

WORKING PAPER N° IDB-WP-1713

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August 2025



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**Cataloging-in-Publication data provided by the  
Inter-American Development Bank  
Felipe Herrera Library**

Aristizabal-Ramirez, Maria.

Arepas are not tacos: on the labor markets of Latin America / Maria Aristizabal-Ramirez, Cezar Santos, Alejandra Torres.

p. cm. — (IDB Working Papers Series ; 1713)

Includes bibliographical references.

1. Labor market-Latin America. 2. Unemployment-Latin America. 3. Informal sector (Economics)-Latin America. I. Santos, Cezar. II. Torres, Alejandra. III.

Inter-American Development Bank. Department of Research and Chief Economist. IV. Title. V. Series.

IDB-WP-1713

<http://www.iadb.org>

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## Abstract

This paper examines labor markets across Latin American countries and documents large differences in labor market outcomes across these countries. Using comparable data for eight countries, we show that unemployment and informality act as substitute states and cluster countries into high-unemployment or high-informality groups. Labor market transitions vary systematically across these groups and help explain differences in employment dynamics. Embedding country-specific transitions in a simple model, we show that these differences have meaningful macroeconomic implications: countries with more volatile labor markets exhibit higher asset accumulation and greater consumption inequality. Moreover, heterogeneity in labor market transitions produces different effects on how taxation influences savings and inequality.

**JEL classifications:** E24, E26, J46, O54

**Keywords:** Latin America, Labor markets, Informality, Unemployment, Transitions

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We have benefited from helpful comments from Matias Busso, Joaquín García-Cabo, John Leahy, Renata Narita, Pablo Ottonello, Christian Posso, Todd Schoellman, and Andrés Zambrano. The views expressed in this article are those of the authors and do not necessarily represent those of the Inter-American Development Bank or the views of the Board of Governors of the Federal Reserve System or any other person associated with the Federal Reserve System.

# 1 Introduction

Developing economies tend to have larger informal sectors than developed ones (Ulyssea, 2020), exhibit higher labor market flows (Donovan et al., 2023), and experience greater unemployment in countries with stronger unemployment protection (Feng et al., 2024). Given this, how similar are labor markets within emerging economies? This paper focuses on Latin America and shows that, despite broad similarities, there are striking differences in labor market stocks and transitions across countries in the region. We provide a set of comparable labor market statistics to illuminate the specific features of Latin American labor markets and demonstrate that these differences matter for macroeconomic outcomes.

We provide the first systematic evidence that labor markets in the region fall into two distinct types—high unemployment or high informality—a contrast that, while sometimes implied in prior discussions, has not been explicitly established in the literature. In other words, informality and unemployment appear to be substitute states, and differences in these stocks are not solely explained by GDP. The predominance of one over the other seems to be related to preferences for institutional compliance and to how binding the minimum wage is. Second, we document country-specific labor market transitions and show that this classification (high-unemployment versus high-informality) helps explain how workers move into and out of employment. Finally, we use a simple model calibrated to the observed transition rates to show that these labor market differences have important aggregate implications for asset accumulation and consumption inequality.

We begin by constructing a comprehensive dataset of labor market variables from 2012 to 2019 using household surveys from eight countries: Argentina, Bolivia, Brazil, Chile, Costa Rica, Ecuador, Mexico, and Paraguay. We adopt a unified definition of informality, classifying workers as informal if they are employed but do not report their status to social security or tax authorities. Under this definition, informal workers can be either wage workers or self-employed. An examination of average unemployment and informality rates reveals striking cross-country differences: unemployment ranges from 3% in Mexico to 14% in Brazil, while informality ranges from 15% in Chile to 80% in Bolivia. To systematically analyze these differences, we place countries in a two-dimensional matrix of unemployment and informality rates. We document that countries cluster into two main groups: Group I includes those with high unemployment and relatively low informality (Argentina, Brazil, Chile, Costa Rica), while Group IV comprises countries with low unemployment and high informality (Bolivia, Ecuador, Mexico, Paraguay). Unem-

ployment and informality are negatively correlated even after controlling for a broad set of institutional variables, suggesting that they are substitute states. Beyond differences in development, we find suggestive evidence that this substitutability is related to preferences for institutional compliance and to how binding the minimum wage is.

We also analyze labor market transitions across formal employment, informal employment, and unemployment. The patterns of these transitions differ across the high-unemployment and high-informality country groups. First, formal employment is more persistent in high-unemployment countries. Second, after losing a formal job, workers in high-unemployment countries are more likely to transition into unemployment, whereas in high-informality countries they tend to move into informal employment. Third, informality tends to be short-lived in high-unemployment countries, while unemployment is short-lived in high-informality countries. Fourth, the formal and informal sectors appear more segmented in high-unemployment countries than in high-informality ones.

To assess the macroeconomic relevance of labor market transitions, we perform a series of counterfactual exercises using Brazil as a benchmark. By replacing Brazil's transition rates with those of Mexico and Paraguay—two countries with similar informality but lower unemployment—we show that even modest changes in transition rates can substantially alter steady-state informality and unemployment rates. We then embed these transition matrices into a simple model of precautionary savings and find that country-specific transitions have important implications for asset accumulation and consumption inequality. While Brazil's volatile labor market induces high savings and high consumption dispersion, Mexico's shorter unemployment spells reduce both. Paraguay, despite sharing broad features with Mexico, exhibits greater segmentation between formal and informal sectors, leading to intermediate levels of savings and consumption inequality.

Finally, we use the model to implement a stylized tax experiment. We impose different levels of labor income taxation with revenues rebated as lump sum transfers. When Brazilian workers face Mexico's labor market transitions, asset accumulation becomes more sensitive to tax rates, and inequality responds less to redistribution. In contrast, Brazil's own transitions result in flatter asset responses and a larger decline in consumption inequality, with Paraguay's case lying between the two. These results show the importance of accounting for country-specific labor transitions when evaluating the macroeconomic effects of policy.<sup>2</sup>

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<sup>2</sup>For example, Albanesi and Sahin (2013) emphasizes the importance of considering the large informal sector and transitions into and out of informality when evaluating labor market policies in emerging economies. Our work shows the need to account for country-specific labor market differences when con-

**Related Literature.** This paper contributes to the literature on cross-country differences in labor markets with three main contributions. First, by generating comparable measures of labor market dynamics across Latin American countries, we produce ready-to-use labor market statistics. We systematically compare informality, unemployment, and labor market transitions across the region, in a spirit similar to Hobijn and Şahin (2009) for OECD countries. Until recently, constructing a consistent and comparable dataset for Latin America was challenging. As a result, prior work often focused on individual countries—such as Brazil (Gerard and Gonzaga, 2021; Gomes et al., 2020) or Mexico (Gong and Van Soest, 2002; Maloney, 1999)—or limited cross-country comparisons to specific demographic groups (Bosch and Maloney, 2010; Funkhouser, 1996).

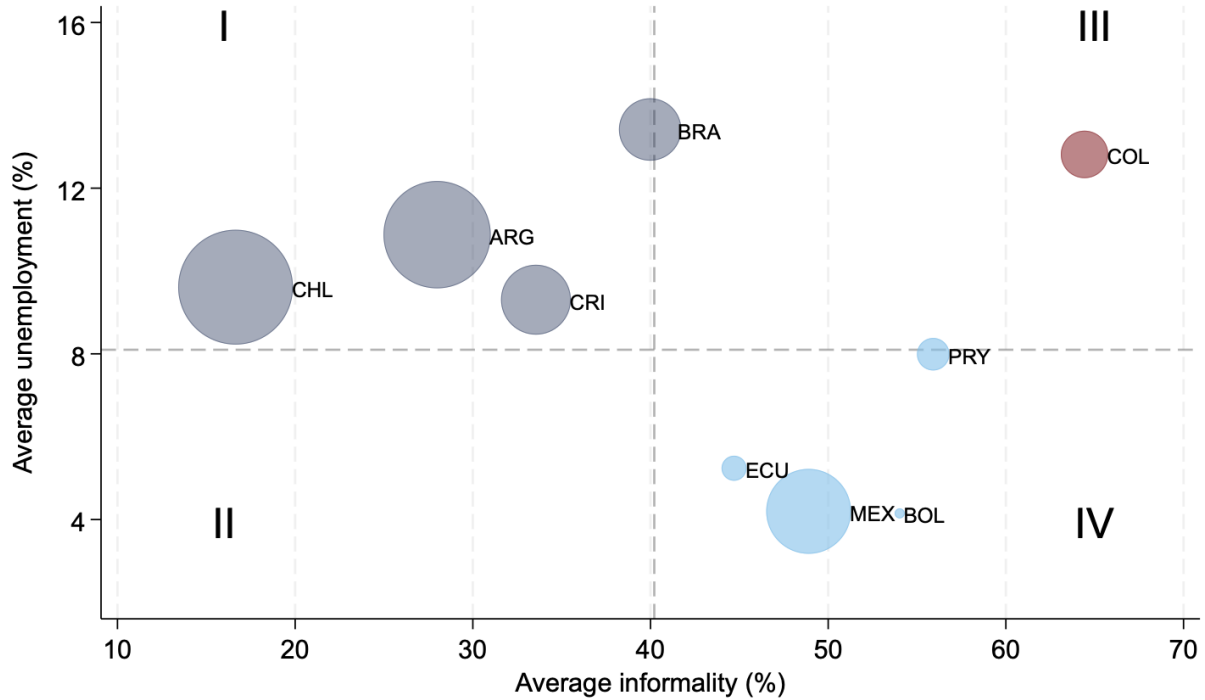
Second, we build on the literature linking labor markets and development (Poschke, 2024; Feng et al., 2024; Donovan et al., 2023) and show that, even among countries with similar income levels, labor market structures can differ substantially. We document that Latin American labor markets can be classified into two groups—high-unemployment with low informality, and low-unemployment with high informality—and, to our knowledge, this is the first explicit documentation of such a distinction in the region. This classification helps explain key differences in employment transition rates across otherwise similar countries. For example, Brazil and Mexico have comparable income levels but exhibit markedly different labor market dynamics. We show that even among emerging economies, differences in labor market transitions can affect simulated outcomes like savings and consumption inequality. As a result, responses to similar policy interventions, like changes in income taxes, differ in how consumption and inequality respond to redistribution (as in, e.g., Albrecht et al., 2009; Chodorow-Reich and Coglianese, 2021).

