on comparing paid versus unpaid participation, statistical tests of the differences are performed, and the resulting gaps are shown in Figure 14.

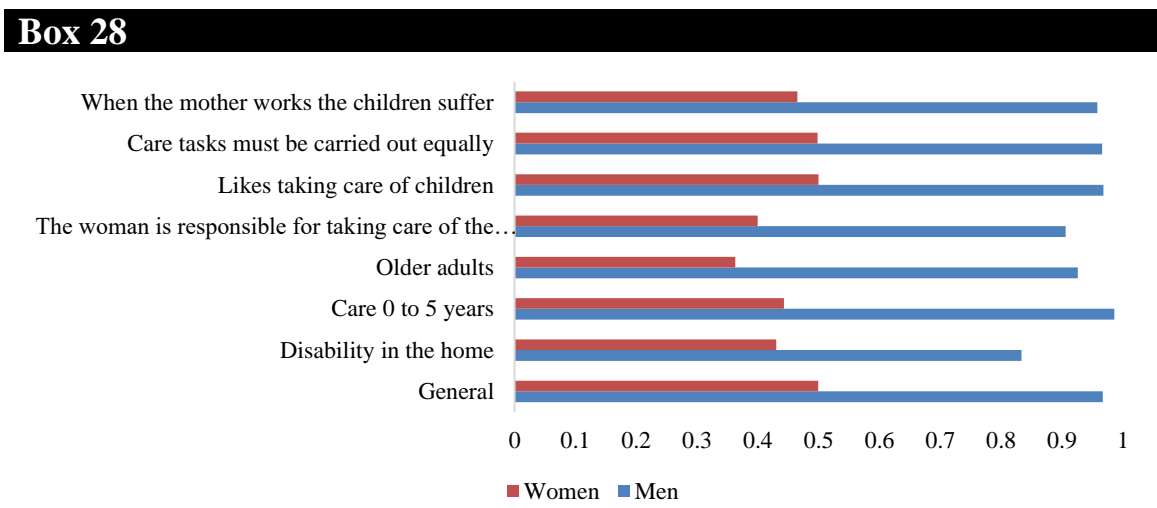


Figure 14
Relative paid labor participation
Own calculations from ENASIC microdata (2022), for people over 12 years old and using the expansion factors. Relative paid labor participation takes the value of 1 when people report that they work for pay, and 0 when they work without pay. The differences are statistically significant at 95% confidence

3.3 Labor gaps and gender roles

The comparison of gaps indicates that, regardless of the perception of gender roles, even when there are differences between what men and women should do, what is most important is the presence in the home of people who are susceptible to being cared for, such as people with disabilities, children from 0 to 5 years of age, and the elderly; these are the determining factors for women to reduce their paid labor participation. With respect to the gap between unpaid and paid work, there is no symmetry, since in some cases more than 50% of women report that they also perform caregiving or unpaid work (Figure 15). In most of the cases shown, the percentage of women who dedicate themselves to unpaid work or childcare continues to be in similar percentages, although in the case of men, in some cases the percentage who also dedicate themselves to childcare increases, especially when they are susceptible to care because they have a disability. With respect to the perception of gender roles, women's participation in unpaid work is at 50%, and increases considerably when they think that childcare is the exclusive responsibility of women, although it is equally high as in the general case, when they think that work should be equal between men and women, or when they think that children suffer if the mother works. On the other hand, it is evident that the percentage of women who dedicate themselves to unpaid work is higher if there are children under 5 years of age, an elderly person, or people with disabilities in the household. In these last two cases, men's participation in caregiving increases.

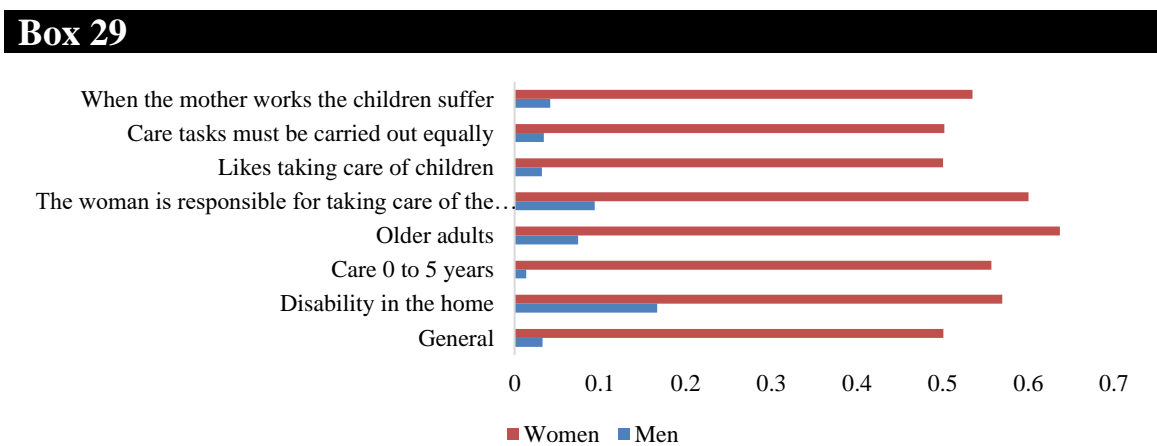


Figure 15
Relative unpaid labor participation
Own calculations from ENASIC microdata (2022), for persons over 12 years old and using the expansion factors. Relative unpaid labor participation takes the value of 1 when people report that they work unpaid, and 0 when they work paid. The differences are statistically significant at 95% confidence

3.4 Social programs and labor participation

To study the effect of social programs on labor participation, we will focus on households where they are susceptible to care. It is estimated that 8.4 million households have children from 0 to 5 years of age, in relative terms representing 21.55% of all households, of which only 3.45% of them report having a social program related to childcare or daycare centers. The second largest population corresponds to households with children between 6 and 17 years of age, and represents 40.82%, which corresponds to a total of 15.8 million households. It is estimated that 18.4% of households with children between 6 and 17 years of age have a Benito Juarez scholarship for Basic Education and 9.82% of households with children in this same age range have a scholarship for higher education. In these three programs, it is observed that, relatively more of these social programs are granted to households with a female head of household, although the differences are minimal. On the other hand, it is observed that in households where there are people with disabilities, which is estimated at 4.9 million households, only 8.3% of households that have a person with a disability receive the Pension for the Welfare of People with Permanent Disabilities Program. Unlike the previous programs, households where the head of household is male have a relatively higher percentage of beneficiaries.

