Closing the Gap: Labor Market Participation in Latin America[1]
# (Background Paper 1)

The expanding labor force has been an important driver of economic growth in Latin America over the last decades. However, as population growth decelerates and population ages, the contribution from demographics to growth will diminish. Increasing labor force participation can mitigate these demographic headwinds. Using microdata from several Latin American household surveys, this paper documents key patterns in labor market participation and identifies demographic groups with the potential to boost the labor force going forward. There is significant scope to offset the demographic shift by increasing female participation, although household responsibilities remain a crucial obstacle. Implementing policies that improve the availability and affordability of childcare, eliminate asymmetries in parental benefits, and make work schedules more flexible can relax constraints to women's labor force participation. Incentivizing older adults to remain active longer and more effectively integrating the youth into the workforce can provide an additional boost to the labor force.

1. Introduction

The growth of the labor force has been an important driver of Latin America's economic growth. Over the last two decades, more than 40 percent of GDP growth can be attributed to the expanding labor input. A large portion of labor growth has come from demographic factors; population growth has been the largest contributor, followed by a demographic shift that has led to a sustained increase in the share of the working-age population—referred to as the "demographic dividend." In contrast, labor market outcomes, namely the participation and employment rates, have played a more limited role (Figure 1). Modest increases in the overall participation rate during 2000–10 followed by minor decreases thereafter in several countries resulted in a negligible contribution of participation rates over the past two decades, while increases in employment rates can explain roughly 0.3 percentage points of the labor force growth on average.

Figure 1. Contributions to Labor Growth, 2000–19
(Percentage points)
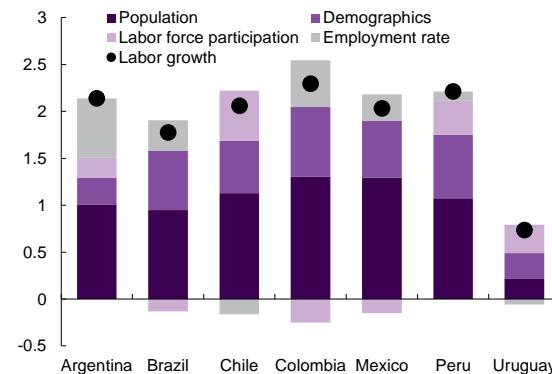
Sources: ILOSTAT; Penn World Table 10.0 database; 2024 UN Population Prospects; and IMF staff calculations.
Note: Working-age population is defined as 15 and older. Paraguay is excluded due to data limitations.

However, the region is aging, and the "demographic dividend" is coming to an end. Falling fertility rates and the aging population are turning the tide on the proportion of people who work—and, thus, generate income—and those who depend on them. This implies that, all else equal, economic growth going forward would be lower given the expected lower contribution from the working-age population. A growth accounting exercise estimates that demographic changes could reduce annual GDP growth rates by 0.3 percentage points on average over the next decade (see Box 1 for details).

Increasing labor force participation stands out as a potential factor that can mitigate the negative impact of demographic changes on labor supply and help sustain economic growth. But how much scope do countries in the region have to increase labor force participation and what role can economic policies play to achieve this? To tackle these questions, this paper relies on detailed microdata from several Latin American household surveys to document key patterns in labor market participation, assess whether there have been any significant changes (for instance, due to the pandemic), analyze potential determinants of these patterns, and identify demographic groups that can critically shape the labor force going forward. The paper also explores how these key factors interplay with labor market informality, which is pervasive across the region.

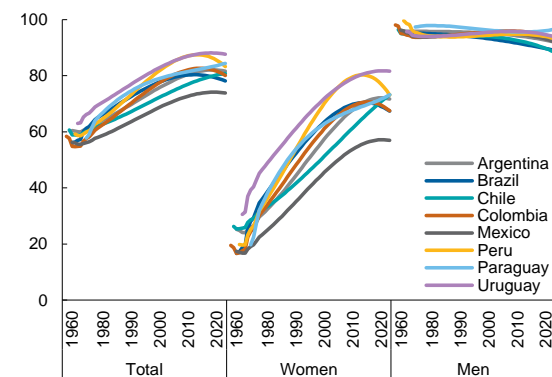# 2. Labor Force Participation Trends

Latin America experienced a significant increase of more than 10 percentage points in labor force participation—and nearly 25 percentage points among the prime working-age population (25–54 years old)—between the 1950s and 2010, driven by women joining the labor force (Figure 2). However, participation rates have plateaued since then at uneven levels across gender and age groups.

Despite significant gains made over the last decades, gender disparities in participation rates persist across the region. Latin America's average gender gap in participation is now close to 20 percentage points, in line with peer countries but twice as large as the average gap across advanced economies (Figure 3). Within the region, however, there are significant cross-country differences: while Uruguay's participation gap is 12 percent, just a few percentage points larger than those of advanced economies, Mexico's is about 30 percent. And, while Mexico and Chile have reduced their gaps by 15 percentage points since 2000, Colombia's gap has shrunk by only 5 percentage points since then.

Figure 2. Labor Force Participation Rates by Gender
(Percent of prime working-age population)

Sources: ILOSTAT; and IMF staff calculations.
Note: Participation rates based on prime working-age population (25–54).
1951–2023 series smoothed geometrically.

This regional heterogeneity stems mostly from the female labor force participation rates. Men's participation rates are uniformly high across the region throughout prime working age, in most cases above the levels observed in advanced economies (Figure 4). By contrast, female participation rates exhibit greater heterogeneity both in levels and across age groups and are generally lower than those in advanced economies. Uruguay stands out as the country in the region with the highest female labor force participation rate, reaching over 85 percent among women 35–44.

Participation rates are also uneven across age groups (Figure 4). Although a decline with age is expected, female participation rates notably start declining from a relatively early age as women in Latin America exit the labor force sooner than men, and sooner than women in advanced economies—in some cases, even while still in their prime working age.[2] Moreover, participation rates among late working-age women lag those of Asian and European peer cohorts, with the differences becoming more notable in recent years when participation increased elsewhere while it remained flat in Latin America (Figure 5). In contrast, participation among men during late working-age years is in line with, and even slightly above, that in Asian and European peers. While there is a sharp decline for the eldest group of workers (65 and older) across all countries, the participation rate of men in Latin

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[2] Although cohort effects may explain some of the differences in participation rates between generations, the steep drops observed between adjacent age groups are hard to attribute entirely to them.

America remains relatively high—at around 40 percent—indicating that a significant fraction of this demographic does not retire when reaching official retirement age, a feature also observed in Asia.

Figure 3. Labor Force Participation Rate Gap
*(Percentage points; gap = female minus male)*

Sources: ILOSTAT; IMF Gender Data Hub; and IMF staff calculations.
Note: Aggregates are simple averages based on modeled ILO estimates. AEs = advanced economies; Africa = Sub-Saharan Africa; EMDE = emerging market and developing economies; LAC = Latin America and the Caribbean; MECA = Middle East and Central Asia.

Figure 4. Labor Force Participation Rate by Gender and Age, 2023
(Percent of working-age population)
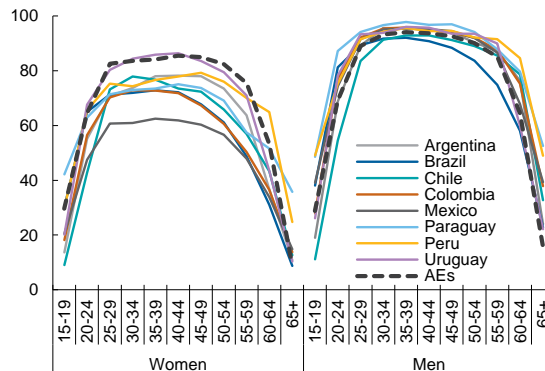
Sources: ILOSTAT; and IMF staff calculations.
Note: AEs (advanced economies) is simple average.

Figure 5. EMDEs: Labor Force Participation Rates by Gender and Age, 55+
*(Percent of population)*
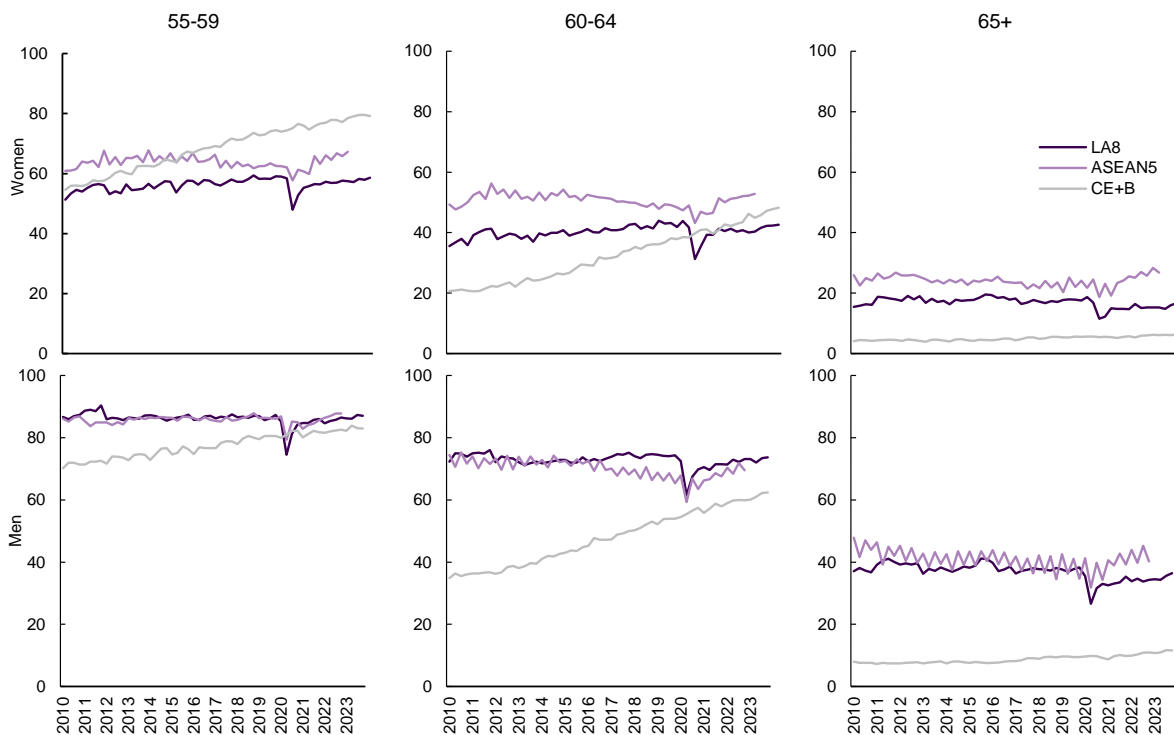
Sources: ILOSTAT; and IMF staff calculations.
Note: Regional aggregates are simple averages. ASEAN5 = Indonesia, Malaysia, Philippines, Thailand, Vietnam; CE+B = Central Europe and the Baltics (Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia); LA8 = Latin America 8 (Argentina, Brazil, Chile, Colombia, Mexico, Paraguay, Peru, Uruguay).