Third, we propose a new way of characterizing labor markets in emerging economies. Rather than focusing exclusively on informality (Meghir et al., 2015; Ulyssea, 2018; Herreño and Ocampo, 2023; Menezes-Filho and Narita, 2023) or unemployment (Poschke, 2024; Feng et al., 2024), we emphasize the relationship between the two, viewing them as substitute states outside the formal sector. We argue that understanding labor markets in emerging economies requires examining both dimensions jointly. Our approach also differs from existing work in how we define informality: we include both self-employed and wage workers who do not report their employment to tax or social security authorities. This broader definition captures a segment of the labor market that goes beyond home production or low-skilled entrepreneurship, offering a more comprehensive view of informality.

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ducting macroeconomic policy analysis.

Figure 1: Informality vs. Unemployment: Two Different Forces



**Note:** The vertical axis shows the average unemployment rate, and the horizontal axis shows the average informality rate. Dot sizes represent GDP per capita, where Chile is the largest and Bolivia the smallest. The graph is divided into four groups using the average unemployment and informality rates across countries. Group I in the top left corner and gray dots shows high unemployment with low informality, Group II in the bottom left corner (empty) shows low unemployment and low informality, Group III in the top right and red dots corner shows high unemployment and high informality, and Group IV in the bottom right corner and blue dots shows low unemployment and high informality. Data source: Countries' labor market surveys and authors' calculations. See Appendix A for details.

## 2 An Overview of Unemployment and Informality in Latin America

We begin by documenting differences in average unemployment and informality rates. The literature often uses the unemployment rate as a key summary statistic to characterize labor markets. More recently, a body of work has focused on the determinants of labor market informality, especially in emerging economies (Donovan et al., 2023). In this section, we show that, in Latin America, these two measures are closely intertwined, and that labor markets can be meaningfully characterized by their relationship.<sup>3</sup> We classify countries according to these two indicators and document that most exhibit either high

<sup>3</sup>Participation rates are broadly similar across countries, as shown in Figure B1 in the Appendix.

unemployment with low informality or low unemployment with high informality, with Colombia standing out as the sole exception.<sup>4</sup> To our knowledge, this is the first time this distinction between unemployment and informality has been explicitly documented for the region. We show in the rest of the paper that this classification is key to understanding labor market transitions, and ultimately aggregate outcomes. Second, countries with higher unemployment tend to be more developed than those with higher informality. However, even after controlling for these characteristics, the negative relationship between unemployment and informality remains strong and statistically significant. This suggests that these are substitute states, with the degree of substitutability shaped by preferences for institutional compliance and the extent to which the minimum wage is binding.

To analyze labor market characteristics across Latin American countries, we construct a comparable dataset of average labor market stocks and transition rates between 2012 and 2019, using household labor surveys from Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, and Paraguay. To construct this data set, we use labor market surveys with rotating panels for each country similar to Donovan et al. (2023) and unify the definition of informality. Workers are classified as informal if they are employed but do not report their employment status to the relevant social security or tax authority. Unemployed workers are those who report not having a job and are actively looking for one. Both formal and informal workers can transition into unemployment. Workers are considered out of the labor force if they neither have a job nor are actively seeking one. The unemployment rate is defined as the ratio of unemployed individuals to the sum of the employed (formal and informal) and unemployed; the informality rate is the share of informal workers in total employment. Further details are provided in Appendix A. In our definition, informality refers to a worker's reporting status and is not synonymous with self-employment. On average, roughly half of informal workers are self-employed, and half are wage workers. In contrast, the formal sector is composed mostly of wage workers, with only about 10% being self-employed.

Figure 1 plots the average informality rate (horizontal axis) against the average unemployment rate (vertical axis) for each country in the sample. The size of each dot reflects GDP per capita, with Chile represented by the largest dot and Bolivia by the smallest. The dashed horizontal and vertical lines indicate the sample averages for unemployment and informality rates, respectively. These lines divide the figure into four regions used to

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<sup>4</sup>We exclude Colombia from most of the analysis in the following sections due to the lack of panel data needed to compute employment transitions.

classify countries: the top-left quadrant and gray dots (Group I) includes countries with high unemployment and low informality; the bottom-left (Group II) features low unemployment and low informality; the top-right and red dot (Group III) captures high unemployment and high informality; and the bottom-right and blue dots (Group IV) includes countries with low unemployment and high informality. Surprisingly we find that most countries in our sample fall into either Group I or Group IV. We maintain these groupings throughout the remainder of the analysis.<sup>5</sup>

The range of unemployment and informality rates across countries is striking. Average unemployment varies from 3% in Mexico to nearly 14% in Brazil, while informality ranges from about 15% in Chile to almost 80% in Bolivia. Group I includes Argentina, Brazil, Chile, and Costa Rica—countries with high unemployment and low informality—while Group IV includes Bolivia, Ecuador, Mexico, and Paraguay, characterized by low unemployment and high informality. Colombia is the only exception, falling into Group III with both high unemployment and high informality. However, we exclude Colombia from most of the analysis in the following sections due to the lack of panel data needed to compute employment transitions. We keep it in Figure 1 to illustrate the diversity of labor market experiences in the region.

There are three key characteristics of Groups I and IV. First, countries in Group I (high unemployment, low informality) have a higher average GDP per capita—\$19,500—compared to \$12,700 in Group IV (low unemployment, high informality). This pattern is consistent with Donovan et al. (2023), who find a negative correlation between income and informality. An exception is Mexico, which, despite a relatively high GDP per capita of \$18,700 by regional standards, falls into Group IV with low unemployment and high informality.<sup>6</sup> Second, the average unemployment rate in Group I is comparable to that of Spain, the highest within the European Union, whereas Group IV’s unemployment rate is closer to that of countries like the United States or Canada. Third, informality rates in Group I are roughly in line with some EU countries, according to estimates from the International Labor Organization (ILO, 2020), while Group IV’s informality rates exceed those observed in any advanced economy. Most countries, however, do not produce informality statistics, and if they do, the definition is not necessarily comparable.

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<sup>5</sup>Figure B2 in the Appendix presents results by demographic group. The overall group classifications based on high or low unemployment and informality hold, on average, across demographics. Female workers tend to have higher unemployment and informality rates than males. Differences across countries are smaller for highly educated workers, who are generally concentrated in the low unemployment–low informality group.

<sup>6</sup>GDP and population data are for 2019 from the Penn World Table 9.1.