Finally, it is estimated that in 12.4 million households there are adults over 60 years of age, representing 31.97% of the total number of households in the country, and it is estimated that the Pension for the Welfare of the Elderly Program, formerly the older than 65 Program, is the one with the greatest coverage of all social programs, reaching 56.97% of households, where the highest relative proportion of beneficiaries is found in households with a male head of household.

Box 30

Table 15

Paid labor participation according to activities performed and perceptions of gender roles

Population	Total households	Percentage of total households	Have social program	Relative population with social program (%)	Households with male head (%)	Households with female head (%)
Children from 0 to 5 years old	8,358,265	21.55	288,216	3.45	3.19	4.12
People from 6 to 17 years old (basic education social program)	15,830,724	40.82	2,918,883	18.44	17.72	19.84
People from 6 to 17 years old (social program for high school education)			1,554,048	9.82	9.7	10.05
People with disabilities	4,942,570	12.74	410,349	8.3	8.9	7.4
Adults over 60 years of age	12,399,495	31.97	7,063,980	56.97	57.68	55.7

Source: Own calculations from ENASIC microdata (2022), for people over 12 years old and using the expansion factors

In general, it is observed that of the three population groups that are susceptible to care, only one has broad access to a social program, while the other two groups, 0 to 5 years old and persons with disabilities, have the lowest coverage of social programs, 3.45% for the former and 8.3% for the latter, with the case of households headed by women having the lowest coverage, since only 7.4% of households with persons with disabilities have access to this social program. In this sense, social programs could reduce the burden of care work by increasing coverage, since this is where women's unpaid work is the greatest.

The conclusion of this chapter is that women have concentrated on care work, and although it could be thought that the time dedicated to unpaid work is disproportionate, and that women are the ones who have suffered the most problems due to caregiving, it was also found that when asked if they would like to increase their time in paid work, the vast majority would not wish to do so. It could be inferred that there is an effective specialization of care work performed by women compared to men, particularly when considering the groups most susceptible to support such as young children under 5 years of age, and people with disabilities for whom women seem to be better caregivers. In addition, households where this population is identified have low coverage by social programs. As a policy recommendation, these data indicate a need to improve the targeting of the population, or else, make support for these groups universal, a similar case to older adults aged 60 and over, whose social program has the highest coverage and is a universal program since 2018.

Chapter 4. Factors affecting labor force participation gaps

The comparison of the labor force participation of men and women reflects a reduction in the gap, regardless of the period of the COVID-19 pandemic. One way to reduce the gap is to increase women's labor force participation, in that sense, the analysis will be based on the identification of the most important factors that women consider to enter or remain in the labor market. In order to econometrically identify the factors behind women's labor participation, and considering unpaid responsibilities, the factors that could be explaining the probability of women working are analyzed. For this purpose, the ENASIC (2022) microdata base is used, since it is the one that allows us to evaluate the reasons why women increase the probability of participating in the labor market, or the reasons why they wish to change jobs, or why they would not like to change jobs, as well as whether they have reasons to change their work schedule. These reasons allow us to have a broader idea about women's labor participation, using the data that each woman responds.

The ENASIC (2022) also allows us to know if they perform caregiving activities because they have a person with a disability, children under three years of age, older adults, or people who require care. It also considers the characteristics of the people who answer the questionnaire, such as age, if they consider themselves indigenous, if they have a disability, or if there are reasons why women do not wish to enter the labor market. The following sections will address the related factors.

4.1 Factors related to labor participation

The descriptive analysis showed that women have lower labor participation than men, using nonlinear probabilistic models presented in Table 16, it is found that the probability of men participating, compared to women, is higher between 71.5% and 72.6%. Thus, it follows that there is a labor participation gap between men and women. On the other hand, age seems to be irrelevant in increasing labor participation. When people are asked to consider themselves indigenous, the estimates show that the probability of working is reduced, and the value is robust to any specification, between 24.4 and 25.3 percent, another variable that seems to reduce the probability of working is if the person has a disability, in which case the reduction in the probability of working is reduced by a greater magnitude, between 42.9 and 44.8 percent.

It is interesting to identify that the probability of working increases if the commuting time to work increases; this variable could imply that the place of work to which people go is at least one hour away, the round trip. It is identified that the probability of working is reduced if people want to change jobs, the magnitudes are in the range of 23.4 and 25 percent. However, this situation is consistent with the responses that, if they are satisfied with their job, the probability of working increases, although the results were not statistically significant. On the contrary, when they state that they would like to change jobs, the probability of working is reduced, by a little more than fifty percent. People's health could indicate a lower probability of working, but as the responses are of different levels, it is found that only when people respond that they have neither good nor bad health, the probability of working is reduced, between 26 and 27 percent. Finally, when the respondent has caregiving responsibilities, the probability of working would be expected to decrease, although the coefficients were negative, not all of them were statistically significant. The coefficients that were statistically significant in reducing the probability of working are if the person cares for a person with a disability, or when caring for an older adult. Because the sex of the person is not identified or interacted with, no lower labor participation is identified when caring for children under 5 or under 17 years of age.

If people report poor health it would reduce the probability of working, or if they are in very good health it could increase the probability of working; however, the coefficients, in the estimated models, do not show statistical significance, only when people report having neither good nor poor health, although this way of classifying is not clear, it could be inferred that the state of their health does not seem to be relevant for the probability of working.