At the opposite end of the age spectrum, a significant share of youth, ranging from 17 to 27 percent in the region, is neither employed, nor enrolled in education or training (the so-called NEETs). Although a high portion of the youngest remains in school, the share of NEETs increases around the age when most people finish high school, and this increase reflects the incipient gender participation gaps that appear around this time

(Figure 6). Moreover, for those who do enter the labor force, unemployment is an important concern, as the youth unemployment rate is markedly higher than the overall unemployment rate in all the countries in the sample (Figure 7). Reducing the share of young people that are neither employed, in school, nor in training by half could boost the employment rate and increase real GDP growth by as much as five percent (Ahn and others 2019).
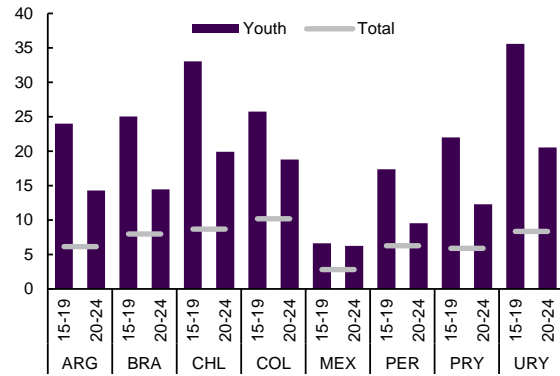
Figure 6. Youth: Main Activity by Age, 2023
(Percent of population)
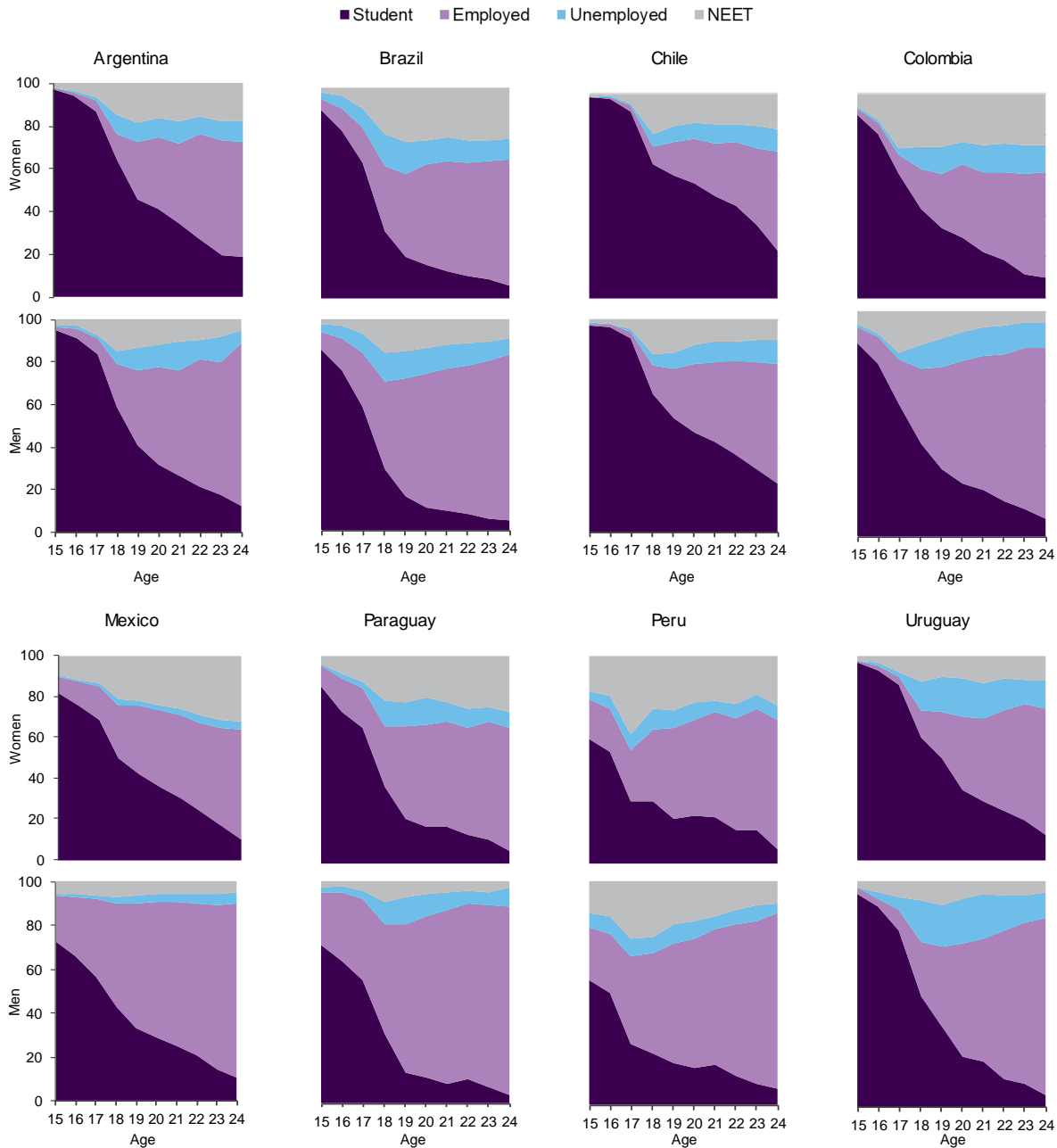
Sources: EPH (INDEC); PNADC (IBGE); ENE(INE); GEIH (DANE); ENOE (INEGI); ENAHO (INEI); EPHC (INE); ECH (INE); and IMF staff calculations.
Note: Individuals that are both students and active in the labor force are counted as employed/unemployed. NEET = youth not in employment, education or training.

The severe disruptions caused by the pandemic and the accompanying containment measures may have set in motion structural changes to participation trends. Although employment has returned to its pre-pandemic trend in most Latin American labor markets in 2023, the aggregate recovery may envelope different patterns across demographic groups, given the unequal effects of covid (IMF 2021). Box 2 presents a more detailed analysis of the observed changes in participation between 2013–19 and between 2019–23, including a shift-share analysis to disentangle the effect of population shifts from changes in the underlying participation rates of different demographic groups. The results indicate that the aggregate recovery conceals two important changes—after a small but

Figure 7: Youth and Total Unemployment, 2023
(Percentage points)

Sources: EPH (INDEC); PNADC (IBGE); ENE(INE); GEIH (DANE); ENOE (INEGI); ENAHO (INEI); EPHC (INE); ECH (INE); and IMF staff calculations.
Note: Unemployment rates based on active population. For youth (15–24), students are excluded.

generalized increase in female participation up to 2019 (except for Colombia), the recovery of female participation rates has been heterogeneous across the region, and the participation of older adults, that was increasing before 2019, was still subdued by the end of 2023. Importantly, the latter can be explained by behavioral changes that resulted in less participation *within* this group; as the share of population 55 and older is increasing, the lower participation rates among them older are weighting more on overall participation rates.

3. Obstacles to Women's Labor Force Participation

Despite progress over the past decades, women in Latin America continue to face numerous obstacles to labor force participation, with unpaid work, including household work, explaining most of the remaining participation gap. Participation gaps widen after parenthood, as women often permanently exit the labor force while men's participation remains largely unaffected. There is, however, a substantial heterogeneity both across and within countries, in particular along education levels.

Unpaid work

Gender gaps in labor force participation are not explained by worker characteristics. A standard decomposition of a gender gap that accounts for key factors that could affect participation rates—age, education, household composition, and location— shows that the differences in these characteristics

Figure 8. Decomposition of LFPR Gender Gap, 2023
(Percentage points)
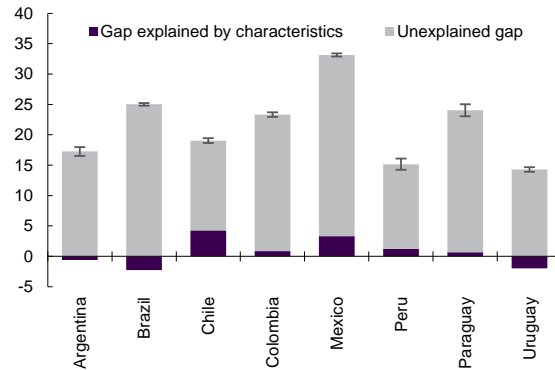
Sources: EPH (INDEC); PNADC (IBGE); ENE(INE); GEIH (DANE); ENOE (INEGI); ENAHO (INEI); EPHC (INE); ECH (INE); and IMF staff calculations.
Note: Results from Oaxaca-Blinder decomposition of a probit regression. Observable worker features include education, household structure (such as marital status and the presence of children and/or older adults), age group, and location (urban or rural). The errors bars denote the 95 percent confidence interval for the unexplained gap.

play, at best, a minimal role in the participation gaps.[3] In Mexico and Peru, these factors help explain about 3 and 2 percentage points of the gap, leaving 29 and 10 percentage points unexplained, respectively (Figure 8). Moreover, in Argentina, Brazil, and Uruguay these characteristics suggest that the actual *effective* gap is even

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[3] The Oaxaca-Blinder decompositions is a widely used statistical method to analyze differences in outcomes (such as labor force participation) between two groups by running two separate OLS regressions and separating the observed disparity into explained and unexplained components (see Annex 1). The explained portion attributes the differences to observable characteristics, such as education or the presence of children at home, while the unexplained part, arising from the differences in the size of the regression coefficients, accounts for disparities not explained by these characteristics.

larger than the one observed, reflecting that women are generally more educated across the region (UNESCO 2022, Berniell and others 2024), and, thus, holding other characteristics constant, should participate more in the labor force.