Table 1: Labor Market Characteristics

|                       | Informality        |                    |                    |
|-----------------------|--------------------|--------------------|--------------------|
|                       | (1)                | (2)                | (3)                |
| Unemp.                | -1.52***<br>(0.23) | -0.55***<br>(0.16) | -0.41**<br>(0.15)  |
| Log(GDP pc)           |                    | -0.31***<br>(0.01) | -0.50***<br>(0.03) |
| Time FE               | Yes                | Yes                | Yes                |
| Controls              | No                 | No                 | Yes                |
| <i>N</i>              | 216                | 216                | 162                |
| <i>R</i> <sup>2</sup> | 0.136              | 0.781              | 0.884              |
|                       | GroupI             | GroupIV            | Diff               |
| Log(GDP pc)           | 9.37               | 8.65               | 0.72***            |
| Pop. growth           | 1.00               | 1.40               | -0.40***           |
| Inf. to for. ear.     | 0.51               | 0.54               | -0.02              |
| High education        | 0.31               | 0.28               | 0.03***            |
| Rule of law           | 0.24               | -0.43              | 0.68***            |
| Contributions         | 0.36               | 0.28               | 0.08***            |
| Min wage prop.        | 0.39               | 0.29               | 0.11***            |

**Note:** The top panel of the table shows the estimated OLS coefficients of informality on unemployment. Column (1) includes dates fixed effects, column (2) adds Log(GDP) per capita from WDI, and column (3) adds population growth, formality rate, the proportion of population with high education using our data, average informal to formal earnings, rule of law measured with the government effectiveness index from WDI, total share of contributions to formal wages, and the proportion of workers making minimum wage or less. The bottom panel of the table shows in the first two columns the average of these controls by Group I – high unemployment countries – and Group IV – high-informality countries. Column (3) shows the difference, where \*\*\* the difference is statistically significant at the 99% level, \*\* at 95%, and \* at 90%.

What can explain whether a country exhibits high unemployment or high informality? Table 1 presents an exploratory analysis of institutional characteristics that may help account for these patterns. The top panel reports OLS regressions of the informality rate on the unemployment rate. Column (1) includes time fixed effects, column (2) adds controls for the log of GDP per capita, and column (3) includes a broader set of institutional variables: population growth, the share of highly educated workers, the ratio of informal to formal earnings, a government effectiveness index (rule of law), the share of wages allocated to social security contributions in the formal sector, and the proportion of workers earning at or below the minimum wage. Informality and unemployment are negatively correlated even after using this large set of controls.<sup>7</sup> The bottom panel of the table com-

<sup>7</sup>Table B2 in the appendix shows the equivalent correlation with unemployment on the left-hand side.

compares average values of these institutional variables across countries in Group I (high unemployment) and Group IV (high informality). On average, Group I countries have higher GDP per capita and lower population growth. Differences in educational attainment and relative informal earnings are not statistically significant. However, Group I countries tend to have stronger government effectiveness, a higher share of wages going to social security, and a smaller share of workers earning at or below the minimum wage.

This exercise provides suggestive evidence of several patterns. First, higher informality is associated with lower GDP per capita and higher population growth. This aligns with prior work connecting development levels to informality (Poschke, 2024; Feng et al., 2024; Donovan et al., 2023). Second, even after controlling for GDP, the negative relationship between unemployment and informality remains strong and significant, suggesting a trade-off between these two states that goes beyond development. Third, cross-country differences in informality do not appear to be driven by educational attainment or relative informal-sector earnings. Rather, in countries with stronger rule of law and more protective labor institutions—as proxied by higher social security contributions—unemployment appears more attractive than informality following job loss. Conversely, in settings with weaker legal institutions and limited unemployment protection, informality rises. This is consistent with Garcia-Cabo (2018), who finds that more stringent labor market regulation is associated with higher unemployment. For example, during the COVID-19 pandemic, Brazil and Argentina—both high-unemployment countries—implemented stronger social protection measures than Mexico (Blofield et al., 2021).

### **3 Labor Market Transitions across Employment States**

In this section we focus on labor market transitions and find that the classification of high-unemployment or high-informality groups is key for understanding differences in labor market transitions. There are four key takeaways from the analysis. First, formal employment is more persistent in high-unemployment countries. Second, after losing a formal job, workers in high-unemployment countries tend to move to unemployment, and workers in high-informality countries usually move to informality. Third, informality is short-lived in high-unemployment countries, while unemployment is short-lived in high-informality countries. Fourth, the formal and the informal sectors seem to be more segmented in high-unemployment countries than in high-informality countries.

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Importantly, the coefficient on informality remains negative and significant, even with a large set of controls. However, different from Feng et al. (2024), the coefficient on GDP is slightly negative and mildly significant

Table 2: Labor Market Transitions: Mobility and Direction

|    | Country        | FF           | II           | UU           | FI           | FU          | IF           | IU          | UF           | UI           |
|----|----------------|--------------|--------------|--------------|--------------|-------------|--------------|-------------|--------------|--------------|
| I  | Argentina      | 90.41        | 61.75        | 37.13        | 5.58         | 1.53        | 16.16        | 7.83        | 8.51         | 21.96        |
|    | Brazil         | 82.61        | 69.41        | 45.67        | 10.47        | 3.20        | 16.67        | 6.25        | 12.10        | 17.96        |
|    | Chile          | 90.50        | 50.59        | 32.53        | 3.43         | 2.87        | 23.96        | 7.45        | 25.62        | 13.95        |
|    | Costa Rica     | 90.18        | 66.69        | 33.93        | 5.76         | 2.05        | 12.37        | 6.39        | 14.35        | 22.96        |
|    | <b>Average</b> | <b>88.34</b> | <b>62.21</b> | <b>37.36</b> | <b>6.36</b>  | <b>2.44</b> | <b>17.27</b> | <b>6.95</b> | <b>15.27</b> | <b>19.16</b> |
| IV | Bolivia        | 82.95        | 75.55        | 13.83        | 8.84         | 2.78        | 10.68        | 2.90        | 29.43        | 33.58        |
|    | Ecuador        | 83.46        | 72.89        | 27.46        | 10.26        | 2.04        | 12.72        | 2.20        | 20.29        | 21.59        |
|    | Mexico         | 80.02        | 69.03        | 20.79        | 14.12        | 1.93        | 15.56        | 2.40        | 23.12        | 29.78        |
|    | Paraguay       | 89.02        | 79.58        | 34.47        | 8.26         | 1.52        | 7.04         | 4.30        | 7.76         | 35.22        |
|    | <b>Average</b> | <b>83.46</b> | <b>73.44</b> | <b>24.87</b> | <b>10.90</b> | <b>2.00</b> | <b>12.10</b> | <b>2.77</b> | <b>19.68</b> | <b>29.08</b> |

**Note:** Each column  $OD$  shows the average labor market transition rate per country from the origin state  $O$  to the destination state  $D$ . F denotes formal, I informal, and U unemployment. These transitions plus values from each state to out of the labor force sum up to one. Countries at the top of the table are those in Group I as defined in section 2, and countries in the bottom part of the table are those in Group IV. The bottom row on each panel shows the each group's averages. See Appendix A for further details.

Table 2 shows labor market transitions across formal jobs (F), informal jobs (I) and unemployment (U). The sum of transitions from a given state, including out of the labor force, sum up to one. For ease of exposition, we exclude from the main analysis the values for transitions into and out of the labor force.<sup>8</sup> Each column  $OD$  shows the average quarterly transition rate per country from the origin state  $O$  to the destination state  $D$ . For example, FI is the probability of moving from a formal job to an informal job in the next quarter. Countries at the top of the table are those in Group I (high unemployment and low informality) as defined in Section 2, and countries in the bottom part of the table are those in Group IV (low unemployment and high informality). For each group, we also report the average values for each transition.

First, formal sector employment in Group I (high unemployment) is more persistent than in Group IV (high informality). Column FF in Table 2 denotes the probability of keeping a formal job. On average, in countries in Group I, high-unemployment, workers remain in a formal job with a quarterly probability of 0.88, while workers in Group IV, high-informality, keep their job with a probability of 0.83. The difference is statistically significant at the 99% level, implying that half of the workers in a high-unemployment country remain formally employed after 1.5 years, but in high-informality countries they only remain in this job for one year.

<sup>8</sup>We provide the table with no-participation rate transitions in Table B3 in the Appendix. Moreover, Tables B4 and B5 provides similar tables for different demographic groups: sex and education.

Second, upon losing a formal job Group I workers usually move to unemployment, whereas workers in Group IV move to informality. Column FI in Table 2 show the probability of moving from a formal to an informal job, and Column FU show the probability of moving from a formal job to unemployment. For Group I countries, high-unemployment, workers move from a formal to an informal job 6.4% of the time and to unemployment 2.4% of the time. In high-informality countries, Group IV, workers move from a formal job to an informal job 10.8% of the time, and to unemployment 2% of the time. Both differences are statistically different with a 99-confidence interval. This means that seven out of ten workers losing a formal job in Group I countries will be informal and three will be unemployed, while in Group IV, eight workers will be informal and 2 unemployed.