It is concluded that, statistically, the factors that contribute to increase the probability of working are being a man, compared to women, or having a commute to work that takes at least one hour each way, and weakly, being satisfied with work would increase the probability of working. However, other factors such as being considered indigenous, having a disability, if he would like to change jobs, change your work schedule, or if he care for a person with a disability or an elderly person reduce the probability of working.

Box 31**Table 16**

Factors conducive to labor participation

	Basic	Disability	Children under 5 years	Older adult	Children 6 to 17 years	Caregiver	All
Male	0.716*** (0.0798)	0.725*** (0.0811)	0.724*** (0.0813)	0.738*** (0.0817)	0.715*** (0.0800)	0.719*** (0.0799)	0.726*** (0.0822)
Age	0.00284 (0.00252)	0.00289 (0.00258)	0.00210 (0.00272)	0.00331 (0.00261)	0.00282 (0.00253)	0.00309 (0.00254)	0.00331 (0.00277)
Considers himself to be indigenous	-0.253*** (0.0650)	-0.244*** (0.0657)	-0.249*** (0.0656)	-0.250*** (0.0657)	-0.253*** (0.0651)	-0.252*** (0.0650)	-0.246*** (0.0660)
Has a disability	-0.437* (0.190)	-0.437* (0.197)	-0.448* (0.197)	-0.445* (0.198)	-0.438* (0.191)	-0.429* (0.190)	-0.444* (0.197)
Hours commuting to work	0.208*** (0.0376)	0.201*** (0.0376)	0.204*** (0.0376)	0.203*** (0.0376)	0.208*** (0.0376)	0.207*** (0.0376)	0.199*** (0.0375)
Would like to change jobs	-0.234** (0.0713)	-0.246*** (0.0718)	-0.250*** (0.0718)	-0.254*** (0.0719)	-0.234** (0.0713)	-0.233** (0.0713)	-0.250*** (0.0720)
Are you satisfied with your job	0.213 (0.110)	0.213 (0.111)	0.221* (0.111)	0.217 (0.111)	0.213 (0.110)	0.211 (0.110)	0.210 (0.112)
Would like to change work schedule	-0.510*** (0.105)	-0.518*** (0.106)	-0.509*** (0.106)	-0.509*** (0.106)	-0.510*** (0.105)	-0.510*** (0.105)	-0.517*** (0.107)
Very good health	0.000817 (0.103)	-0.0189 (0.104)	-0.0211 (0.104)	-0.0183 (0.104)	-0.000169 (0.103)	0.00276 (0.103)	-0.0244 (0.104)
Neither good nor bad	-0.261*** (0.0706)	-0.268*** (0.0712)	-0.272*** (0.0711)	-0.275*** (0.0711)	-0.261*** (0.0706)	-0.259*** (0.0706)	-0.270*** (0.0713)
Bad health	-0.0225 (0.277)	0.0361 (0.299)	0.0174 (0.297)	0.00552 (0.297)	-0.0241 (0.277)	-0.0230 (0.277)	0.0164 (0.298)
Very poor health	-1.452 (0.885)	-1.453 (0.886)	-1.436 (0.887)	-1.456 (0.885)	-1.453 (0.884)	-1.455 (0.884)	-1.478 (0.877)
Caregiving responsibilities							
Cares for disabled person		-0.186 (0.0960)					-0.293* (0.138)
Cares for children under 5 years old			-0.00980 (0.0696)				-0.0578 (0.0756)
Cares for older adults				-0.273* (0.121)			-0.314* (0.129)
Cares for children from 6 to 17 years old					-0.0104 (0.0634)		-0.0549 (0.0742)
Cares for someone else						0.0931 (0.125)	-0.111 (0.192)
Observations	3569	3473	3473	3473	3569	3569	3473
Pearson Chi2	96327.04	74196.12	79833.72	78658.47	95656.95	93736.67	77245.45
Prob > chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Correctly predicted	90.56%	90.38%	90.38%	90.38%	90.56%	90.56%	90.38%

Source: Own calculations obtained from ENASIC 2022 microdata, coefficients are marginal effects. Standard errors are in parentheses. Changes are estimated as dummy variable changes from 0 to 1. Asterisks denote significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.2 Women's reasons for not wanting to change jobs

In the previous section we estimated the reasons behind the labor participation decisions of men and women. From this section, the analysis will be carried out considering the reasons mentioned by women for keeping the job they have, according to the ENASIC (2022) base, the majority do not want to change their job, 69% in the case of women. It is inferred that these reasons would allow them to combine time dedicated to childcare, or because they have a job that allows them to have flexibility.

The above-mentioned responses allow us to understand whether these reasons would improve the working conditions of women.

From Figure 16 it is evident that women are more likely to keep or not want to change their jobs because they have good working hours, are well paid, and have benefits. On the other hand, the reasons that reduce labor participation, and that are related to not changing jobs, is because they have flexibility to pick up their children, and if women think that working reduces their time, such that they neglect their children, then they will reduce their labor participation. Other reasons were not as relevant in influencing work participation, such as being close to the job, work environment, liking the job, or having a compassionate boss.