Household responsibilities play a key role in keeping women out of the labor force, especially among women with lower educational attainment. Women are systematically more likely to report in household surveys that household responsibilities, including childcare and elderly care, are the main reason why they do not look for a job (Figure 9), with some variation across countries. For instance, in Mexico and Paraguay, household work is the reported reason for inactivity for about two thirds of women who are out of the labor force as opposed to only about a tenth of men. This cross-country variation is consistent with differences in attitudes towards gender roles as measured, for instance, by Latinobarómetro.[4] In every country in the sample, women are at least five times more likely than men to report household work as the main reason for inactivity. Within country, female labor

Figure 9. Reported Main Reasons for Inactivity, 2023
(Percent of working-age population not in the labor force)
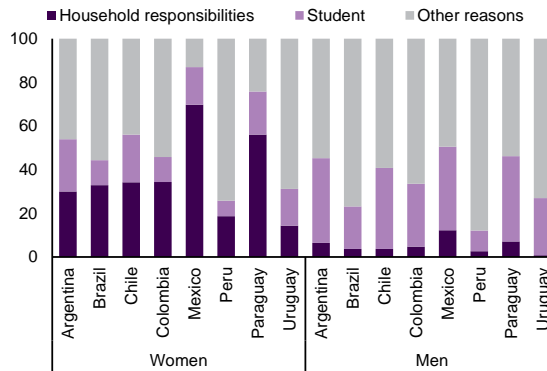
Sources: EPH (INDEC); PNADC (IBGE); ENE(INE); GEIH (DANE); ENOE (INEGI); ENAHO (INEI); EPHC (INE); ECH (INE); and IMF staff calculations.
Note: Self-reported by working-age population not in the labor force. "Household responsibilities" include taking care of children or other relatives and other chores, and cannot be separated due to data limitations. "Other reasons" vary across countries.

force participation increases significantly with educational attainment (Figure 10). For instance, in Brazil, women with educational attainment lower than high school are more than five times more likely to stay inactive because of household work compared to women with higher education who face a higher opportunity cost of staying home.

Women are the largest contributors to (unmeasured) household output. Once domestic responsibilities are taken into consideration, female participation rates are similar to (or higher than) men's (Figure 11). However, from a national accounting perspective, unpaid household services produced and consumed by households are generally not included in the scope of production while similar tasks performed by paid domestic workers are.[5] Unpaid care and domestic work are estimated to range between 15 percent (Ecuador) and 24 percent of GDP (Mexico), when hours of domestic work are valued at their corresponding market price.[6] Advancements in accounting unpaid household services (as part of the updates to the international statistical standards) could shed light on a more comprehensive measure of labor input and economic growth.

As a result of women's propensity to carry out a larger share of household duties, their labor supply is particularly responsive to changes in income. This higher elasticity of labor can be, simultaneously, an additional obstacle to women's participation in the labor force and an opportunity for economic policies to encourage it.[7] For instance, remittances, an alternative and sizeable source of household income in several countries in the region, tends to dampen female participation (Box 3). Furthermore, improving the progressivity and the individualization of the tax and benefit systems can foster gender inclusion and deliver meaningful labor supply gains (Box 4).

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[4] In Paraguay and Mexico, about 50 percent and 40 percent of respondents, respectively, agree or strongly agree with the statement that "It is better that women concentrate on the home and men on work," as opposed to 22 percent on average in the six other countries in our sample (Latinobarómetro 2023).

[5] The 2025 System of National Accounts update will include "unpaid household service work" in macroeconomic statistics as an extended account (not in GDP). See System of National Accounts (United Nations 2008) and Household Satellite Account (HHSA) (experimental) Methodology (Holloway and others 2002).

[6] See D'Alessandro and others (2020) for a detailed methodology and comparison of estimates across the region.

[7] A large body of literature documents women's higher elasticity of labor supply. See Blau and Kahn (2007), Heim (2007), Evers and others (2008), Alesina and others (2011), and McClelland and Mok (2012).

Figure 10. Labor Market Status by Age and Educational Attainment, Women, 2023
(Percent of working age population)
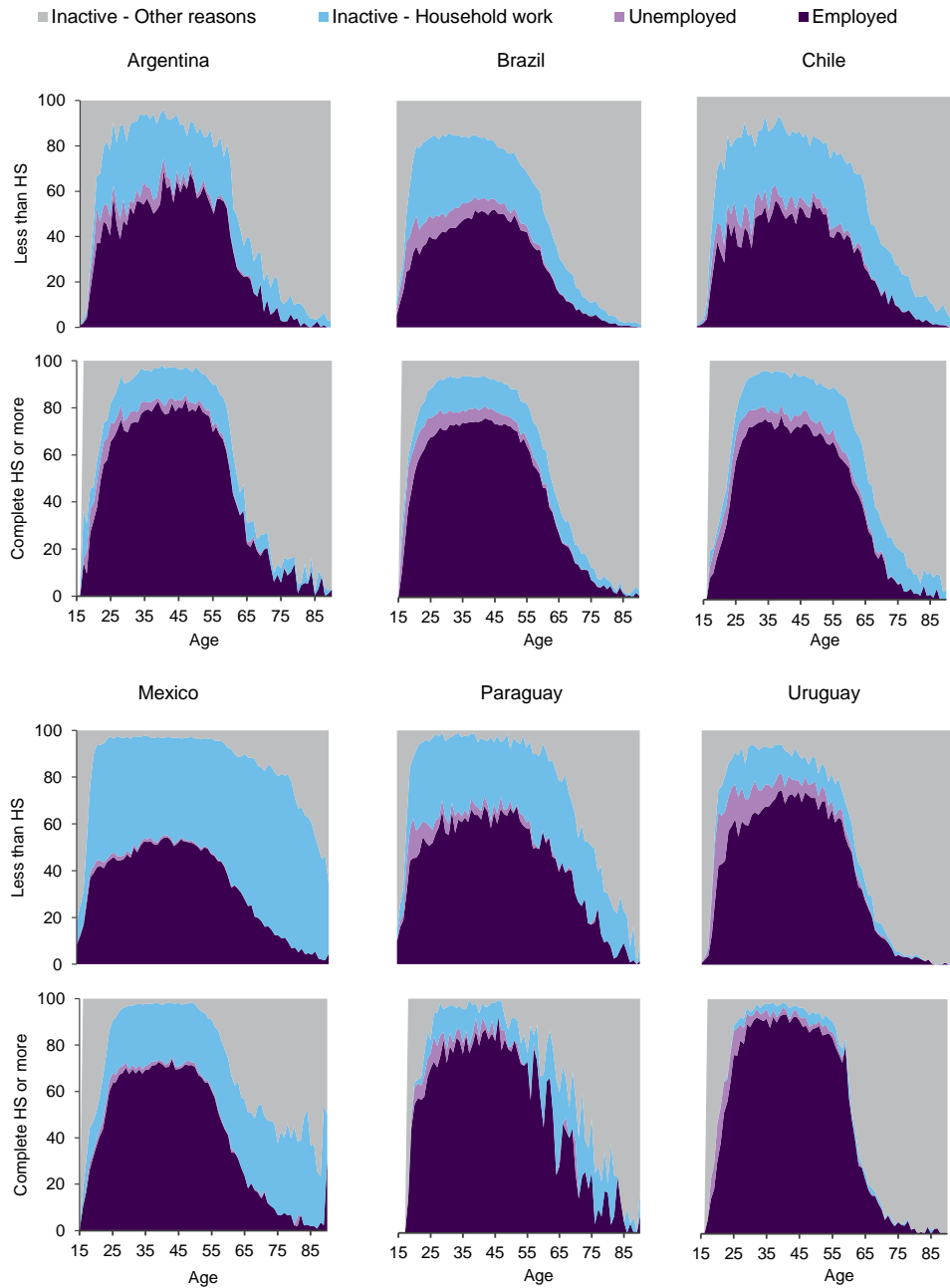
■ Inactive - Other reasons   ■ Inactive - Household work   ■ Unemployed   ■ Employed

Sources: EPH (INDEC); PNADC (IBGE); ENE(INE); ENOE (INEGI); EPHC (INE); ECH (INE); and IMF staff calculations.
Note: "Inactive – Household work" shows the percentage of women who report household responsibilities as their main reason for not participating in the labor force. Colombia and Peru are excluded due to data limitations arising from differences in surveys' design.

Figure 11. Labor Market Status by Age and Gender, 2023
(Percent of working age population)

Sources: EPH (INDEC); PNADC (IBGE); ENE(INE); ENOE (INEGI); EPHC (INE); ECH (INE); and IMF staff calculations.
Note: "Inactive – Household work" shows the percentage of women who report household responsibilities as their main reaso
for not participating in the labor force. Colombia and Peru are excluded due to data limitations arising from differences in
surveys' design.

Parenthood is a key driver of participation gaps

Female labor force participation drops sharply around motherhood, while male labor force participation is largely unaffected or slightly increases (Figure 12). The pattern is broadly similar across the region although varies with income levels. The drop in participation rates in the year after childbirth is smaller and less pronounced (at least in the initial year) in higher-income countries (Uruguay, Chile), more in line with advanced economies with more extensive social protection system.[8] In middle-income countries, especially in Brazil and Colombia, the drop is sharper and plateaus around 20 percent, even comparing with peer countries in emerging Asia, where the motherhood effect is twice smaller on average at a five-year horizon (Kleven and others 2023). In the region, motherhood effects are estimated to account for about a third of the overall gender participation gap (Kleven and others 2023).[9]

The motherhood effect is also heterogenous within countries and across occupations. The size of the motherhood effect reflects a host of factors, including cultural norms, availability of alternatives and personal preferences, but also legal/tax incentives as tax codes that penalize dual earner households and asymmetries in parental roles can play an important role (Box 4). Job flexibility is another important dimension for parents, and especially for mothers (Berniell and others 2023), and this is closely connected to the issue of informality as formal and informal jobs differ in the protection, parental leave benefits, and the flexibility of hours. This can lead to changing informality rates around motherhood. In many countries, for instance in Peru (Figure 13), informality among women drops around motherhood, as mothers in a formal job can use maternal leaves to stay in the labor force, while women in an informal job are typically not granted the same protection and need to exit of the labor force. However, when re-entering the job market, mothers are more likely to take an informal job which tends to allow for more flexible hours (Berniell and others 2023) or due to reduced job opportunities and higher search frictions.[10] Higher informality rates for women after childbirth are also observed in countries with lower overall formality rates such as Chile (Berniell and others 2021).

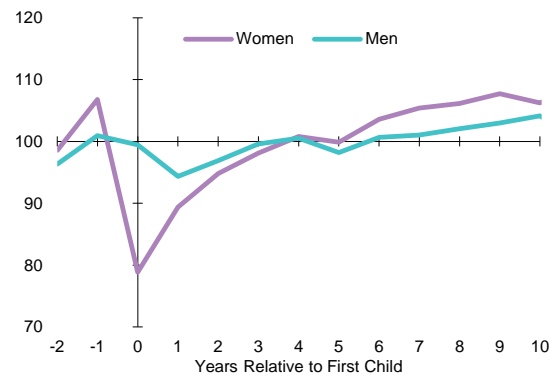**Figure 12. Labor Force Participation and Parenthood**
(Fraction of pre-child participation rate)
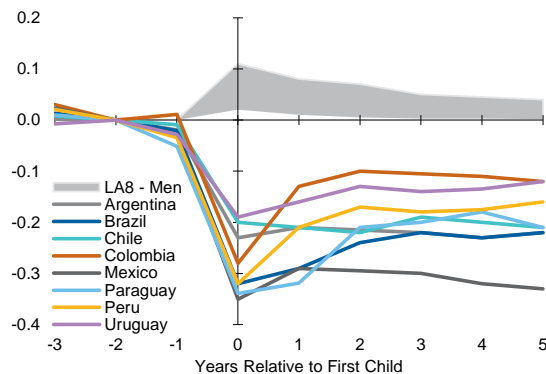
Sources: Berniell and others (2024); and IMF staff calculations.
Note: See Annex 2 for details.