Third, informal employment is short-lived in Group I countries, while unemployment is short-lived in Group IV countries. Columns IF and IU show the probabilities of leaving the informal sector, and Columns UI and UI show the probabilities of leaving unemployment. If we sum columns IF and IU, we find that Group I countries, on average leave the informal sector with a 23% probability, and Group IV countries leave it with a 14.78% probability. That is, half of the workers in Group I that leave the informal sector do so after one and a half months (0.5 quarter), while in Group IV half of the workers leaving the informal sector do so after two months (2/3 of a quarter). Similarly, if we sum columns UF and UI, we find that in Group I countries workers leave unemployment with a 34% percent probability but in Group IV countries, high informality, they leave unemployment with a 46% probability, meaning that half of the workers in Group I, if leaving unemployment, they do so after one month, while in Group IV they do so after one week. Remarkably, that difference comes largely from movements out to unemployment into informality (Column UI).

Fourth, we find significant differences between these two groups of countries in terms of segmentation between the formal and the informal sectors, however, with important within group heterogeneity. This then suggests that the informal sector plays two different roles in this set of developing economies. In one hand, it is a substitute for unemployment, at the same time, the informal sector might be a substitute for informal jobs. Notably, Mexico and Chile have the highest probability of moving from an informal to a formal job (IF), while Costa Rica and Paraguay have the lowest probability within their groups. However, when we compute the likelihood of returning to a formal job in less than a year of losing this job and after transiting to informality, we find that 3.3% of workers return to a formal job in the high-informality group, while 2.4 percent of workers

Table 3: Counterfactual Informality and Unemployment Rates

|                   | Informality, % | Unemployment, % |
|-------------------|----------------|-----------------|
| Brazil, benchmark | 38.4           | 10.2            |
| w/ Mexico F       | 42.6           | 9.0             |
| w/ Mexico I       | 41.4           | 7.3             |
| w/ Mexico U       | 38.0           | 5.9             |
| w/ Paraguay F     | 30.6           | 7.2             |
| w/ Paraguay I     | 57.2           | 9.2             |
| w/ Paraguay U     | 41.4           | 7.7             |

**Note:** This table reports Brazil’s steady-state informality and unemployment rates under alternative transition matrices. Each counterfactual replaces one row of Brazil’s transition matrix (formal, informal, or unemployed) with that of Mexico or Paraguay.

return to formality in high-unemployment countries.<sup>9</sup>

In sum, we document that high-unemployment and low-informality countries (Group I) are characterized by more persistent formal employment, shorter spells of informality, and stronger segmentation, whereas high-informality and low-unemployment countries (Group IV) display the opposite dynamics.

### 3.1 Transitions and Stocks across Countries

The previous section documented significant differences in transition rates across labor market states in Latin American countries. But are these differences large enough to generate substantial variation in labor market outcomes across countries? In a way, Section 2 suggests they are. We now quantify how much each transition contributes.

Take Brazil as an example, a country classified in Group I (low informality and high unemployment). The transitions in Table 2 define a Markov chain across the different states: formal (F), informal (I), and unemployed (U). Iterating this chain yields the steady-state distribution across states and consequently informality and unemployment rates. The first row in Table 3 reports these values: 38.4% informality rate and 10.2% unemployment rate. These numbers are close to those in Figure 1.

What would happen if Brazilian workers faced the transition rates of a different country? Take Mexico first. The two countries have similar levels of informality, though Mexico’s

<sup>9</sup>Counting all possible combinations within a year of returning to formality after passing at least for one quarter through informality: FI-IF, FI-II-IF, FI-II,II,IF, FU-UI-II-IF, etc

is slightly higher, and its unemployment rate is lower, hence its classification in Group IV. Start by considering only the transitions for formal workers: that is, replace the formal row of Brazil’s transition matrix with that of Mexico. The results are reported in the second row of Table 3 (labeled “Mexico F”). Brazil’s informality rate would increase by 4.2 percentage points, about half of the total difference between the two countries. The next two rows (“Mexico I” and “Mexico U”) report similar exercises in which the transition rates for informal and unemployed workers are replaced, respectively. The fact that unemployment in Mexico is much shorter-lived translates into a lower unemployment rate for Brazil in the “Mexico U” counterfactual.

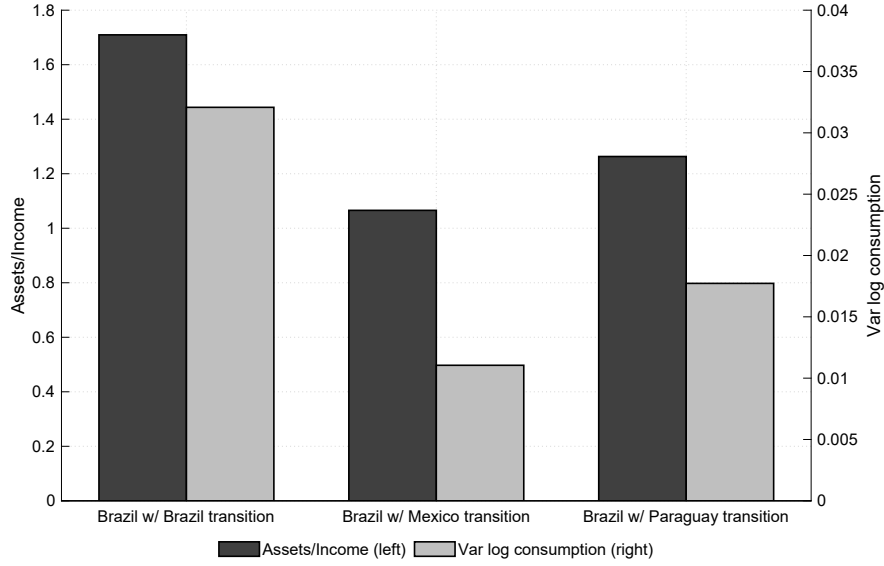
It is not surprising that changing Brazil’s transitions (a Group I country) to those of Mexico (a Group IV country) leads to significant changes in labor market outcomes. But are all transitions in Group IV countries similar? To explore this, contrast the previous exercises with analogous ones using Paraguay, also a Group IV country, instead of Mexico. The results are shown in the last three rows of Table 3. Replacing Brazil’s transition rates for formal workers with those of Paraguay (row “Paraguay F”) yields much larger formalization, driven by a significantly higher FF transition probability in Paraguay. In contrast, the “Paraguay I” counterfactual implies a much higher informality rate, a rise of almost 19 percentage points, due to Paraguay’s higher II transition rate. In other words, the formal and informal sectors in Paraguay are more segmented, and each transition plays a substantial role. Thus, even within the same group, important variation in transition dynamics exists.

### 3.2 Macroeconomic Implications of Country-specific Transitions

In this section, we use data from Brazil, Mexico, and Paraguay in combination with a stylized model to evaluate how labor market transitions matter for asset accumulation and consumption inequality. We also study how labor market transitions lead to different effects of tax policies. The framework is deliberately simple and does not aim to capture every institutional detail of these economies; instead, it isolates the role of transition dynamics. Precisely because of this focus, the exercises provide clear evidence that country-specific labor market heterogeneity is a central channel through which both macroeconomic outcomes and policy effects operate.

Here is the environment of the model. Suppose a worker has preferences represented by the utility function  $v(c) = c^{1-\sigma}/(1-\sigma)$ , with a time discount factor of  $\beta$ . The worker faces shocks to which sector  $s$  they participate in: formal  $f$ , informal  $i$  or unemployment

Figure 2: Macroeconomic Effects of Labor Transition Rates



**Note:** This figure shows the relationship between household assets (as a ratio to income) and the variance of log consumption under different transition matrices. Each group of bars represents Brazil with a different set of labor market transitions: its own, Mexico's, or Paraguay's.

*u.* The probability of switching from sector  $s$  in the current period to sector  $s'$  in the next period is given by  $\pi(s, s')$ , and the income for sector  $s$  is given by  $y(s)$ . The worker can insure against these income-sector shocks by saving in a one-period bond,  $a$ , that pays a non-contingent interest rate  $r$ . The value function for the worker's problem reads:

$$V(a, s) = \max_{c, a'} v(c) + \beta \sum_{s'} \pi(s, s') V(a', s')$$

$$\text{s.t. } c + a' = y(s) + (1 + r)a.$$

We calibrate the model setting  $\beta$  to 0.98,  $\sigma$  to 2, and  $r$  to 0.01, standard values. In addition, we use relative earnings data for Brazil. Informal earnings relative to formal earnings are 0.74 and unemployment earnings are 0.30. In this simple exercise, we compute assets-to-earnings ratios and the variance of log consumption for Brazil using Brazil's, Mexico's and Paraguay's transitions and show them in Figure 2.

Brazil's transition rates imply a highly volatile labor market. This leads to high asset accumulation as households engage in self-insurance. Still, consumption dispersion remains high. In Mexico, transitions are such that the worst state (unemployment) is short-lived. As a result, consumption is less dispersed, reducing the need for precautionary savings. Paraguay, like Mexico, is classified as having high informality and low unem-

ployment (Group IV). However, as discussed above, the formal and informal sectors in Paraguay are more segmented. Transitions across sectors involve substantial risk, leading to greater consumption dispersion and higher asset accumulation. However, asset holdings do not reach the levels seen under Brazil's transitions, as unemployment is less frequent in Paraguay.