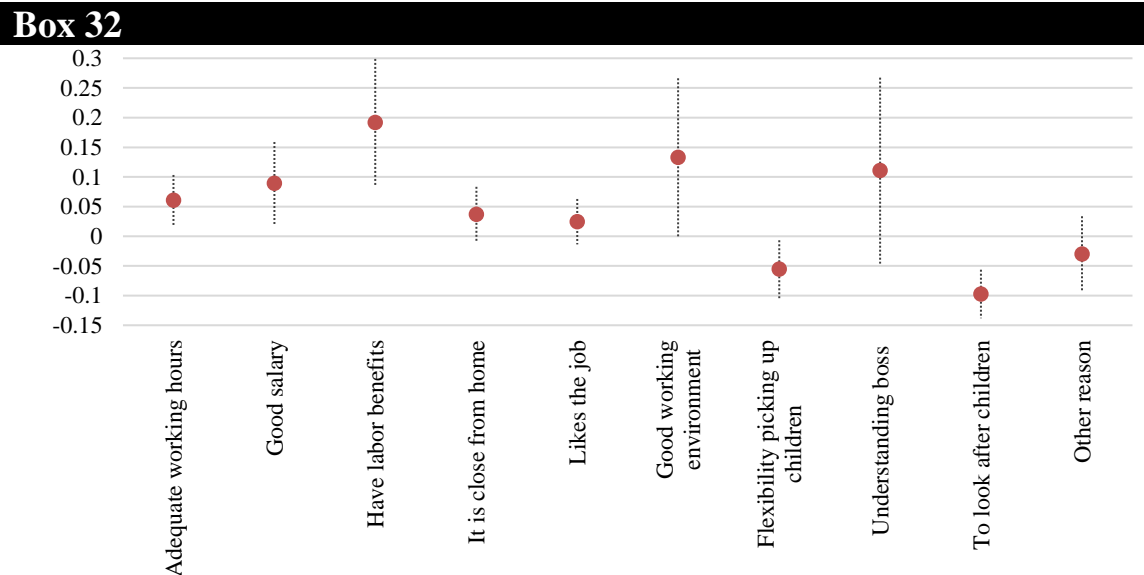


Figure 16

Effect on women's labor force participation for not changing jobs

Source: Own calculations obtained from the estimation of a Probit model on women's labor participation and reasons for not changing jobs, using the ENASIC (2022). The coefficients represent the conditional marginal effects with 95% confidence interval, with respect to each variable shown.

4.3 Women's reasons for wanting to change jobs

On the other hand, one out of every three women mentions that she would like to change jobs, and just as in the previous section, they mention the reasons for wanting to leave the job, these reasons are expected to reduce the probability of working. Figure 17 compares the magnitudes of the coefficients obtained from the conditional marginal effects, with 95% confidence intervals, the reasons that would motivate women to change jobs.

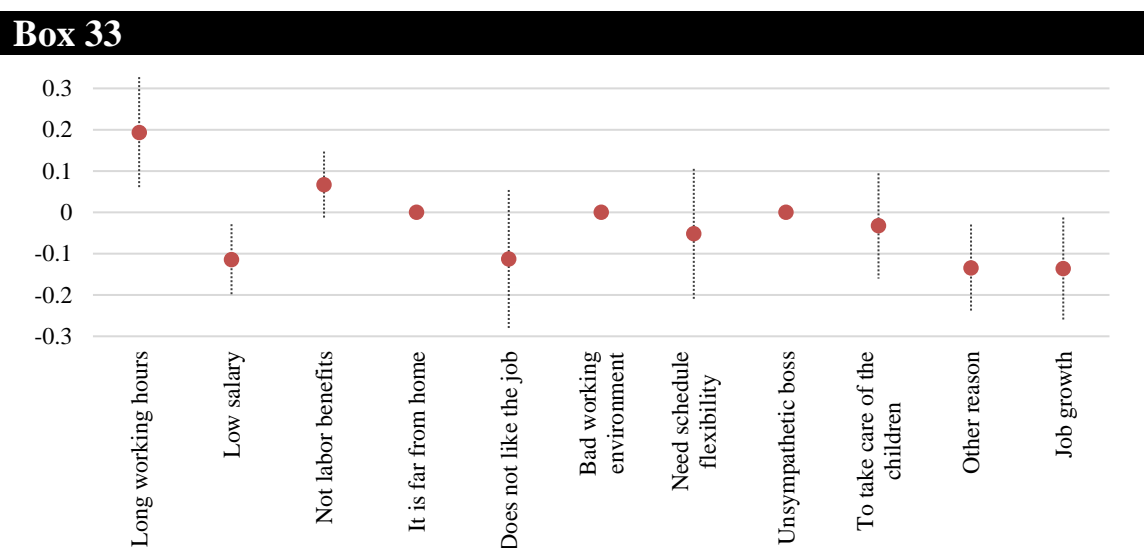


Figure 17

Effect on women's labor force participation in changing jobs

Source: Own calculations obtained from the estimation of a Probit model on women's labor participation and reasons for changing jobs, using the ENASIC (2022). Coefficients represent conditional marginal effects with 95% confidence interval, with respect to each variable shown

It is estimated that, if working hours are excessive, they would want to change jobs, so the probability of working increases; this effect would seem counterintuitive; however, it could reflect the fact that, although working hours are long, it would not be a determinant for leaving the labor market. On the other hand, having a low salary, or being paid little, would reduce the likelihood of working, and is a reason for wanting to change jobs. These two reasons seem to be the most robust in influencing women's labor force participation.

Finally, the other reasons for wanting to change jobs include not having benefits, the work center is far away, not liking the job, a bad work environment, needing flexible hours, or if the boss is not understanding, or not to neglect their children.

In other words, although they could be important reasons for changing jobs, they were not statistically significant for women's labor participation.

4.4 Women's reasons for changing work schedules

As mentioned, having the need for an adequate schedule to reconcile caregiving could be the reasons for women to increase their labor participation. However, from the information used we find that 84% of women do not want to change their work schedule, a figure of 83% of men declare this situation. A further description of the reasons for wanting to change the schedule is shown in Figure 18. However, it appears that none of the related reasons for wanting a change in work schedule is related to an increase or decrease in women's labor participation.