Figure 13. Informality Rates around Parenthood in Peru, 2007–22
(Pre-child participation informality rate = 100)

Sources: ENAHO 2007–22; and IMF staff calculations.

Childcare policies can substantially raise women labor force participation. Some studies indicate that successful policies can raise the labor force participation of the eligible women population by 5 to 15 percentage points, including by expanding preschool care in Argentina, Chile, and Uruguay (Berlinski and others 2011; Martinez and Perticará 2017; Padilla-Romo and Cabrera-Hernández 2019; IMF 2023) or extending school day

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[8] Event studies around the arrival of the first child, under suitable assumptions, can provide causal explanations going beyond a correlational analysis (Berniell and others 2024; Kleven and others 2023). See Annex 3 for methodological details.

[9] Grandmothers are also a major source of childcare in Latin America. In Mexico, grandmothers' deaths can reduce mothers' employment rate by 13 percentage points (Talamas Marcos 2023).

[10] See Le Barbanchon and others (2021) for gender differences in job search related to commuting time.

(Programa Escuelas de Tiempo Completo in Mexico). At the same time, childcare policies offer potentially large additional benefits in the form of early childhood investments on long-term skill development (Berlinski and others 2008) and nutrition (Attanasio and others 2022), with a positive impact on future labor force productivity. Other policies to boost female labor force participation include improving safety, transportation, targeted skill training, and encouraging cultural change in gender norms (Berniell and others 2024). Some of the policies may be fiscally costly, and a full cost-benefit analysis is needed to assess their desirability.

4. The Interplay Between Participation and Informality

Informality is still pervasive in Latin America,[11] resulting in limited social protection for large swaths of the working population and contributing to fragmented careers. The informality also shapes labor market dynamics with higher separation rates and job-to-job transitions and lowering the incentives to join the labor force.[12]

Pervasive informality

Across all ages and genders, a large share of jobs is in the informal sector. In Argentina, Colombia, Mexico, Paraguay, and Peru, the majority of jobs are informal, whereas Chile and Uruguay have managed to reduce informality to less than a third of the workforce (Figure 14), with Brazil in an intermediate position. Formal jobs are concentrated among prime-age workers, with young workers facing elevated informality rates. The lack of formal jobs entails limited social protection during the working age and minimal to no pension upon retirement. The share of formal jobs drops sharply for older workers, many of whom continue to work in the informal sector until the late 70s, especially in Mexico. The higher propensity of older workers to operate in the informal sector can also be linked to the design of social security systems: when additional contribution to social security past a certain age does not yield additional pension benefits, many older workers in Brazil stop contributing and can then be classified as working informally (Box 5).

Figure 14. Labor Market Status by Age, 2023
(Percent of working age population)
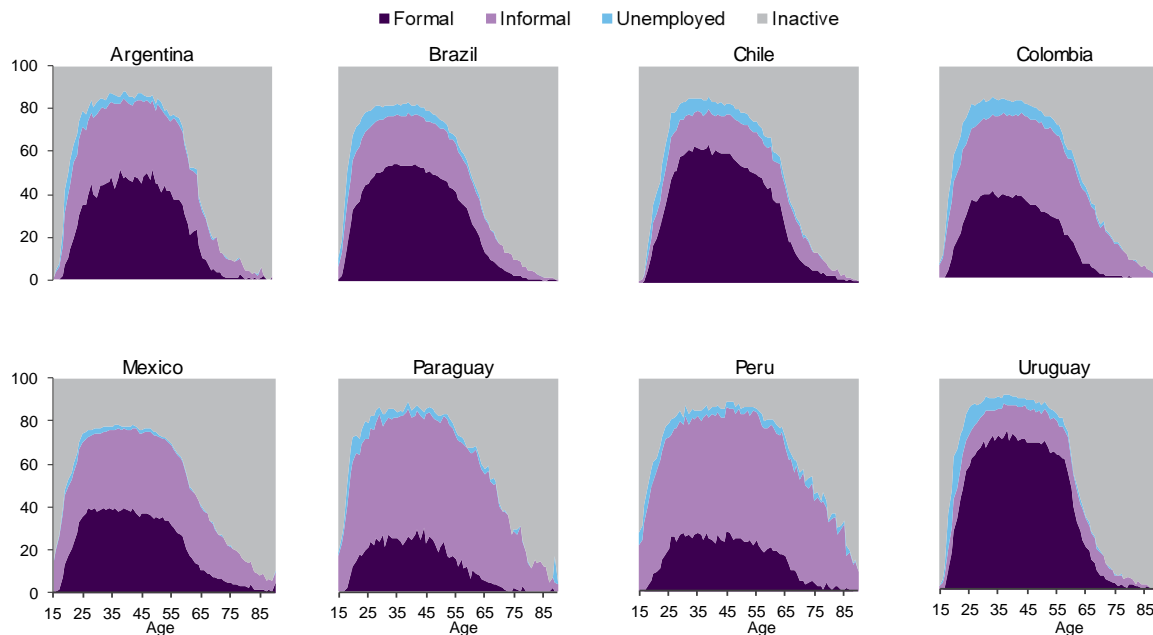
Sources: EPH (INDEC); PNADC (IBGE); ENE(INE); GEIH (DANE); ENOE (INEGI); ENAHO (INEI); EPHC (INE); ECH (INE); and IMF staff calculations.

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[11] See IMF (2019) for an analysis of the evolution of informality over the past decades and ILO (2014a) for an overview of formalization policies.

[12] Informality is multifaceted and for this reason several definitions coexist (ILO 2018). For the purpose of our cross-country analysis, we use the definition whereby a job is informal if the employee is not paying social contributions.

Both men and women are employed in informal jobs but are unevenly distributed across sectors with high incidence of informality. For instance, a large fraction of women is informally employed as domestic workers where the incidence of informality is typically above 80 percent, while informal jobs in the transportation, security, and construction sectors are overwhelmingly held by men (Bonnet and others 2019). Coordinated strategies to reduce informality can make headway by paying attention to the specific characteristics of sectors with high informality—for example, specific policies for domestic workers and maternity leaves were among a package of policies that helped Uruguay reduce informality by 17 percentage points between 2004 and 2014 while increasing labor force participation by more than 5 percentage points (Amarante and Gomez 2016).

A tradeoff between informality and labor force participation?

Reducing informality has been a longstanding objective of labor market policies in the region (ILO 2014a, ILO 2014b; ILO 2024). However, the presence of structural and regulatory barriers, if they generate a large labor wedge (Levy 2008), could leave policymakers facing a dilemma with efforts to increase participation resulting in a higher share of informal jobs. Evidence from the region suggests that the relationship between these two objectives is nuanced, with a potential tradeoff emerging only at low levels of informality.

At the aggregate level, informality and labor force participation appear positively correlated across the countries in the region. In Peru and, to a lesser extent, Mexico, where informality levels are higher, labor force participation is also larger (Figure 15). This cross-country relationship holds for both genders, with the relationship somewhat stronger for men. In addition, informality rates are usually procyclical, rising during downturn when there is substantial slack in labor markets (IMF 2019). Taken together, these observations suggest a potential tradeoff between the twin goals of boosting labor force participation and reducing the size of the informal sector, associated with the lack of social protection, lower productivity, and higher job turnover (see below).

However, the relationship between informality and labor force participation is complex, and countries with high levels of informality do not face an inherent trade-off. Variations in informality and labor force participation at the subnational levels exhibit different behavior over time depending on the share of informal jobs. For countries with relatively lower informality rates (Chile, Brazil), decreases in informality rates are associated with lower participation rates, for both men and women, and especially in urban areas (Figure 16), while the opposite is true for countries with higher levels of informality (Peru, Mexico). Overall, these findings suggest that policies prioritizing labor force participation may not contradict formalization efforts in countries where informality is elevated.

Figure 15. Informality and Labor Force Participation Rates by Gender at the Country Level, 2023
(Percent of working-age population)
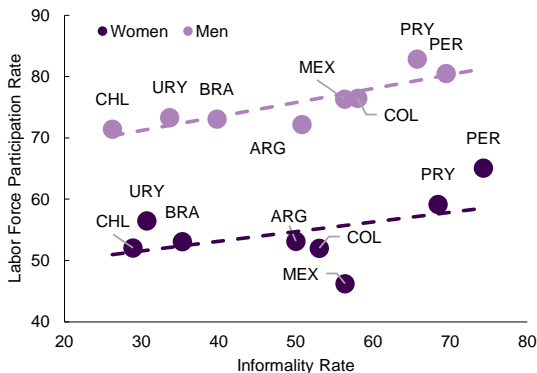
Sources: ILOSTAT; and IMF staff calculations.
Note: The informality rate is the share of workers with an informal job.

Figure 16. Panel Regression of LFP on Informality Rate at the Subnational Level
(Regression coefficient of LFP on informality)
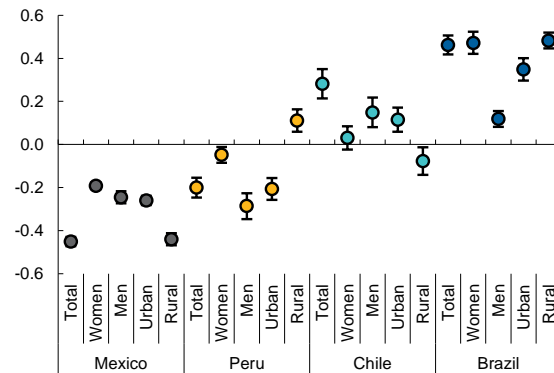
Sources: PNADC (IBGE); ENE (INE); ENOE (INEGI); ENAHO (INEI), and IMF staff calculations.
Note: Prime working age population. The chart reports the coefficient of a separate panel regression with subnational fixed effects and for different worker groups (by gender and location). An increase of one percentage point of informality in Mexico is associated with a decline of 0.38 percentage points in total LFP. LFP = labor force participation.

A dual labor market with informality contributing to a slippery job ladder

Informality also shapes the dynamics of labor markets in Latin America, with workers in the informal sector experiencing more frequent job-to-job transitions. First, job separation rates in the region are in line with other emerging market and developing economies but about twice higher than in advanced economies, despite less developed unemployment schemes (Figure 17). Other things equal, these higher separation rates contribute to higher frictional unemployment in equilibrium, as workers experience unemployment between two job spells. Second, while dynamic labor markets play an important role in reallocating workers to more productive job and sectors, excess churn can create disincentives for workers to specialize and for firms to provide training (Engbom 2022). When comparing transition rates for workers in either formal or informal sectors, informal workers have a higher propensity to switch jobs, in particular in Argentina, Paraguay, and Chile. In contrast, Latin American workers on formal jobs exhibit much lower job transition rates, closers to those of workers in advanced economies.