Do these differences in labor market transitions matter for economic policy? We investigate this by slightly changing the model to incorporate labor income taxation. Labor is taxed linearly at rate  $\tau$ , and government revenues are rebated via lump sum transfers ( $T$ ) such that the government always runs a balanced budget. The worker thus faces the following budget constraint:

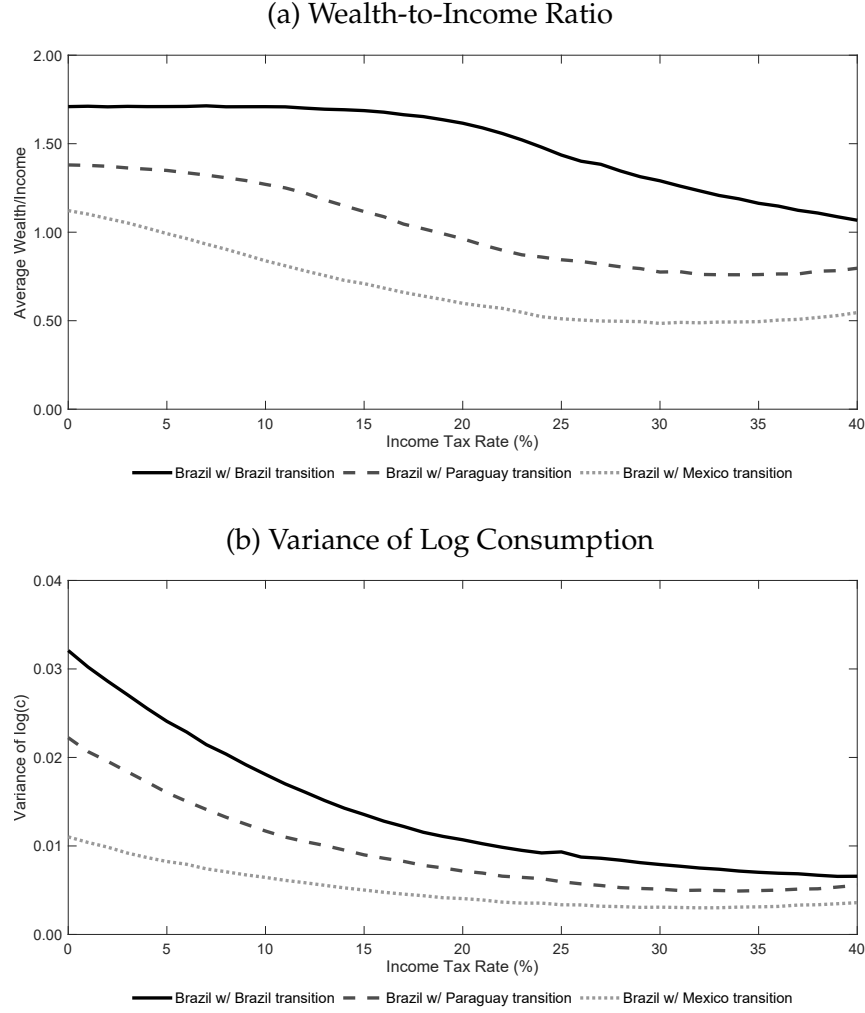
$$c + a' = (1 - \tau)y(s) + (1 + r)a + T.$$

We compute the model for different values of the tax rate:  $\tau \in [0, 40\%]$ . As in the previous exercise, we compute the model for Brazil and two counterfactuals: a Brazilian economy in which workers face the transition rates of Paraguay or Mexico. The results are reported in Figure 3.

Panel (a) in Figure 3 shows the effects on the aggregate wealth-to-income ratio. Start with the benchmark Brazilian economy. Moving from a labor income tax rate of 0% to 20% has little effect on this statistic. Contrast this with the counterfactual economy in which Brazilian workers face the same labor transition rates as in Mexico (dotted line). As already discussed above, at the 0% tax rate, the counterfactual economy exhibits lower levels of asset accumulation. But now we can observe a marked change in the response to policy: in the counterfactual economy, asset accumulation decreases substantially as tax rates increase up to 20%. From 20% to 40%, the experiences of the two economies flip: the wealth-to-income ratio for the benchmark economy starts to decrease, whereas it levels off in the economy with Mexico's transition. The case for the economy with the Paraguayan transition rates lies in between the other two.

Panel (b) in Figure 3 shows the results for inequality, measured by the variance of log consumption. Now, between the 0% and 20% tax rates, the Brazilian benchmark economy shows a substantial decline. This reflects the effects of a more progressive welfare policy on inequality. For the economy with Mexico's transition, the effect is more muted. Again, the economy with Paraguay's transition provides an intermediate case. Overall, these results show the importance of country-specific transition rates for macroeconomic statistics and for the effects of policy.

Figure 3: Labor Transitions and the Effects of Income Taxation



**Note:** This figure shows model-generated results for aggregate wealth-to-income ratio (Panel a) and the variance of log consumption (Panel b) of imposing different levels of labor income tax,  $\tau \in [0, 40\%]$ .

## 4 Conclusion

As the title of this paper quips, although there are similarities across Latin American countries, the labor markets in these economies display substantial differences in unemployment, informality, and worker transitions. By organizing countries into high-unemployment and high-informality groups, we provide a framework to interpret labor market dynamics that goes beyond standard development metrics. This classification reveals meaningful variation in how workers move across employment states and how those transitions shape steady-state outcomes. The observed trade-off between unemployment and informality is robust to controls and suggests that institutional features—such as rule of law, minimum wage enforcement, and social protection—play a role in

shaping workers' experience outside the formal sector.

These differences are not merely statistical artifacts but have significant macroeconomic consequences. Using a calibrated model, we show that variation in labor market transitions affects asset accumulation and consumption inequality. Moreover, this cross-country labor market heterogeneity has implications for the macroeconomic effects of policy. According to the model, the impact of the same labor income tax differs for asset accumulation and consumption inequality depending on the transitions workers face across formal and informal work and unemployment. In reality, these transitions are equilibrium outcomes arising from firm and worker behavior in response to different institutional arrangements in each economy. It is thus an interesting avenue of future research to explore the deeper drivers of these heterogeneous transitions with important macroeconomic consequences.

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# Appendix

## A Data

For our analysis, we build a comprehensive dataset to provide comparable statistics across countries. To build labor market variables, we use labor surveys that have a rotating panel structure. This way, we can follow individuals for at least a quarter. Table A1 shows the surveys and periods used for each country.

To build income variables for our model, we use supplementary data to include different sources of income. For Brazil, the PNADC main dataset only includes information on first and second-activity income, which means that we do not have information on income for the unemployed. To address this, PNADC has a supplementary survey that includes information on other sources of income. Data for PNADC are collected in a 1-2(5) rotation scheme, where each household is surveyed for a month, leaves the survey for two months, and then is surveyed again in the following month. The data for the supplementary survey are collected at the first and fifth visits. Our earnings variable is the one defined by the Brazilian statistical office (IBGE) as total income from all sources.

For Colombia, GEIH also includes information on income only for main and second activity. We use the “Medición de Pobreza Monetaria y Desigualdad” survey, which includes data on other sources of income to calculate poverty statistics. This survey follows the same methodology used in GEIH, so we can merge the two datasets directly.