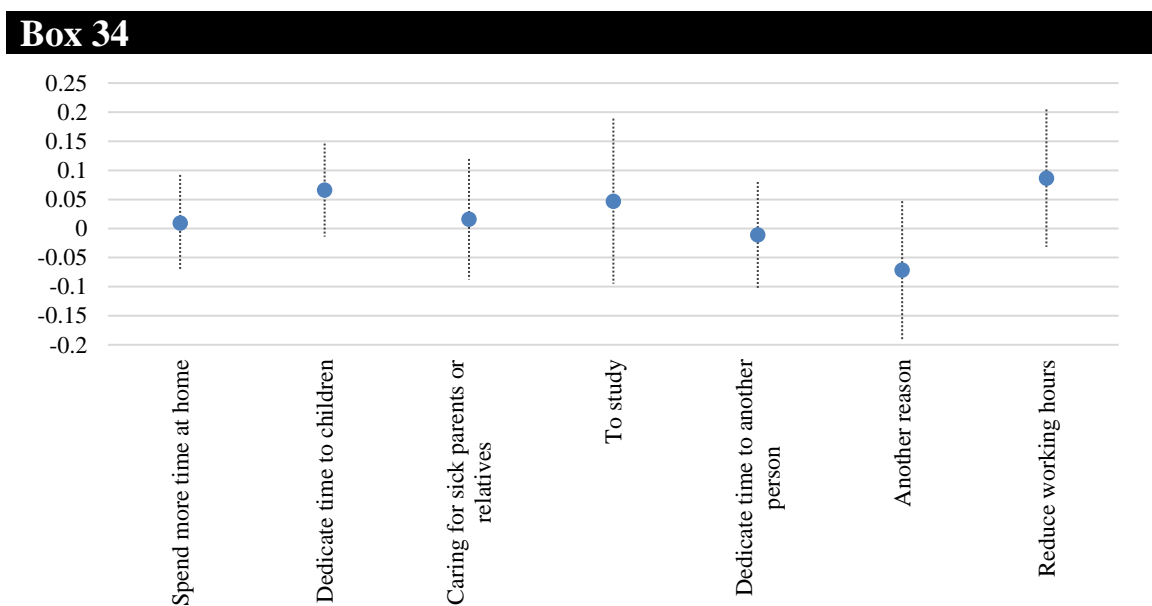


Figure 18

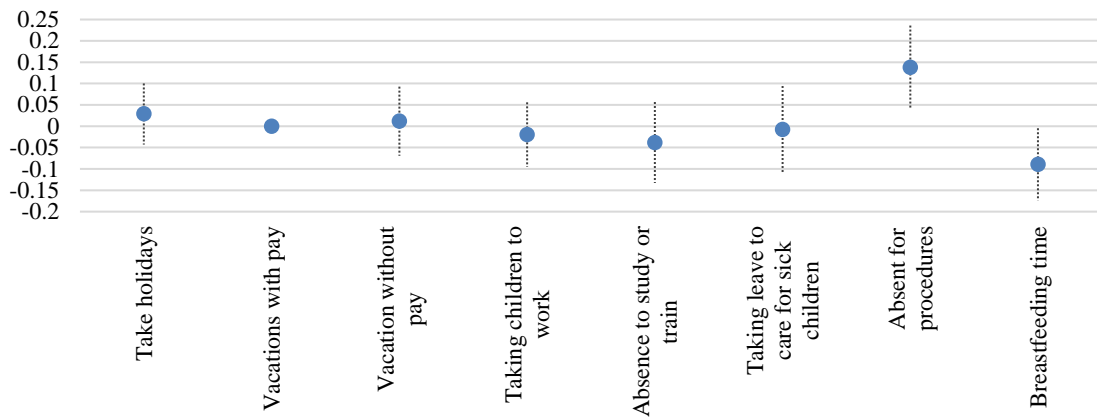
Effect on labor participation due to desire to change schedule

Source: Own calculations obtained from the estimation of a Probit model on women's labor participation and reasons for changing jobs, using the ENASIC (2022). Coefficients represent conditional marginal effects with 95% confidence interval, with respect to each variable shown

4.5 Effect of benefits on women's labor force participation

The benefits that women receive could also increase incentives to enter the labor market, or to remain in employment. Although, descriptively, it was shown that women seek to be employed in formal jobs, if it is possible for them to choose due to access to day care, medical services, paid or unpaid vacations, if they are allowed to take their children on holidays.

On the other hand, Figure 19 shows that the benefit that has a statistically significant effect on women's labor participation is taking time off to do some paperwork, and to a lesser extent having time for breastfeeding, although the confidence interval is wide.

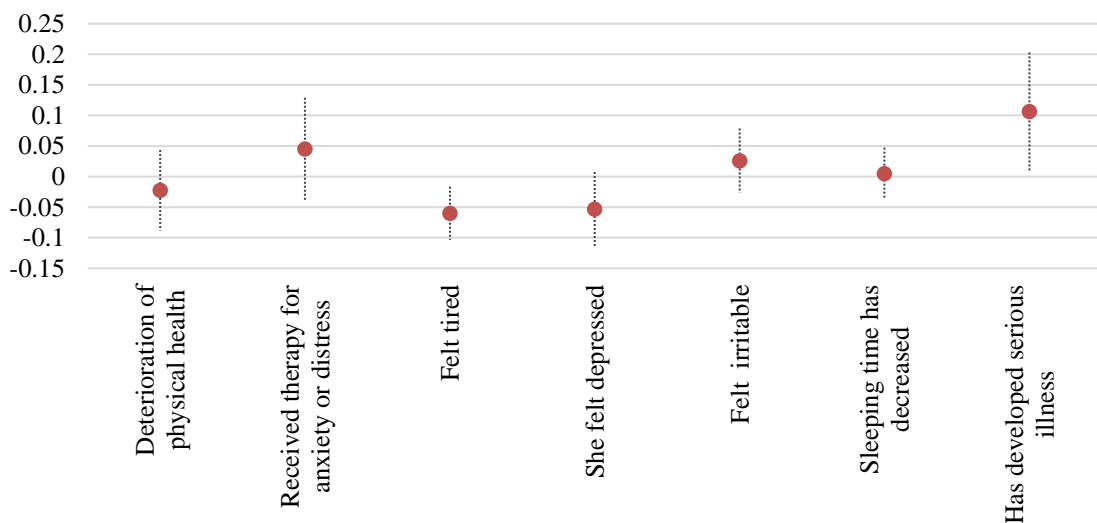
Box 35**Figure 19**

Effect of benefits on women's participation in the labor market

Source: Own calculations obtained from the estimation of a Probit model on women's labor participation and reasons for changing jobs, using the ENASIC (2022). Coefficients represent conditional marginal effects with 95% confidence interval, with respect to each variable shown

4.6 Effect of declining health on women's labor force participation

Women's health is important for the care of children, people with disabilities, the elderly, or other types of care in the home, which is generally unpaid. If the caregiver is not in good health, it will be difficult for her to perform caregiving tasks. Figure 20 shows the possible illnesses or situations that could deteriorate women's health. Although most of the options seem to be aligned around the origin, it is clear that feeling tired is a reason that reduces the likelihood of women participating in the labor market. While being depressed also reduces this likelihood, its effect is somewhat weak. On the other hand, being seriously ill increases the probability of working, or increases the probability of aggravating an existing illness, although it is possible that there is inverse causality for the measurement of this effect.