Figure 17. Labor Market Dynamics

1. Exit to Unemployment Rates
(Fraction of workers employed)
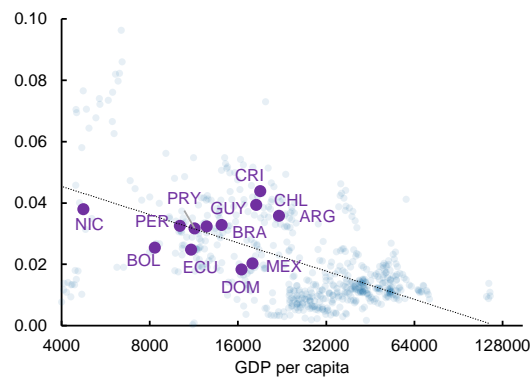
2. Job-to-Job Transition Rates
(Fraction of workers employed)
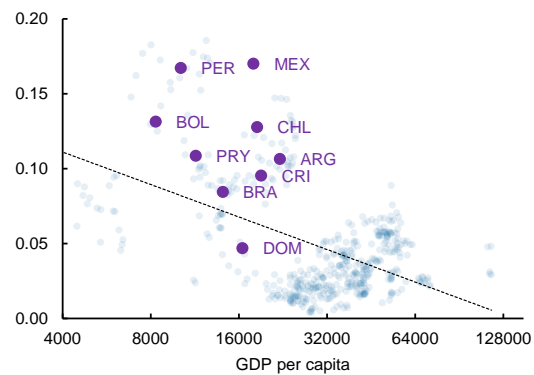
3. Job to Job Transition Rates by Type of Occupation
(Fraction of workers employed)
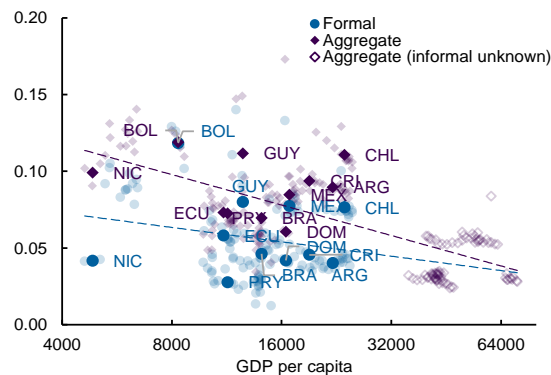
4. Occupation Switching Rates[1]
(Fraction of workers employed)
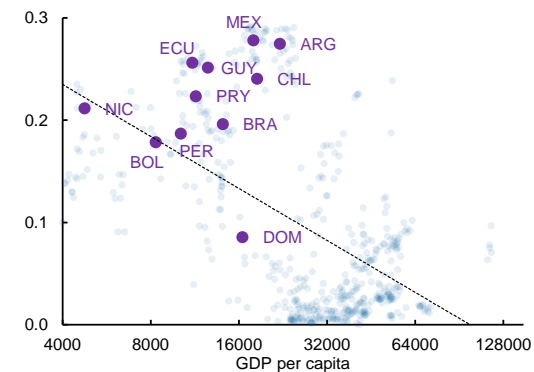
Sources: Donovan and others (2023) and IMF Staff calculations. The transitions rates are calculated at the annual frequency. LAC countries' latest observations are highlighted in purple, while previous years and other EMDEs and AEs are in blue. See Annex 3 for details.
[1] Occupations are defined at the 2-digit industry level.

Excess job turnover in Latin America exacerbates low labor productivity issues. The region stands out by excessive job turnover among countries with similar income levels. In fact, a negative cross-country relationship between income levels and excess labor market flows lose significance once Latin America and the Caribbean are excluded from the estimations (Annex 2). In addition to switching jobs more frequently, workers in Latin America are also more likely to switch sectors and occupations, preventing on-the-job human capital accumulation, and reducing returns to education and incentive to join the labor force.

5. Key Takeaways

Latin America experienced a significant increase in labor force participation in the five decades up to 2010. However, with male participation rates already high, once the growth in female participation rates decelerated, total labor force participation rates in the region plateaued.

Despite the gains made over time, gender disparities in participation rates persist and female participation is still relatively low across the region. Latin America's average pa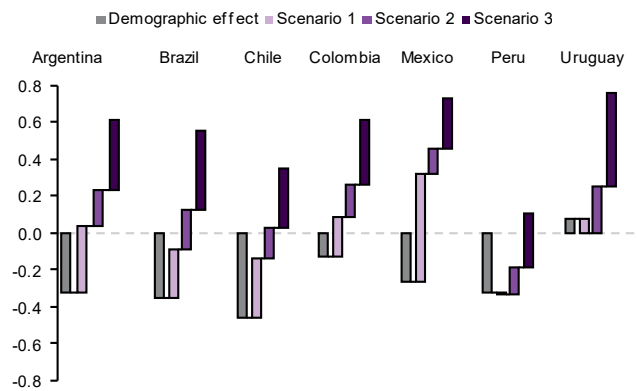rticipation gender gap remains about 20 percentage points, comparable to those of peer economies but twice as large as the average gap across advanced economies.

Participation rates are also uneven across age groups. Although a decline with age is expected, female participation rates notably start declining from a relatively early age as women in Latin America exit the labor force sooner than men, and sooner than women in advanced economies—in some cases, even while still in their prime working age. At the opposite end of the age spectrum, around 20 percent of young people are neither employed nor enrolled in education or training, and a significant part of this youth inactivity rate can be explained by women not entering the labor force upon the completion of their education.

Economic policies that relax constraints to entering or participating fully in the labor force will be crucial to support economic growth going forward. Given the significant gender gaps in participation across ages, designing and implementing policies that encourage the participation of women will be key. Closing gender participation gaps to levels comparable to those of advanced economies can increase annual GDP growth rates by around half a percentage point per year over the span of a decade, more than offsetting the negative effect of the population shift on growth for most countries in the region (Figure 18; see Box 1 for details). With growth in most of these economies expected to be around 2 percent per year in the next five years, this would represent a sizable boost. In addition to raising the quantity of labor, closing the gender gap could further boost growth by enhancing the aggregate productivity of the labor force through improvement in the matching of talent across professions (Hsieh and others 2019).

Figure 18. Estimated Changes in Real GDP Growth
(Percentage points)

Sources: ILOSTAT; Penn World Table 10.0; 2024 UN Population Prospects; and IMF staff calculations.
Note: "Demographic effect" shows the estimated change on average annual GDP growth with respect to the levels observed in 2010–19 from projected demographic changes. "Scenario 1", "Scenario 2", and "Scenario 3" show the estimated change of increasing overall participation rates to levels consistent with gender gaps of 15 percent, 10 percent, and no gender gap, respectively.

The main obstacle cited by many women outside of the labor force is family responsibilities—although these include household chores and caring for other relatives, tending to children plays a crucial role. Hence, policies that improve the availability and affordability of childcare and parental benefits may reduce constraints for some women. More flexible work arrangements that allow work patterns to adapt to family needs would also facilitate participation (Ahn and others 2019) and contribute to formalize work (Samaniego de la Parra and others 2024). Moreover, family responsibilities are a bigger constraint among women with lower educational attainment, leading to a strong gradient of labor force participation with income levels, with implications for pension eligibility. Although women in Latin America are more educated than men, policies that encourage the involvement of women in careers for which skill shortages are more acute, such as STEM careers, can increase the returns of education for women and might have a substantial impact on female labor participation by making working outside the home more profitable (Berniell and others 2024).

One consequence of women usually bearing a larger share of household responsibilities is that their labor supply is very responsive to changes in income. Therefore, actions that increase labor income for women can boost female labor force participation. Closing the persistent wage gap observed in the region is of paramount importance—working women in Latin America and the Caribbean earn, on average, 30 percent less than men and are often paid less for the same work, particularly among high-income earners (Ishak and Siravegna 2024). The lower earning potential may lead more women than men to choose not to work at any wage level. Reforms to tax and benefits systems that reduce the fiscal costs for second earners within households—often women—such as individualizing taxation and increasing its progressivity and eliminating asymmetries in parental benefits between men and women, can further strengthen women's incentives to work.

Additional strategies targeting age groups outside prime working age can also help raise labor force participation. Increasing statutory retirement ages and/or generating incentives to have longer careers, for instance by allowing workers to improve their pension by working past a minimum retirement age, can boost participation among older adults, especially given the increase in life expectancy. Given that women in Latin America exit the labor force sooner than men, some of the above-mentioned policies can help retain women in the labor force for longer, boosting the overall participation among this age-segment of the population. In particular, improving the availability and affordability of care services could reduce participation constraints for grandmothers, who play a crucial role in providing childcare the region (Attanasio and others 2022; Talamas Marcos 2023), and for the growing share of women that disrupt their careers to take care of aging parents (Stampini and others 2022).

It is also important to engage a larger fraction of youth that are neither employed, nor enrolled in education or training. Part of the low labor force participation among this group reflects gender participation gaps that appear early, but unemployment also plays a key role. Given that skill mismatches are a key obstacle for effectively integrating young people into the labor force (October 2024 *Western Hemisphere: Regional Economic Outlook*), providing vocational training or other short-cycle programs can help integrate both inactive and unemployed into the labor force by equipping them with job-ready skills in a short time (Ferreyra and others 2021). Particularly, vocational training can increase formal employment (Barrera-Osorio and others 2023).

The demographic clock is ticking for Latin American economies to better prepare for the impending shifts. Policies to make labor markets more inclusive, by closing participation gaps across gender and age groups could go a long way in boosting the labor force. Nonetheless, as demographics trends become less favorable, the contribution of the labor force to economic growth will diminish, and productivity improvements will remain a fundamental mechanism to foster economic growth in the long term.

Box 1. Quantifying the Effect of Closing Gender Gaps on Economic Growth

The "demographic dividend" has been a key driver of economic growth in Latin America since the turn of the century. Using growth accounting methods, this box quantifies the effect of population shifts on output growth and the mitigating impact of increasing labor force participation.

Using data from the Penn World Table database and assuming a Cobb-Douglas production function, the real GDP growth observed between 2010–19 is decomposed into the contributions of labor, capital, and productivity growth:

$$\Delta Y_{it} = \alpha \Delta L_{it} + (1 - \alpha) \Delta K_{it} + \Delta \omega$$

where Y, L, K, and ω denote GDP, labor, capital, and TFP of country i at time t, respectively; α denotes the output elasticity of labor, measured with the share of labor in production; and Δ denotes the logarithmic change of each variable.