Table A1: Data Sources

| Country    | Dataset | Source                                                             | Dates used                                              |
|------------|---------|--------------------------------------------------------------------|---------------------------------------------------------|
| Argentina  | EPH     | Instituto Nacional de Estadística y Censos, Argentina (2003–2024)  | 2012q1 - 2019q4,<br>Exc 2015q3 - 2016q1                 |
| Bolivia    | ECE     | Instituto Nacional de Estadística, Bolivia (2015–2024)             | 2016q1 - 2019q4<br>Exc 2015q1 - 2015q3, 2018q2 - 2018q3 |
| Brazil     | PNADC   | Instituto Brasileiro de Geografia e Estatística (2012–2024)        | 2012q1 - 2019q4                                         |
| Chile      | ENE     | Instituto Nacional de Estadística de Chile (1986–2024)             | 2012q1 - 2019q4                                         |
| Colombia   | GEIH    | Departamento Nacional de Estadística, Colombia (2011 - 2024)       | 2012q1 - 2019q4                                         |
| Costa Rica | ECE     | Instituto Nacional de Estadística y Censos, Costa Rica (2010–2024) | 2012q1 - 2019q4                                         |
| Ecuador    | ENEMDU  | Instituto Nacional de Estadística y Censos, Ecuador (2007–2024)    | 2012q1 - 2019q3<br>Exc 2019q3 - 2019q4                  |
| Mexico     | ENOE    | Instituto Nacional de Estadística y Geografía, Mexico (1995–2024)  | 2012q1 - 2019q4                                         |
| Paraguay   | ECE     | Instituto Nacional de Estadística, Paraguay (2010–2017)            | 2012q1 - 2017q4<br>Exc 2014q4, 2017q3, 2017q4           |

## A.1 Details on the Definition of Informality

We start with the definition of informality in Donovan et al. (2023). To arrive at a common definition of informality across countries, we make some adjustments as follows:

- Argentina: Donovan et al. (2023) use job benefits of the worker. In this case, informal is defined as being employed and not having any job benefit, while formality includes having at least one type of job benefit. Job benefits include paid leave, Christmas bonus, paid sick leave, and social security. We use contributions to pension funds instead.
- Bolivia: Informality is defined as workers either contributing to a pension fund or the firm having a tax ID.
- Brazil: The survey asks if the worker has a “carteira de trabalho,” which is an employee record. Formality in this case is defined for employed workers who have a “carteira de trabalho,” are domestic workers, or contribute to social security.
- Chile: Includes contributions to pension, to the health system, to unemployment insurance. Also, if workers have annual vacation leave, sick leave, maternity leave or daycare.
- Colombia: Workers are formal if they work at a firm with more than 5 workers and contribute to pension funds.
- Costa Rica: Workers are formal if their workplace is registered and if they have deductions for social security and income tax.
- Ecuador: Workers are formal if they work at a firm that is registered and has more than 100 workers. The survey also includes as informal workers with no income and helpers of wage employees.
- Mexico: There is a variable on the survey that indicates whether the worker is formal or informal. However, the official calculations of the informality rate consider informal workers who are vulnerable due to the nature of the economic unit for which they work, as well as those whose labor dependence does not recognize their source of work. This includes the population working in unregistered micro businesses, as well as self-employed persons in subsistence agriculture, those who work without social security, and those whose services are used by registered economic units. We excluded job benefits from the definition.

- Paraguay: Donovan et al. (2023) use the variable that indicates whether workers' contract has either a defined or undefined term. We add contribution to pension funds to our definition.

## A.2 Details on the Definition of Unemployment

We follow the definitions of unemployed in Donovan et al. (2023).

- Argentina: We use the occupation condition variable included in the survey. This is, people who did not have a job in the reference period, and were available to work and searched for a job. Additionally, Donovan et al. (2023) include unpaid family workers who worked less than 15 hours and searched for a job.
- Bolivia: We use the dummy for unemployment included in the survey. This is, people older than 14 years old who answered that they did not work in the reference week, even though they were looking for a job or attempted to engage in self-employment during the last four weeks.
- Brazil: We define as unemployed a worker who did not report having a job during the reference week but has searched during that week and would have started working if they had gotten a job.
- Chile: We define as unemployed a worker who did not report having a job, and searched for a job during the previous four weeks.
- Colombia: We use the dummy for unemployment included in the survey. This is, people who did not have a job in the reference week and were available to work and searched for a job during the previous 12 months.
- Costa Rica: We define as unemployed a worker who did not report having a job, but searched for a job during the previous four weeks, and would be willing to start a job if it were offered during the previous week.
- Ecuador: We define as unemployed a worker who did not report having a job during the previous week, but searched for a job during the previous four weeks or took any steps to change their labor situation.
- Mexico: We define as unemployed a worker who did not report having a job.

- Paraguay: We define as unemployed a worker who did not report having a job but searched for a job during the previous four weeks and would be willing to start a job if it were offered during the previous four weeks.

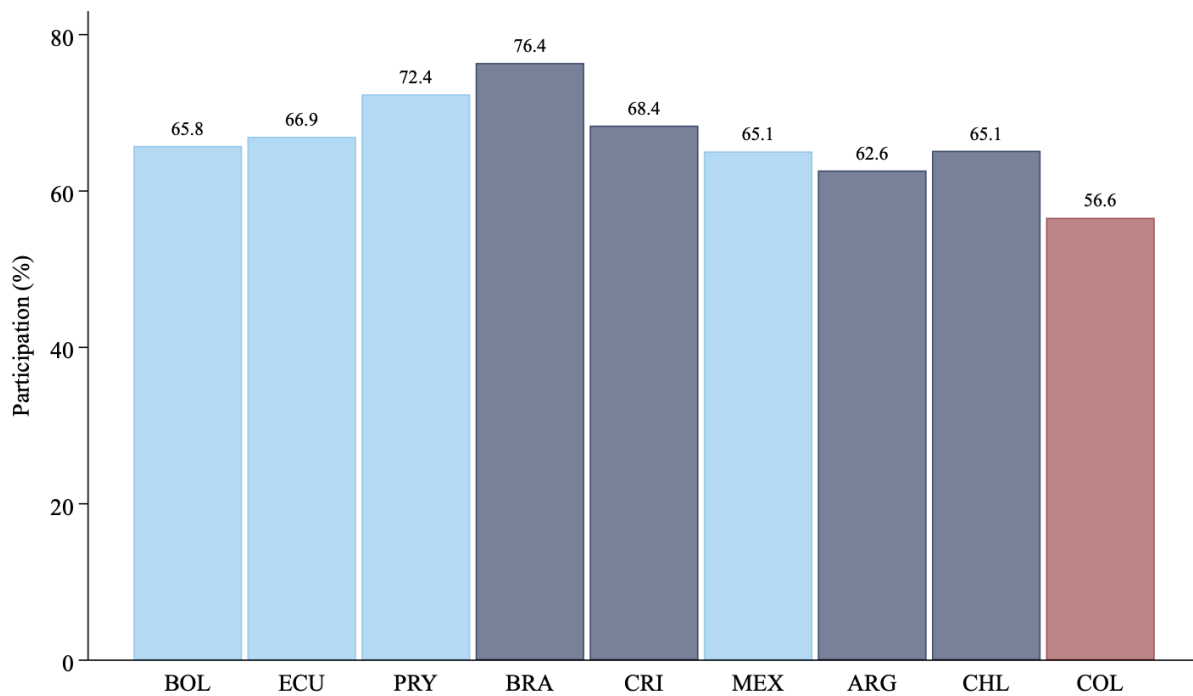
## B Additional Tables and Figures

Table B2: Labor Market Characteristics

|                       | Unemployment       |                    |                   |
|-----------------------|--------------------|--------------------|-------------------|
|                       | (1)                | (2)                | (3)               |
| Inf.                  | -0.07***<br>(0.01) | -0.10***<br>(0.03) | -0.11**<br>(0.04) |
| Log(GDP pc)           |                    | -0.01<br>(0.01)    | -0.06**<br>(0.03) |
| Time FE               | Yes                | Yes                | Yes               |
| Controls              | No                 | No                 | Yes               |
| <i>N</i>              | 216                | 216                | 162               |
| <i>R</i> <sup>2</sup> | 0.136              | 0.781              | 0.884             |

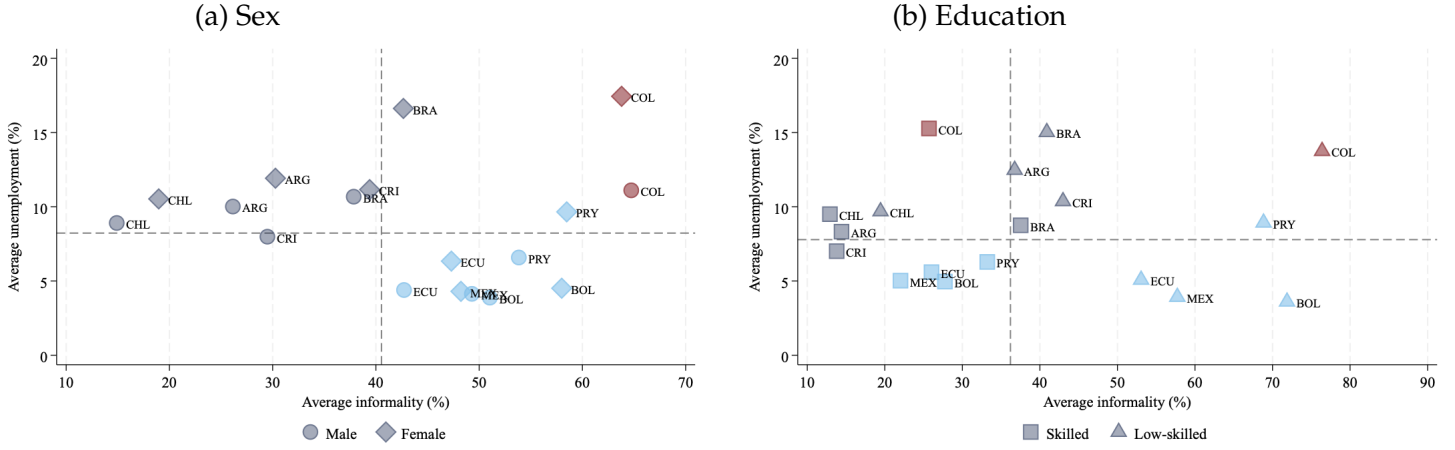
**Note:** This table shows the estimated OLS coefficients of unemployment on informality. Column (1) includes dates fixed effects, column (2) adds Log(GDP) per capita from WDI, and column (3) adds population growth, formality rate, the proportion of population with high education using our data, average informal to formal earnings, rule of law measured with the government effectiveness index from WDI, total share of contributions to formal wages, and the proportion of workers making minimum wage or less. Robust standard errors in parenthesis. \*\*\* 99% significance level, \*\* at 95%, and \* at 90%.