Box 36**Figure 20**

Effects of health on women's labor participation

Source: Own calculations obtained from the estimation of a Probit model on women's labor participation and reasons for changing jobs, using the ENASIC (2022). Coefficients represent conditional marginal effects with 95% confidence interval, with respect to each variable shown

4.7 Effect of labor participation on gender role perceptions

The last section of this chapter addresses women's perceptions of the roles that women should play. For this purpose, the respondents are asked their opinions regarding some preconceptions about caring for the home, children, and family members, and how these duties should be divided. Figure 21 shows the statements in which they responded that they agree, and estimates how these affect women's labor participation.

The results indicate that taking care of children or sick people is the responsibility of the respondent, although the effect would seem to increase the probability of working, the effect is not statistically significant. An effect with the opposite direction, i.e., that reduces the probability is if you think it is the duty of women, although the effect is weak. On the other hand, the effects do not seem to be statistically significant if they agree that responsibilities should be shared between men and women, or should be shared among other family members. If women like to perform caregiving tasks, it implies a positive effect on their labor participation, although it is not significant. Finally, the two effects that reduce women's probability of working are whether they think that it is women who should learn about caregiving, or whether they think that children suffer if the mother works. The effect on health status, especially when it is poor, would seem to reduce women's labor participation, although the effect is weak.

Box 37

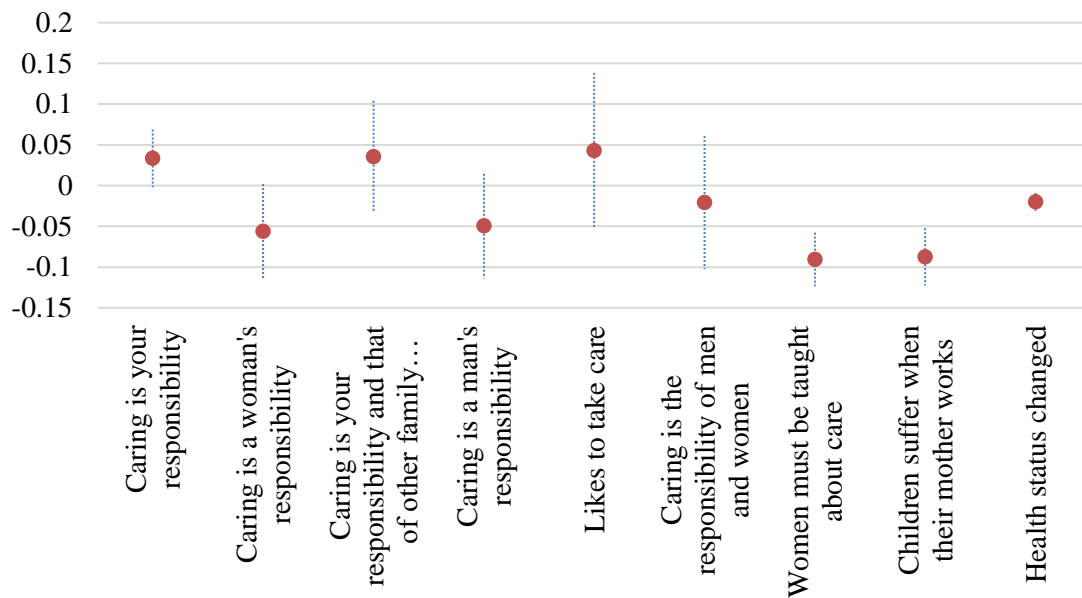


Figure 21

Effect of gender role perception on labor participation

Source: Own calculations obtained from the estimation of a Probit model on women's labor participation and reasons for changing jobs, using the ENASIC (2022). Coefficients represent conditional marginal effects with 95% confidence interval, with respect to each variable shown

The conclusion of this chapter is that the most important factors that are related to a greater probability of women working are related to the employability aspects of the labor market, such as having a good salary, good working hours, being allowed to take time off to care for their children when they are sick or to carry out procedures, as well as having work benefits. On the other hand, perceptions about what women should do reduce the probability of working, for example, if they consider that the children suffer when the mother works, or when they consider that it is the woman who should be taught about caregiving. On the other hand, the state of women's physical and mental health is important for labor participation, and has been an under-studied aspect.

Conclusions

The book allows us to identify that the labor participation gap in Mexico is wide, although it has closed over time, a fact that has been observed in the world for the last three decades. However, the results show that in Mexico the proportion of Mexican women who work is proportionally lower than that of men, reflecting inequality in access to the paid labor market. Although there are factors that encourage women to devote a large part of their time to care work, these gaps widen, particularly when women care for children from 0 to 5 years of age, the gap is the highest estimated at 48.4 percentage points (pp), and although the gaps considering care work for people with disabilities (22.6 pp) and for the elderly (22.6 pp) are smaller than those for women (6 pp) and for the elderly (29 pp) are wide, gaps are estimated to be even higher when considering perceptions of gender roles, since when both men and women agree that women are responsible for caregiving, the gap widens even more than in the general case, since it is estimated at 33 pp, or if they agree that caregiving tasks should be shared equally, the gap is higher (36.8 pp), or if they like the idea that women are responsible for caregiving, the gap is even wider (36.8 pp). Or if they like to care (37 pp), and the second widest gap is when people (both men and women) consider that the children suffer if the mother works (38.2 pp).