In turn, the growth of the labor force can be expressed as:

$$\Delta L_{it} = \Delta N_{it} + \Delta WAP_{it} + \Delta LFPR_{it} + \Delta ER_{it}$$

where N is total population, WAP is the share of working-age population (those 15 and older), $LFPR$ is the labor force participation rate, and ER is the employment rate.

To isolate the effect of the projected population shifts on growth, a counterfactual growth rate is calculated by assuming that the growth of capital and productivity and the labor share remain at their observed 2010–19 average levels, while the growth of the labor force is modified to reflect projected population changes. Initially, the third and fourth terms of the labor identity are assumed to remain constant at their 2010–19 levels, and the first two terms are updated to match the average 2024–33 median projections of the UN Population Prospects database. The estimated average annual growth rate decreases to 2.5 percent on average per year from the roughly 2.8 percent observed in the decade before the pandemic (Figure 18).[1] All else equal, the projected demographic changes will have a significant effect on economic growth across the region.

However, changes to participation rates can offset the negative effect of demographic changes on the labor force, as illustrated by the results of three additional counterfactual exercises. First, female participations rates are assumed to increase (while keeping male participation rates constant) to levels that imply a gender gap of approximately 15 percent—close to the gender gaps of Peru and Uruguay, the smallest in our sample ('Scenario 1' in Figure 18). This would be enough to more than offset the negative effect of population changes for Mexico, Argentina and Colombia. Then, female participation is assumed to increase to levels that close the gender gap to 10 percent, a gap similar to that of advanced economies ('Scenario 2'). This would increase annual GDP growth rates by almost half a percentage point per year. Finally, women's participation rates are assumed to be the same as men's such that the gender gap closes completely ('Scenario 3'). This would more than offset the negative effect for all countries in our sample. Although the overall participation rates used for the counterfactuals are calculated to be consistent with specific values for gender gaps, the same values could be obtained by increasing the participation of other demographic groups such as the youth and/or older workers. These results illustrate both the weight that the demographic transition can put on economic growth and the power of an inclusive labor market to mitigate it.

The authors of this box are Camila Casas and Nicolás Gómez-Parra.
[1] Population projections follow the UN medium scenario, but the trends can change depending on assumption on fertility, mortality, and international migration.

Box 2. Labor Force Participation Trends Before and After the Pandemic

Labor markets were severely disrupted by the COVID-19 pandemic. As containment measures were imposed, employment and labor force participation rates contracted rapidly in Latin America and across the world (IMF 2020; IMF 2021). This box breaks down the changes in participation rates before and after the pandemic across different demographic groups to assess whether the shock changed any underlying pre-pandemic trends.

The overall changes in participation rates are analyzed for two periods: 2013–19 and 2019–23. The pre-pandemic period was characterized by diverging male and female trends—in line with historical patterns, female labor force participation continued to increase, except in Colombia, while male labor force participation declined across the region, except in Paraguay, especially among young men (Box Figure 2.1). Since the pandemic, there is no clear pattern across countries and/or age groups regarding female participation. The two notable regional patterns are the continued decline in participation among young men, and a decline in participation rates for both genders among older adults. While the participation rate of the prime working-age population (25–54) is back to its pre-pandemic level, the participation of those above 55 has not recovered.

The overall change in participation, however, is determined by the interaction between demographic changes and changes in participation rates. Using a shift-share analysis, this box then decomposes the total change in participation with respect to a base year into a *population share shift*, that captures the demographic effect, and a *participation rate shift*, that captures changes in the participation rate of each group, holding the population composition constant. This decomposition can be expressed as:

Box Figure 2.1. Changes in Labor Force Participation Rates Pre- and Post-pandemic
(Percentage points)

1. Changes Between 2013 and 2019
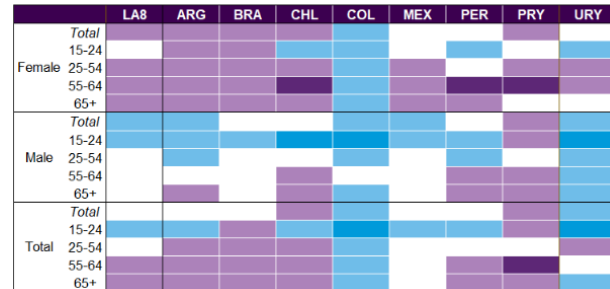
2. Changes Between 2019 and 2023

Sources: ILOSTAT; and IMF staff calculations.

$$p_t - p_0 = \sum_g [\, p_0^g(s_t^g - s_0^g) + s_0^g(p_t^g - p_0^g) + (p_t^g - p_0^g)(s_t^g - s_0^g)\,]$$

where p_t denotes the aggregate participation rate in year t, and p_t^g and s_t^g denote the participation rate and the population share of group g in year t, respectively. The first term captures the demographic effect, by weighting changes in the population shares of each demographic group by its initial participation rate, while the second term measures the change in the overall participation attributable to changes in participation rates of the different groups, assuming constant population shares. The interaction term is typically negligible for relatively short periods.

The authors of this box are Camila Casas and Flavien Moreau.

Box 2. *(continued)*

Between 2013 and 2019, the increase in female participation and the decrease in male participation, particularly among young men, offset each other (Box Table 2.1). Changes in participation rates (rather than demographic effects) explain the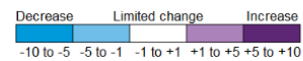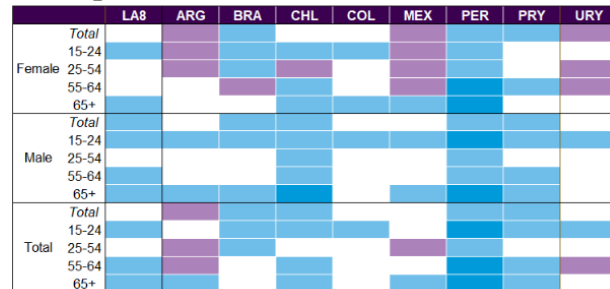se movements for both genders. Between 2019 and 2023, the participation shift among women was heterogeneous across countries, such that it was small on average, and the demographic effect played a larger (negative) role. For men, demographics played a negligible role, and the fall in participation rates can be attributed to a general decrease in participation rates across all groups, but with significantly larger reductions for older workers (55 and older) and the young.

Although labor markets have recovered after the disruptions caused by the pandemic, this aggregate behavior hides changes to some underlying trends. Notably, the participation of older workers has not recovered due to shifts in the participation rates of those over 55. And the recovery in female participation has been heterogeneous across countries.

Box Table 2.1. Shift Share Analysis of Changes in Labor Force Participation Rates

			LFPR Change	Population Shift	Participation Shift
	Total population		-0.1	-0.4	0.3
		15-24		-0.9	-0.2
		25-54		-0.5	1.2
	Female	55-64		0.6	0.4
		65+		0.3	0.1
2013–19		Total	1.1	-0.6	1.6
		15-24		-1.2	-0.9
		25-54		-0.5	-0.4
	Male	55-64		0.9	0.0
		65+		0.5	0.1
		Total	-1.4	-0.3	-1.2
	Total population		-1	-0.2	-0.8
		15-24		-0.6	-0.2
		25-54		-0.3	0.3
	Female	55-64		0.3	-0.1
		65+		0.2	-0.2
2019–23		Total	-0.6	-0.3	-0.2
		15-24		-0.7	-0.7
		25-54		-0.1	-0.3
	Male	55-64		0.4	-0.2
		65+		0.4	-0.3
		Total	-1.5	-0.1	-1.4

Sources: 2024 UN Population Prospects; ILOSTAT; and IMF staff calculations.
Note: The total change in the labor force participation is the sum of the population shift, the participation shift, and a second-order interaction term (omitted). LFPR = labor force participation rate.

Box 3. Cross-border Migration and the Gender Gap in Labor Force Participation: Evidence from Latin American and Caribbean Countries[1]

This box examines the effect of remittances on gender gaps in labor force participation rates in LAC countries using macro level data to establish cross-country patterns, and detailed micro level data for Colombia to explore the role of individual characteristics, such as education levels.

By 2020, around 6.5 percent of the population of Latin American and Caribbean (LAC) region was residing abroad, making immigration a relevant policy issue for the LAC region. In parallel with high migration ratios, gender gaps in labor force participation rates remain high in LAC. Cross-border emigration is documented to reduce the overall labor force participation rates across LAC countries (Carare and others 2024). Given that women are more susceptible to emigration effects owing to their higher elasticity of labor supply to income, the analysis presented in this box estimates the effect of remittances on participation rates by gender.

First, the female and male labor force participation rates of LAC countries between 1991–2019 are regressed on remittances (as a share of GDP) and additional controls.[1] The regression results indicate that countries with a higher share of remittances in GDP have lower labor force participation rates for both genders, and that the effect is stronger for women[2] (Box Figure 3.1, panel 1; Xiang and others, forthcoming). The predicted effects of remittances on female labor force participation rates across the LA8 countries (Argentina, Brazil, Chile, Colombia, Mexico, Paraguay, Peru, Uruguay) are then calculated based on these estimations (Box Figure 3.1, panel 2). Mexico has the strongest estimated negative effect, followed by Colombia, consistent with these countries' relatively low female labor participation rates.

The macro estimations are then complemented with additional estimations for Colombia using detailed micro data.[3] Results from these estimations corroborate that outmigrants reduce labor force participation, and that the negative effect of remittances on participation is stronger for women. Moreover, the estimations indicate that effect of remittances is heterogeneous across women—it increases with the value of remittances[4] but declines with the level of educational attainment.

Box Figure 3.1. Remittances and Labor Force Participation Rates
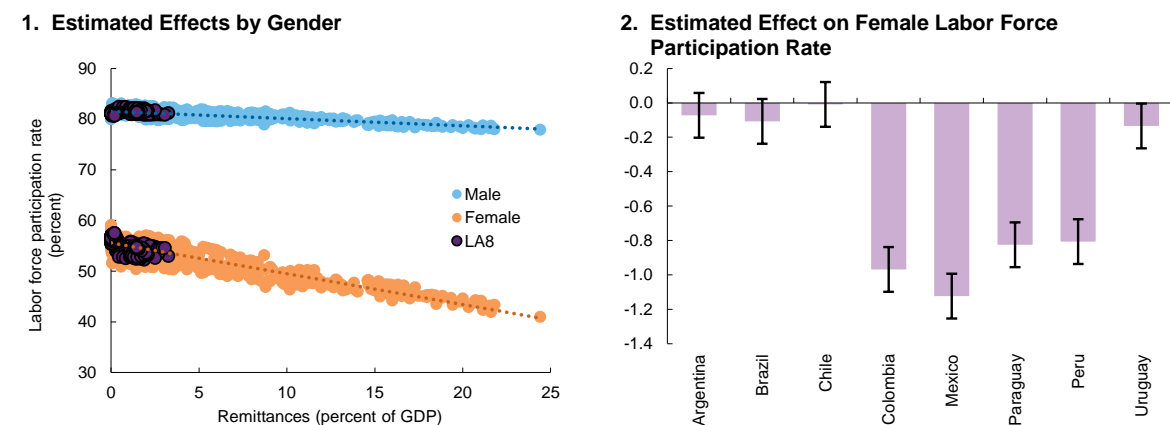
Sources: World Bank, World Development Indicators; and IMF staff calculations.
Notes: Additional regression controls include unemployment rate, GDP per capita, and country and year fixed effects. LA8 = Latin America 8 (Brazil, Chile, Colombia, Mexico, Paraguay, Peru, Uruguay).