Figure B1: Participation Rate



**Note:** The vertical axis shows the average participation rate per country. Each bar represents a country from our sample, and the bars are ordered from left to right from the lowest to the highest GDP per capita. Bars in dark blue represent countries in Group I, and bars in light blue represent countries in Group IV as used in Figure 1. Data source: Countries' labor market surveys and authors' calculations. See Appendix A for details.

Figure B2: Informality vs. Unemployment by Demographics



**Note:** The vertical axis shows average unemployment rates, and the horizontal axis shows average informality rates. The graph is divided into four groups as described in Section 2. Panel (a) shows differences across sex. Diamonds represent women and circles men. Panel (b) shows differences across education level. Triangles represent low-education workers and squares high-education workers. High education is college or more, low education less than college. Data source: Countries' labor market surveys and authors' calculations. See Appendix A for further details.

Table B3: Transition Probability: Out of the Labor Force

|    | Country        | NN           | NF          | NI           | NU          | FN          | IN           | UN           |
|----|----------------|--------------|-------------|--------------|-------------|-------------|--------------|--------------|
| I  | Argentina      | 85.49        | 2.44        | 6.05         | 6.02        | 2.48        | 14.26        | 32.40        |
|    | Brazil         | 76.59        | 4.72        | 8.25         | 10.43       | 3.72        | 7.67         | 24.27        |
|    | Chile          | 85.71        | 4.09        | 4.85         | 5.32        | 3.19        | 18.00        | 27.89        |
|    | Costa Rica     | 80.87        | 2.32        | 10.02        | 6.79        | 2.01        | 14.55        | 28.77        |
|    | <b>Average</b> | <b>82.03</b> | <b>3.42</b> | <b>7.35</b>  | <b>7.19</b> | <b>2.86</b> | <b>13.56</b> | <b>28.20</b> |
| IV | Bolivia        | 78.42        | 5.19        | 12.51        | 3.87        | 5.43        | 10.87        | 33.77        |
|    | Ecuador        | 80.41        | 4.72        | 11.62        | 3.24        | 4.13        | 12.11        | 30.33        |
|    | Mexico         | 82.00        | 3.93        | 12.04        | 2.15        | 4.37        | 13.49        | 27.96        |
|    | Paraguay       | 80.54        | 1.24        | 12.49        | 5.74        | 1.26        | 9.35         | 22.56        |
|    | <b>Average</b> | <b>79.07</b> | <b>4.25</b> | <b>13.28</b> | <b>3.42</b> | <b>3.78</b> | <b>11.81</b> | <b>26.89</b> |

**Note:** Each column  $OD$  shows the average labor market transition rate per country from the origin state  $O$  to the destination state  $D$ . N denotes out of the labor force, F denotes formal, I informal, and U unemployment. Countries at the top of each panel are those in Group I as defined in Section 2, and countries in the bottom part of the table are those in Group IV. The bottom row below each group shows the average value of each column in the corresponding group, as used in Section 3. Data source: Countries' labor market surveys and authors' calculations. See Appendix A for further details.

Table B4: Labor Market Transitions by Sex and Education

|           | Country    | Type    | FF    | II    | UU    | FI    | FU    | IF    | IU    | UF    | UI    |       |
|-----------|------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Sex       |            |         |       |       |       |       |       |       |       |       |       |       |
| I         | Argentina  | M       | 91.80 | 65.60 | 40.81 | 5.08  | 1.63  | 16.59 | 9.21  | 10.13 | 26.57 |       |
|           |            | W       | 88.61 | 58.02 | 33.83 | 6.23  | 1.39  | 15.69 | 6.50  | 7.13  | 17.81 |       |
|           | Brazil     | M       | 83.30 | 70.15 | 45.45 | 10.46 | 3.15  | 17.67 | 6.42  | 14.61 | 22.13 |       |
|           |            | W       | 81.66 | 68.59 | 45.82 | 10.48 | 3.26  | 15.56 | 6.06  | 10.27 | 14.86 |       |
|           | Chile      | M       | 90.66 | 49.52 | 33.04 | 3.50  | 3.28  | 27.81 | 8.63  | 31.62 | 15.15 |       |
|           |            | W       | 90.26 | 51.62 | 31.95 | 3.33  | 2.30  | 20.16 | 6.29  | 19.50 | 12.68 |       |
|           | Costa Rica | M       | 90.16 | 68.82 | 33.63 | 6.16  | 2.07  | 15.66 | 7.23  | 17.95 | 27.32 |       |
|           |            | W       | 90.22 | 64.37 | 34.16 | 5.09  | 2.00  | 8.77  | 5.51  | 10.74 | 18.49 |       |
|           | Average    | M       | 88.98 | 63.52 | 38.23 | 6.30  | 2.54  | 19.43 | 7.87  | 18.58 | 22.80 |       |
|           |            | W       | 87.63 | 61.14 | 36.40 | 6.34  | 2.24  | 14.61 | 5.94  | 11.89 | 16.07 |       |
| IV        | Bolivia    | M       | 84.08 | 77.78 | 19.88 | 9.64  | 2.82  | 13.04 | 3.36  | 26.24 | 30.31 |       |
|           |            | W       | 81.25 | 72.90 | 20.51 | 7.58  | 2.72  | 7.91  | 2.37  | 16.78 | 18.69 |       |
|           | Ecuador    | M       | 84.27 | 76.67 | 28.54 | 11.57 | 1.98  | 15.66 | 2.61  | 24.37 | 28.31 |       |
|           |            | W       | 82.83 | 68.90 | 27.30 | 8.15  | 2.10  | 8.95  | 1.77  | 16.86 | 15.80 |       |
|           | Mexico     | M       | 80.35 | 75.24 | 21.80 | 15.25 | 2.22  | 16.26 | 2.98  | 25.52 | 36.52 |       |
|           |            | W       | 78.28 | 57.33 | 17.50 | 12.18 | 1.57  | 13.97 | 1.72  | 18.98 | 20.44 |       |
|           | Paraguay   | M       | 88.78 | 80.95 | 33.89 | 8.58  | 1.71  | 7.73  | 4.87  | 8.98  | 39.48 |       |
|           |            | W       | 88.37 | 76.90 | 35.20 | 7.88  | 2.14  | 5.91  | 3.96  | 8.79  | 30.72 |       |
|           |            | Average | M     | 84.57 | 78.03 | 26.03 | 11.28 | 2.11  | 13.16 | 3.30  | 21.34 | 33.91 |
|           |            |         | W     | 82.93 | 69.20 | 25.44 | 8.96  | 2.09  | 9.39  | 2.37  | 14.95 | 21.24 |
| Education |            |         |       |       |       |       |       |       |       |       |       |       |
| I         | Argentina  | H       | 92.96 | 52.40 | 36.73 | 3.66  | 1.14  | 24.64 | 6.85  | 11.77 | 15.14 |       |
|           |            | L       | 88.19 | 64.10 | 37.29 | 7.25  | 1.87  | 14.05 | 8.08  | 7.01  | 24.86 |       |
|           | Brazil     | H       | 84.18 | 74.31 | 48.14 | 10.54 | 2.47  | 18.12 | 2.91  | 15.33 | 13.21 |       |
|           |            | L       | 82.01 | 67.75 | 45.19 | 10.44 | 3.48  | 16.18 | 7.39  | 11.44 | 18.91 |       |
|           | Chile      | H       | 92.31 | 48.34 | 37.16 | 2.70  | 2.37  | 25.74 | 7.38  | 24.61 | 12.08 |       |
|           |            | L       | 89.01 | 51.75 | 29.00 | 4.03  | 3.27  | 23.00 | 7.47  | 26.61 | 15.33 |       |
|           | Costa Rica | H       | 93.44 | 57.66 | 39.58 | 3.47  | 1.25  | 20.56 | 6.02  | 19.25 | 12.11 |       |
|           |            | L       | 87.83 | 68.12 | 32.45 | 7.44  | 2.62  | 11.08 | 6.45  | 12.83 | 26.23 |       |
|           | Average    | H       | 90.72 | 58.18 | 40.40 | 5.09  | 1.81  | 22.27 | 5.79  | 17.74 | 13.14 |       |
|           |            | L       | 86.76 | 62.93 | 35.98 | 7.29  | 2.81  | 16.08 | 7.35  | 14.40 | 21.33 |       |
| IV        | Bolivia    | H       | 87.05 | 63.16 | 25.67 | 5.00  | 2.78  | 19.14 | 3.68  | 6.63  | 13.92 |       |
|           |            | L       | 75.56 | 78.70 | 14.61 | 15.75 | 2.82  | 8.50  | 2.72  | 16.21 | 35.40 |       |
|           | Ecuador    | H       | 89.43 | 67.71 | 32.19 | 5.79  | 1.62  | 17.70 | 2.98  | 22.38 | 16.22 |       |
|           |            | L       | 79.51 | 74.34 | 25.25 | 13.33 | 2.34  | 11.39 | 2.04  | 19.29 | 24.70 |       |
|           | Mexico     | H       | 86.27 | 50.49 | 27.48 | 7.79  | 1.73  | 28.41 | 3.83  | 26.59 | 18.61 |       |
|           |            | L       | 75.45 | 70.63 | 16.91 | 17.86 | 2.11  | 13.72 | 2.32  | 21.35 | 35.00 |       |
|           | Paraguay   | H       | 91.49 | 75.91 | 39.14 | 5.78  | 1.81  | 14.12 | 4.38  | 14.71 | 27.16 |       |
|           |            | L       | 85.08 | 80.02 | 32.77 | 11.37 | 2.26  | 4.82  | 4.56  | 6.48  | 37.34 |       |
|           | Average    | H       | 88.66 | 64.70 | 29.83 | 6.19  | 1.86  | 19.97 | 3.51  | 24.64 | 20.44 |       |
|           |            | L       | 79.14 | 76.10 | 21.08 | 14.51 | 2.34  | 9.78  | 2.80  | 17.14 | 36.13 |       |