These data allow us to infer that it is not only the monetary aspect that would encourage women to join the paid labor market, but that there are also family reasons that prevent them from joining, partly because they have small children, and because they think that they would suffer if they are not at home. These perceptions of gender roles are affecting women's mental health, as they have felt tired and depressed, and a deterioration in their state of health has been observed, factors that are related to lower labor participation. On the other hand, it was found that the factors that would favor parity in the labor participation gap is when considering the economic activities performed by women, in particular, women are mainly employed in the informal sectors of commerce and service, and the gap in these sectors is among the lowest; however, when considering the use of computers in work activities, the participation gap is more equal. This fact allows us to conclude that there is a need for greater promotion of the use of information technologies in the workplace, with training for women. Finally, public policies aimed at improving the conciliation of work and family are required, as we conclude from the analysis that women must make an extreme decision because it depends on their family context. In this sense, social programs have been insufficient to support families with children from 0 to 5 years of age, as this is where the greatest gaps in participation due to caregiving are observed.

Declarations

Conflict of Interest

The authors declare that they have no conflicts of interest. They have no financial interests or personal relationships that could have influenced this book.

Authors' contributions

Caamal-Olvera, Cinthya G.: Contributed to the development of the idea, selection of the theoretical framework, analysis of the methodology, estimation, analysis of the results, and conclusions.

Jiménez-García, Martha: Contributed to the compilation and management of the information, literature review, analysis of the results, and developed the idea for the book's summaries and figures.

Availability of data and materials

The information obtained at the Latin American level is in public repositories and is available for download at the official World Bank sites. For employment at <https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS>, for female and male labor force participation for those over 15 years of age, the following links are available <https://data.worldbank.org/indicator/SL.TLF.CACT.MA.ZS> y <https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS> and for information on Mexico, in the National Institute of Statistics and Geography (INEGI) in the National Survey for the Care System (ENASIC) at <https://www.inegi.org.mx/programas/enasic/2022/> as well as in the National Survey on Availability and Use of Information Technologies in Households (ENDUTIH) at <https://www.inegi.org.mx/programas/endutih/2023/>, as well as the National Survey of Occupation and Employment (ENOE) in Microdata for various years 2018-2023 at <https://www.inegi.org.mx/programas/enoe/15ymas/>

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Abbreviations

BM	Banco Mundial
COVID-19	Enfermedad por Coronavirus de 2019
ENOE	Encuesta Nacional de Ocupación y Empleo
ENASIC	Encuesta Nacional para el Sistema de Cuidados
ENDUTIH	Encuesta Nacional sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares
INEGI	Instituto Nacional de Estadística y Geografía
ILOSTAT	International Labor Organization Statistics
OCDE	Organización para la Cooperación y Desarrollo Económico
OIT	Organización Internacional del Trabajo
PEA	Población Económicamente Activa
PTF	Productividad Total de los Factores
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TIC	Tecnologías de la Información y la Comunicación

References

Antecedents

- Acevedo, I., Castellani, F., Lotti, G., & Székely, M. (2021). [Informality in the time of COVID-19 in Latin America: Implications and policy options](#). *PloS one*, *16*(12), e0261277.
- Alvarez, J. A., & Ruane, C. (2024). [Informality and aggregate productivity: The case of Mexico](#). *European Economic Review*, *167*, 104791.
- Bravo-Ortega, C., Eterovic, N., & Paredes, V. (2020). [Female participation in parliament. Are we ever going to converge to Scandinavia?](#). *Economic Systems*, *44*(2), 100759.
- Campos-Vazquez, R. M., Esquivel, G., & Badillo, R. Y. (2021). [How has labor demand been affected by the COVID-19 pandemic? Evidence from job ads in Mexico](#). *Latin American Economic Review*, *30*(1), 1-42.
- Ovando-Aldana, W., Rivera-Rojo, C. R., & Salgado-Vega, M. D. C. (2021). [Characteristics of informal employment in Mexico, 2005 and 2020](#). *Papeles de población*, *27*(108), 147-184. 2021.108.15.
- Pérez, R. E. R., & Lugo, D. C. (Eds.). (2023). *The Economics of Women and Work in the Global Economy*. Routledge.
- Viollaz, M., Salazar-Saenz, M., Flabbi, L., Bustelo, M., & Bosch, M. (2022). [The COVID-19 pandemic in Latin American and Caribbean countries: The labor supply impact by gender](#). *IZA Discussion Paper*. 15091.
- Wang, Y., & Zhao, X. (2022). [Grandparental childcare, maternal labor force participation, and the birth of a second child: Further knowledge from empirical analysis](#). *Journal of Business Research*, *139*, 762-770.

Zárate, R. D. (2022). [Spatial misallocation, informality, and transit improvements](#). *Development Research*.

Basics

Banco Mundial (2024a). [Labor force participation rate, male \(% of male population ages 15+\) \(modeled ILO estimate\)](#), World Bank.

Banco Mundial (2024b). [Labor force participation rate, female \(% of male population ages 15+\) \(modeled ILO estimate\)](#), World Bank.

ENASIC (2022). [Encuesta Nacional para el Sistema de Cuidados. Microdatos obtenidos del portal del Instituto Nacional de Estadística y Geografía \(INEGI\)](#).

ENDUTIH (2023). [Encuesta Nacional sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares. Microdatos obtenidos del portal del Instituto Nacional de Estadística y Geografía \(INEGI\)](#).

ENOE (2023). [Encuesta Nacional de Ocupación y Empleo \(ENOE\). Microdatos para varios años 2018-2023 obtenidos del portal del Instituto Nacional de Estadística y Geografía \(INEGI\)](#).

Support

Arias, K., López, D., Camino-Mogro, S., Weiss, M., Walsh, D., Gomes, L. G., & Hallack, M. C. M. (2023). [Green transition and gender bias: An analysis of renewable energy generation companies in Latin America](#). *Energy Research & Social Science*, 101.