The authors of this box are Cassie Chen Xiang and Manuk Ghazanchyan.
[1] Following the OECD, participation rates are calculated defining working age as 15–64.
[2] For every one percentage point increase in the remittances share of GDP, the female labor force participation rate is expected to decrease by 0.5 percentage points, and the male labor force participation rate is expected to decrease by 0.18 percentage points, holding all other factors constant.
[3] Colombia has a large number of international emigrants (about 6 percent of its population) and makes available the detailed micro data from the household survey (*Gran Encuesta Integrada de Hogares*) needed for the analysis. Estimations use monthly data for the period 2017–19.
[4] This is consistent with the findings of Amuedo-Dorantes and Pozo (2006) and Hanson (2007) and suggests that remittances lead to an income effect that raises the reservation wage for non-migrating women and, hence, decreases domestic female labor force participation.
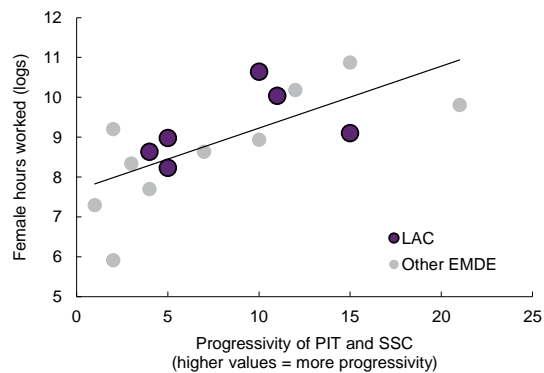
Box 4. Fiscal Policy and Female Gender Gaps in Labor Supply in Selected Latin American Countries

Women are less engaged in paid employment than men in Latin America, both in overall employment and hours worked. Given women's higher responsiveness to changes in net wages, evidence suggests that governments can boost female labor force participation by individualizing the tax system and increasing its progressivity, while strengthening the social safety net by expanding parental benefits and childcare support. These reforms can deliver particularly meaningful labor supply gains in the region, where sizable informal sectors may imply even higher formal labor supply elasticities.[1]

Labor income taxation influences labor supply decisions, and its design can strengthen women's incentives to work through two key features: individualization and progressivity. *Individualized* tax systems, which consider an individual's income separate from that of their partner's, maximize work incentives of secondary earners who are often women. In contrast, household-level tax systems and individual systems with family-based provisions generally raise marginal tax rates for women, as the higher-earner spouse uses up lower income tax brackets and any family-based benefits.[2] As of 2022, some Latin American countries (e.g., Brazil, Peru) allowed for optional joint taxation, while the tax systems of Argentina, Brazil, and Colombia contain family-based provisions that impose additional tax burdens for married women.[3] In *progressive* tax systems, tax rates increase with income. Given that women tend to earn less than men as they do more unpaid household work and, in emerging market and development economies (EMDEs), they are also more likely to be employed in the informal economy with fewer hours of paid work, progressive systems can strengthen women's incentives to take up work, to work more hours, and to potentially shift towards formal employment. Indeed, in EMDEs with more progressive personal income tax and social security contributions systems, women tend to work longer hours (Box Figure 4.1).

Box Figure 4.1. Progressivity and Female Labor Supply at the Intensive Margin

Sources: IMF-ILO, TaxFit microsimulation model; International Labour Organization (ILO); and IMF staff calculations.
Note: EMDE = emerging market and developing economies; LAC = Latin America and the Caribbean.

As highlighted in the chapter, female labor force participation drops sharply around motherhood while male labor force participation is largely unaffected. This highlights the importance of parental care policies in tackling gender participation gaps in Latin America. Access to *paid employment-protected parental leaves* (including maternity and paternity allowances) is a top priority to support women's labor force participation and enhance their financial independence.[4] Analysis suggests that, whereas male labor force participation is unrelated to paternal leave durations, female labor force participation rates are higher where the duration of paid maternity leave is longer, but only up to a certain point, after which excessively long maternity leave can

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The authors of this box are Duncan MacDonald and Júlia Cots-Capell (Fiscal Affairs Department).
[1] See Leyva and Urrutia (2020) and Alba and McKnight (2022).
[2] Joint taxation tends to be as or more attractive than separate filing at the household level as it reduces households' average tax rate, generating incentives to file jointly, even if it raises the secondary earner's marginal tax rate. Coelho and others (2024) show that lower household taxation is often combined with higher secondary earner taxation, with particularly large effects when spouses' earnings are unequal. See also Bick and Fuchs-Schündeln (2018) and Gayle and Shephard (2019).
[3] Argentina provides an allowance for a dependent spouse if their spouse earns below a certain (low) threshold. In Brazil, formal workers are entitled to a tax-free allowance for each dependent regardless of earnings. Colombia provided an allowance for a single dependent of up to a maximum of 10 percent of gross income; recent reforms added fixed deductions for up to four additional dependents.
[4] Maternity leave is defined as the "employment-protected leave of absence for employed women directly around the time of childbirth (or, in some countries, adoption)"; paternity leave, the "employment-protected leave of absence for employed fathers at or in the first few months after childbirth"; and parental leave (or family leave), the "employment-protected leave of absence for employed parents, which is often supplementary to specific maternity and paternity leave periods" consistent with the OECD definitions (OECD 2024).

Box 4. *(continued)*

lead to a decline in female labor force participation (Box Figure 4.2). The incentives triggered by parental policies (maternity, paternity, and parental leave *stricto sensu*) depend on their duration, eligibility requirements, and the wage replacement rate.[5] In the Latin American countries included in the current edition of TaxFit simulation model (Evans 2024; Davis and others, forthcoming) paid maternity leave ranges from 12 weeks in Mexico to 18 weeks in Chile.[6] Formal employees are granted maternity leave in all countries in the region, whereas self-employed are only covered in Brazil, Chile, Colombia, Peru, and El Salvador if they have a minimum number of months of contributions to social security before taking leave. Moreover, whereas employees are granted their reference

Box Figure 4.2. Newborn Leave Provisions and Gendered Labor Supply at the Extensive Margin

Sources: IMF, TaxFit microsimulation model; International Labour Organization; and IMF staff calculations.
Note: Data labels use International Organization for Standardization (ISO) country codes. LFPR = labor force participation rate; OECD = Organisation for Economic Co-operation and Development.

earnings in full, eligible self-employed mothers only a receive replacement wage based on their prior taxable income, which may be lower than their income (40 percent in Colombia) and in effect provide little support to the majority of women in many countries.

Childcare services are a necessary complement to paid parental leaves. Over the last decade, the average Latin American country has allocated less than 0.5 percent of GDP to early childhood care and education, compared to over 0.7 percent of GDP on average in the OECD. Policies that improve the availability, affordability, and quality of childcare are effective in supporting women's labor force participation (World Bank 2022). Governments can consider subsidized childcare or tax credits, implementing quality standards for childcare providers, and providing home-care training services. For instance, work disincentives can be mitigated through subsidies or refundable tax credits, which support lower-income families even if they pay no taxes. Good examples in the region include Brazil's state guarantees of access and priority enrolment to socioeconomically vulnerable families; the "Chile Crece Contigo" program which provides childcare subsidies for young children of low-income families; and Colombia's childcare tax deductions (though they only benefit tax paying parents). Despite some promising initiatives, vulnerable groups still face important barriers to childcare services, either because informal workers cannot access employer-supported services, or because they face logistical difficulties accessing childcare centers. Policymakers should continue to focus on guaranteeing access to and affordability of high-quality childcare services and adequate infrastructure in remote regions.
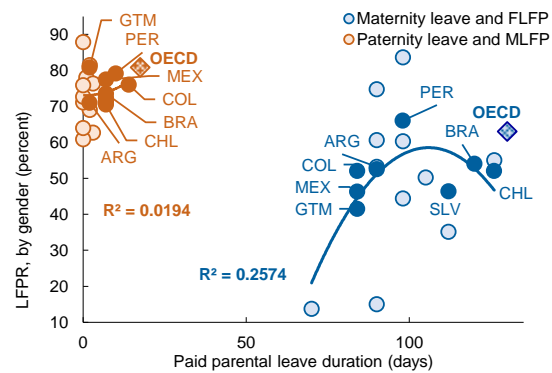
[5] The wage replacement net is a measurement of the effectiveness of the allowance in replacing "active work" earnings, understood as the percentage of the salary that the leave allowance covers.
[6] In Colombia, although maternity leave is of 18 weeks, the last 6 can be transferred to the father as parental leave. Even though all countries provide paternity leave, fathers are only entitled to 2 days in Argentina, and up to 2-weeks of paid leave in Colombia.

Box 5. Measuring Informality for Self-Employed and Older Workers: The Case of Brazil

Throughout this chapter, we followed the ILO definition to measure informality across countries, taking multiple factors into account.[1]

A key issue with this definition, in particular for older workers and self-employed workers, is the interaction with statutory age thresholds built in the pension systems, which can create the perception of a dramatic rise in informality levels around retirement ages, without any meaningful change in their underlying economic activity. Indeed, upon reaching the age threshold when contributions are no longer mandatory and pension withdrawals are allowed, formal workers in several professions, such as doctors or lawyers, face strong incentives to reclassify as self-employed, continue their activity, stop their contribution, and start collecting pension on top of their work income. Abstracting from this behavior would result in over-stating or misunderstanding the incidence of informality at older ages.

To assess the magnitude of this phenomenon, we construct three alternative measures of informality for Brazilian workers, leveraging detailed information regarding their formality statuses present in the *PNAD Contínua* household survey.[1] We complement the standard criterion (no social security contribution)—Definition 1—with two other criteria: for self-employed, whether their business is formally registered in the *Cadastro Nacional de Pessoa Jurídica* (CNPJ)—Definition 2; and for employee, whether they have a formal contract guaranteed the legal benefits, known as the *Carteira de Trabalho e Previdência Social* (CTPS)—Definition 3 (Box Figure 5.1),. The absence of formal registration in the form of a contract for an employee (CTPS) or a business registry for those self-employed (CNPJ) is a more direct indicator of the lack of compliance with labor, fiscal, and overall legislation, a limited access to credit, and no eligibility to benefits and safety nets such as the minimum wage, unemployment/disability insurance, etc. Hence, this is a more precise measure of informality.