**Note:** Each column *OD* shows the average labor market transition per country and type of demographics from origin *O* to destination *D*. M denotes men, W female, H high-education workers and L low-education workers. F denotes formal, I informal, and U unemployment. Countries on the top of each panel are those in Group I as defined in Section 2, and countries in the bottom part of the table are those in Group IV. The bottom row is the middle value of each column, as used in Section 3. Highlighted cells represent transitions above the middle value. Data source: Countries' labor market surveys and authors' calculations. See Section A in the Appendix for further details.

Table B5: Labor Market Transitions out of the Labor Force by Sex and Education

|           | Country    | Type  | NN    | NI    | NU    | NF   | FN    | IN    | UN    |
|-----------|------------|-------|-------|-------|-------|------|-------|-------|-------|
| Sex       |            |       |       |       |       |      |       |       |       |
| I         | Argentina  | M     | 81.97 | 7.47  | 7.32  | 3.24 | 1.49  | 8.60  | 22.49 |
|           |            | W     | 86.88 | 5.49  | 5.50  | 2.13 | 3.77  | 19.79 | 41.23 |
|           | Brazil     | M     | 73.60 | 9.55  | 11.62 | 5.23 | 3.08  | 5.76  | 17.80 |
|           |            | W     | 77.77 | 7.75  | 9.96  | 4.52 | 4.60  | 9.80  | 29.05 |
|           | Chile      | M     | 81.39 | 6.22  | 6.44  | 5.94 | 2.54  | 14.03 | 20.18 |
|           |            | W     | 87.70 | 4.24  | 4.81  | 3.25 | 4.09  | 21.91 | 35.85 |
|           | Costa Rica | M     | 78.07 | 10.14 | 8.05  | 3.75 | 1.60  | 8.29  | 21.10 |
|           |            | W     | 82.08 | 9.96  | 6.26  | 1.71 | 2.69  | 21.35 | 36.61 |
| Average   | M          | 78.76 | 8.34  | 8.36  | 4.54  | 2.18 | 9.17  | 20.39 |       |
|           | W          | 83.61 | 6.86  | 6.63  | 2.90  | 3.79 | 18.21 | 35.69 |       |
| IV        | Bolivia    | M     | 77.98 | 11.53 | 4.29  | 6.20 | 3.47  | 5.82  | 23.57 |
|           |            | W     | 78.62 | 12.98 | 3.68  | 4.72 | 8.46  | 16.82 | 44.02 |
|           | Ecuador    | M     | 80.53 | 10.39 | 3.61  | 5.46 | 2.18  | 5.06  | 18.78 |
|           |            | W     | 80.38 | 12.05 | 3.10  | 4.47 | 6.91  | 20.39 | 40.05 |
|           | Mexico     | M     | 74.49 | 15.63 | 3.99  | 5.89 | 2.19  | 5.52  | 16.17 |
|           |            | W     | 83.04 | 11.81 | 1.72  | 3.43 | 7.96  | 26.99 | 43.09 |
|           | Paraguay   | M     | 78.08 | 13.74 | 6.48  | 1.70 | 0.93  | 6.46  | 17.64 |
|           |            | W     | 80.91 | 12.35 | 5.63  | 1.11 | 2.15  | 13.23 | 25.29 |
| Average   | M          | 74.76 | 14.81 | 4.57  | 5.93  | 2.20 | 5.62  | 17.11 |       |
|           | W          | 78.29 | 14.26 | 3.24  | 4.24  | 6.36 | 19.23 | 36.00 |       |
| Education |            |       |       |       |       |      |       |       |       |
| I         | Argentina  | H     | 83.28 | 5.20  | 7.46  | 4.05 | 2.24  | 16.11 | 36.37 |
|           |            | L     | 86.32 | 6.35  | 5.48  | 1.86 | 2.70  | 13.77 | 30.84 |
|           | Brazil     | H     | 74.92 | 7.69  | 11.36 | 6.03 | 2.81  | 4.66  | 23.32 |
|           |            | L     | 76.91 | 8.35  | 10.26 | 4.48 | 4.07  | 8.68  | 24.46 |
|           | Chile      | H     | 82.99 | 5.22  | 6.80  | 4.97 | 2.61  | 18.52 | 26.13 |
|           |            | L     | 87.09 | 4.67  | 4.57  | 3.65 | 3.67  | 17.76 | 29.32 |
|           | Costa Rica | H     | 80.22 | 7.75  | 7.97  | 4.06 | 1.83  | 15.76 | 29.06 |
|           |            | L     | 81.05 | 10.67 | 6.46  | 1.82 | 2.12  | 14.35 | 28.49 |
| Average   | H          | 80.35 | 6.47  | 8.40  | 4.78  | 2.38 | 13.76 | 28.72 |       |
|           | L          | 82.84 | 7.51  | 6.69  | 2.96  | 3.14 | 13.64 | 28.28 |       |
| IV        | Bolivia    | H     | 76.83 | 8.93  | 5.55  | 8.69 | 5.17  | 14.01 | 32.78 |
|           |            | L     | 79.33 | 14.56 | 2.91  | 3.20 | 5.87  | 10.09 | 33.78 |
|           | Ecuador    | H     | 77.33 | 9.59  | 5.06  | 8.03 | 3.16  | 11.61 | 29.79 |
|           |            | L     | 81.19 | 12.15 | 2.77  | 3.89 | 4.82  | 12.23 | 30.76 |
|           | Mexico     | H     | 79.22 | 9.86  | 3.66  | 7.44 | 4.21  | 17.27 | 27.31 |
|           |            | L     | 81.76 | 13.24 | 1.85  | 3.15 | 4.59  | 13.33 | 26.74 |
|           | Paraguay   | H     | 75.42 | 12.19 | 8.37  | 4.02 | 1.53  | 7.00  | 18.99 |
|           |            | L     | 80.98 | 12.85 | 5.42  | 0.86 | 1.48  | 10.60 | 23.40 |
| Average   | H          | 74.60 | 11.61 | 5.51  | 8.48  | 3.48 | 12.21 | 25.98 |       |
|           | L          | 78.14 | 15.52 | 3.05  | 3.33  | 4.21 | 11.43 | 26.09 |       |

**Note:** Each column *OD* shows the average labor market transition per country and type of demographics from origin *O* to destination *D*. M denotes men, W female, H high-education workers and L low-education workers. N denotes out of the labor force, F formal, I informal, and U unemployment. Countries at the top of each panel are those in Group I as defined in Section 2, and countries in the bottom part of the table are those in Group IV. The bottom row below each group shows the average value of each column in the corresponding group, as used in Section 3. Data source: Countries' labor market surveys and authors' calculations. See Section A in the Appendix for further details.