Cassimon, S., Maravalle, A., Pandiella, A. G., & Turroques, L. (2022). [Determinants of and barriers to people's financial inclusion in Mexico](#). *OECD Economics Department*.

Dang, H. A., Salehi-Isfahani, D., & Do, M. (2024). [The impacts of COVID-19 on female labor force participation in Iran](#). *SSRN Electronic Journal*, 1701.

Delgado Wise, R., Anguiano, F. C., & Gaspar Olvera, S. (2023). [Migration, Informality, and Unequal Exchange in the Context of the Mexico–US Regional Integration Process](#). *Critical Sociology*.

Jaramillo, J. A. C., & Ceballos, C. E. L. (2024). [Empowerment through ICTS: Strategies for the Labor Inclusion of Women Victims of Gender-based Violence in Valle Del Cauca](#). *Kurdish Studies*, 12(2), 4018-4037.

Leyla, A. Ö. (2021). [Women's Labor Force Participation and Inequality in Turkey](#). *Journal of Economy Culture and Society*, (64), 91-104. doi :10.26650/JECS2021-903123

Varanasi, R. A., Siddarth, D., Seshadri, V., Bali, K., & Vashistha, A. (2022). [Feeling proud, feeling embarrassed: Experiences of low-income women with crowd work](#). In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (1-18).

Vázquez-Parra, J. C., Trapero, F. G. A., & Guerra-Leal, E. M. (2023). [Labor Inclusion with a Gender Perspective in Complex Environments: Firm Steps for the Post-Pandemic Economic Recovery](#). *The International Journal of Organizational Diversity*, 23(1), 83-99.

Differences

Shittu, W. O., Musibau, H. O., Adewoyin, H. O., & Hassan, S. (2024). [Drivers of Female Labor Participation: Insights from West Africa](#). *Iranian Economic Review*, 28(1), 293–322.

Sierra, A. V. A., Padilla, S. A. S., & Alvarado, A. A. C. (2021). [Análisis de los supuestos culturales que influyen en la participación laboral de las mujeres de Komchén, Yucatán](#). *Cuaderno de trabajo social*, (16), 2.

Yang, H. lei, Tang, X. qing, Cao, J. yan, & Yang, L. xingzi. (2023). The Effects of Father-in-law's Retirement on Daughter-in-law's Labor Participation: Empirical Evidence from China. *Journal of Family and Economic Issues*, 0123456789.

Discussions

Goodman, J. M., Lara-Mejía, V., Hernández-Cordero, S., & Vilar-Compte, M. (2024). Breastfeeding among women employed in Mexico's informal sector: strategies to overcome key barriers. *International Journal for Equity in Health*, 23(1), 144.

Hualde Alfaro, A., & Ayala Correa, G. (2022). Labor informality during the pandemic: Crisis and recovery in Mexico. *Revista de Economía Mundial*, 60, 173–195.

Kinugasa, T. (2020). Preface to the special feature on population and economic development in East Asia. *International Journal of Economic Policy Studies*, 14(1), 1–2.

Lorenzen, M., Martínez-Reyes, F., & Orozco-Ramírez, Q. (2023). Gendered Economic Impacts of the COVID-19 Pandemic and Rural Women's Livelihood Strategies in Mexico's Mixteca Alta. *Latin American Perspectives*, 50(4), 65–87.

Manosalva Cruz, I. J., García Baldera, K. M., Grandez Chappa, S. H., & Chávez Arroyo, F. O. Z. (2022). Participación Laboral De La Mujer En La Región Amazonas, Perú 2010-2020. *Horizonte Empresarial*, 9(2), 61–73.

Mukhammedova, A., & Askarov, Z. (2023). Labour Force Participation in Developing Countries. *International Journal ff Recently Scientific Researcher's Theory*, 1(7), 87-95.

Mukoki, J., Candia Andabati, D., Mukisa, I., & Musoke, E. (2024). Female labor force participation under the pandemic: evidence from the 2020 Uganda High-Frequency Phone survey on COVID-19. *Cogent Business and Management*, 11(1).




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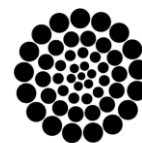
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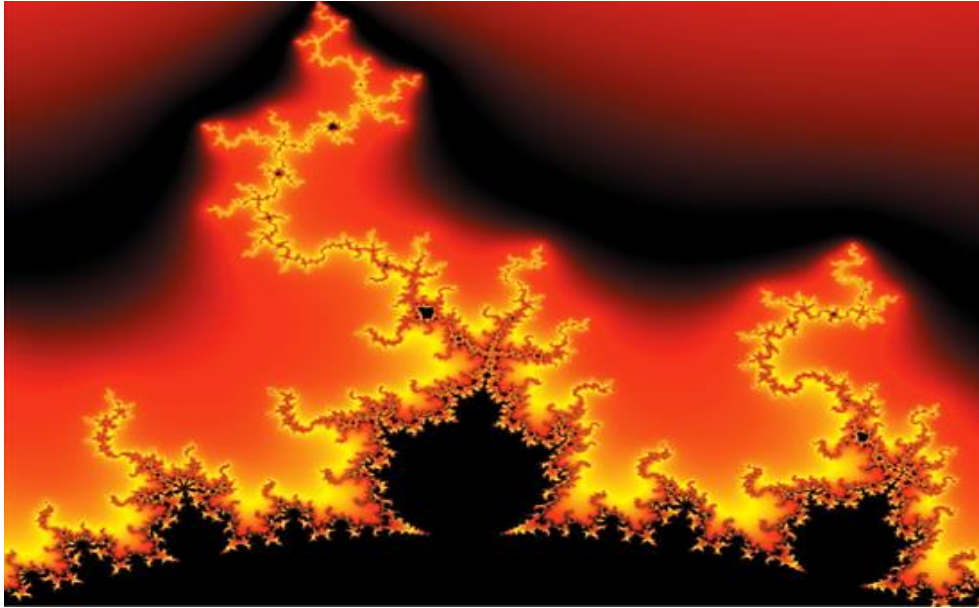


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