Box Figure 5.1. Overlap of the Different Informality Measures

Sources: PNADC (IBGE); and IMF staff calculations.
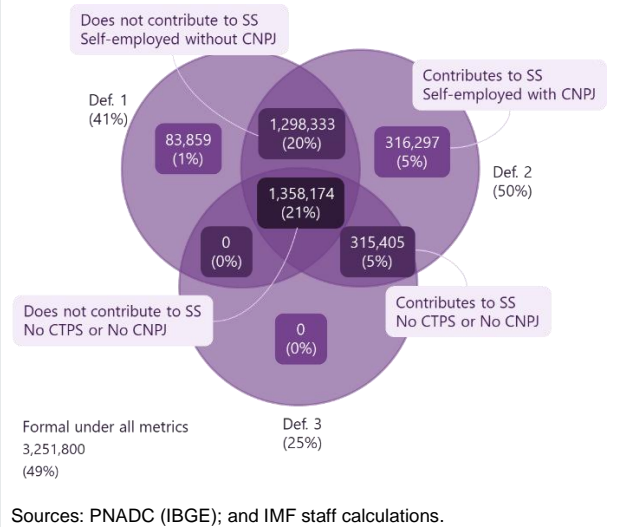
Box Figure 5.2. Share of Informal Workers by Age According to Different Definitions of Informality
(Percentage points)

Sources: PNADC (IBGE); and IMF staff calculations.
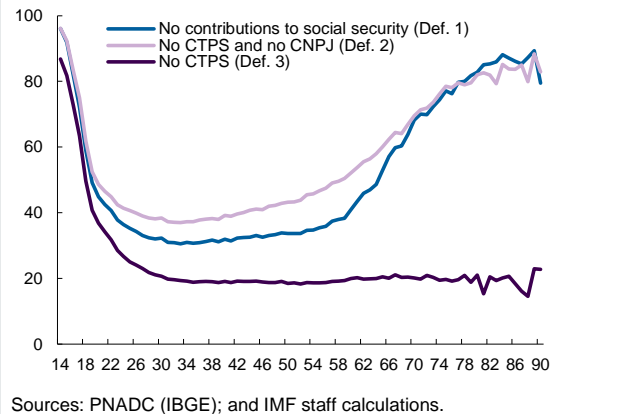
The author of this box is Ana Paula Nothen Ruhe. See Casas, Moreau, and Nothen Ruhe (forthcoming) for details.
[1] See for details on the ILO methodology https://ilostat.ilo.org/methods/concepts-and-definitions/description-labour-force-statistics/.

Box 5. *(continued)*

While these definitions partially overlap, they diverge sharply at older ages (Box Figure 5.2), with important policy implications. Overall, around 41 percent of workers are equally classified as informal under Definitions 1 and 2, with almost half of them being employees without a CTPS (Definition 3) and half being self-employed without CNPJ. The gap in the informality level between Definitions 1 and 2 is due mostly to an understatement of informality among prime-age workers, as some of them voluntarily contribute to social security despite holding an informal job. Conversely, the share of informal self-employed workers increases steadily from the age of 40, which can be a result of older people moving from a formal job to informal self-employment and of formal workers leaving the labor force as they retire. This fast increase illustrates the change in the contribution behavior for those who continue to work happening around the ages affected by the pension system rules.

While observed changes in older workers' activity status older workers in Latin American countries are less sharp than in advanced economies, behavioral responses of older workers to age thresholds in the pension systems are significant and could be taken into account to provide better incentives for older adults to participate in the labor markets.[2]

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[2] For this exercise, we ignore employers and focus only on employees and self-employed. Employers are a quantitatively small group, with their large majority having a business registry. Hence, their inclusion in the analysis does not alter the conclusions drawn in this Box.

Annex 1. Oaxaca-Blinder Decomposition

The Oaxaca-Blinder Decomposition (henceforth OBD) is used to decompose the mean difference in the variable of interest between two groups into the fraction of the difference that can be attributed to observable features, and the remaining fraction that is unexplained by them.

Suppose that a labor market outcome (e.g., wage or labor force participation) can be characterized by the following data generating process:

$$y_i = \alpha + \beta X_i + \varepsilon_i. \qquad (1)$$

The mean outcome for a given group of workers at time *t* can be predicted using the group-specific estimates of (1) (obtained using each group's subsample) and averages,

$$\overline{y^g} = \widehat{\alpha^g} + \widehat{\beta^g}\, \overline{X^g} \qquad (2)$$

where *g* indexes groups (e.g., male or female), and $\overline{y^g}$ and $\overline{X^g}$ refer to the mean outcome and explanatory variables for group *g*.[1] The outcome gap between the two groups can then be calculated as

$$\Delta \bar{y} = \left(\overline{y^1} - \overline{y^2} \right) = \left(\widehat{\alpha^1} + \widehat{\beta^1}\, \overline{X^1} \right) - \left(\widehat{\alpha^2} + \widehat{\beta^2}\, \overline{X^2} \right). \qquad (3)$$

The OBD breaks this gap as follows:

$$\Delta \bar{y} = \underbrace{\widehat{\beta^1} \left(\overline{X^1} - \overline{X^2} \right)}_{Endowment\ effect} + \underbrace{\left(\widehat{\alpha^1} - \widehat{\alpha^2} \right) + \left(\widehat{\beta^1} - \widehat{\beta^2} \right) \overline{X^2}}_{Coefficient\ effect} \qquad (4)$$

The first term of equation (4), often referred to as the endowment effect, quantifies the impact of between-group differences. This fraction corresponds to the explained differences across groups—this is, the differences in the average outcome that can be attributed to the differences in observable characteristics *X* across groups (evaluated using group 1's coefficients). The second term is the coefficient effect. This represents the fraction of the gap that cannot be explained by observable features, but rather by differences in the treatment of the same characteristics.

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[1] The error term is omitted given that the average value of residuals in an OLS regression is zero by definition.

Annex 2. Estimating Motherhood Penalties

The method of event study for assessing child penalties leverages panel data on individuals, both men and women, who enter parenthood. This estimation hinges on pronounced shifts in outcomes for women as compared to men, coinciding with the birth of their first child, designated at event time (t = 0). Following the model proposed by Kleven, Landais, and Søgaard (2019), the subsequent formula is executed for each gender separately:

$$(1) \quad Y_{ist}^g = \sum_{j \neq -1} \alpha_j^g \cdot \mathbf{1}[j = t] + \sum_k \beta_k^g \cdot \mathbf{1}[k = age_{is}] + \sum_y \gamma_y^g \cdot \mathbf{1}[y = s] + v_{ist}^g ,$$

where Y_{ist}^g denotes the labor outcome for individual (i) of gender $g = \{w, m\}$ at event time (t). The initial term incorporates dummies for each event time (t), excluding a reference year prior to childbirth. The coefficients α_{gt} captures the influence of childbirth on gender (g) in event year (t), in relation to the reference year. The subsequent two terms include a comprehensive set of dummies for age and year to control for life cycle and time trends non-parametrically.

Labor market outcomes, such as earnings and employment, are the primary focus. Equation (1) is computed in absolute terms rather than logarithmic to include data points with zero earnings or employment, thereby addressing both intensive and extensive margin responses. The estimated absolute effects are then translated into percentage effects by computing:

$$P_t^g \equiv \frac{\widehat{\alpha}_t^g}{E[\widehat{Y}_{it}^g \mid t]},$$

where $\widehat{Y}_{it}^g$ represents the predicted outcome omitting the event time coefficient's influence, that is, the hypothetical outcome in the absence of children. Ultimately, the child penalty is determined as the mean impact of childbearing on women relative to men across a designated event time span. See Berniell and others (2023) and Casas and others (forthcoming) for details.

Annex 3. Estimation of Excess Job Turnover in LAC's Labor Markets

We analyze the excess job turnover in LAC by building on Donovan and others (2023), who show a negative relationship between countries' level of development, measured by Log GDP per capita, and various measures of Job-to-Job transitions, namely transitions from informal to formal, from formal to informal, and formal to formal. Job-to-job transitions are computed for a large set of developing and developed countries for which available panel data allows to track workers' statuses over time.

Annex Table 2.1 shows a strong link between countries' income levels and the frequence of transitions between informal and formal jobs, with workers in lower-income countries more likely to switch between formal and informal jobs. LAC countries drive a significant share of this relationship, standing apart from peers, with much higher transition rates. Interestingly, transitions between formal jobs are also more frequent in LAC.

Annex Table 2.1. Job-to-Job Transition Rates by Formality Status

Variables	(1) Informal to Formal	(2) Formal to Informal	(3) Formal to Formal	(4) Informal to Formal	(5) Formal to Informal	(6) Formal to Formal
Log GDP per capita	-0.034***	-0.028***	-0.015	-0.011	-0.019***	0.001
	(0.009)	(0.004)	(0.012)	(0.009)	(0.003)	(0.006)
LAC				0.085***	0.034***	0.049***
				(0.014)	(0.006)	(0.015)
Observations	598	598	476	598	598	476
R-squared	0.176	0.531	0.097	0.533	0.779	0.406
Mean of dependent variable	0.071	0.023	0.037	0.071	0.023	0.037

Sources: Donovan and others (2023); and IMF staff calculations.
Note: Panel regressions of labor flows measures on log GDP per capita, with and without a dummy variable for LAC. LAC = Latin American countries. Standard errors clustered by country. *$p<.05$, **$p<.01$, ***$p<.001$.

In addition to higher job-to-job transitions, LAC countries are also characterized by higher occupation switching rates, where workers move across occupations (harmonized at the one-digit International Standard Classification of Occupations 2008), making it more difficult for LAC workers to accumulate human capital and build sector-specific skills (Annex Table 2.2). Taken together, these two facts highlight dysfunctions in LAC labor markets that can contribute to lower labor productivity and lower returns on education.

Annex Table 2.2. Labor Market Flows by Formality Status

Variables	(1) Job-to-Job	(2) Switch of Occupations	(3) Job-to-Job	(4) Switch of Occupations
Log GDP per capita	-0.031***	-0.073***	-0.01	-0.037***
	(0.011)	(0.013)	(0.007)	(0.01)
LAC			0.073***	0.149***
			(0.012)	(0.021)
Observations	494	553	494	553
R-squared	0.258	0.316	0.68	0.691
Mean of dependent variable	0.050	0.105	0.050	0.105

Sources: Donovan and others (2023); and IMF staff calculations.
Note: Panel regressions of job-to-job transitions on log GDP per capita, with and without a dummy variable for LAC. LAC = Latin American countries. Standard errors clustered by country. *$p<.05$, **$p<.01$, ***$p<.001$.

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