

ADVANCES AND SETBACKS IN THE LABOUR FORMALIZATION PROCESS IN LATIN AMERICA DURING THE NEW MILLENNIUM

Autores: Roxana Maurizio, Ana Paula Monsalvo, Sol Catania, Silvana Martínez

Fuente: Revista de Economía Política de Buenos Aires, Año 15 Vol 23 (noviembre 2021), pp 31-67

Publicado por: Facultad de Ciencias Económicas de la Universidad de Buenos Aires.

RESUMEN

Durante la década de los 2000 se ha observado una tendencia creciente en la formalidad laboral en varios países de América Latina. Sin embargo, luego de una importante reducción de la informalidad, este proceso se desaceleró, se detuvo o se revirtió en los últimos años, según el país. Este artículo presenta un análisis comparativo del proceso de formalización laboral durante el nuevo milenio en seis países de América Latina, Argentina, Brasil, Ecuador, México, Paraguay y Perú. En particular, este estudio evalúa la intensidad de la rotación ocupacional entre los trabajadores asalariados urbanos, enfocándose en los flujos de entrada a un puesto formal, y examina si este proceso incluyó a todos los grupos de trabajadores o si algunos se beneficiaron particularmente de esta dinámica. Los resultados brindan una guía útil sobre el diseño de políticas públicas destinadas a reducir la informalidad y mejorar la calidad de vida de los trabajadores y sus familias en América Latina.

Palabras clave: informalidad, rotación ocupacional, Latinoamérica.

Roxana Maurizio, Ana Paula Monsalvo, Sol Catania, Silvana Martínez (2021). ADVANCES AND SETBACKS IN THE LABOUR FORMALIZATION PROCESS IN LATIN AMERICA DURING THE NEW MILLENNIUM. Revista de Economía Política de Buenos Aires, (23), 31-67. Recuperado a partir de <http://ojs.econ.uba.ar/index.php/REPBA/article/view/2167>



Esta revista está protegida bajo una licencia Creative Commons Attribution-NonCommercialNoDerivatives 4.0 International. Copia de la licencia: <http://creativecommons.org/licenses/by-nc-nd/4.0/>.

ADVANCES AND SETBACKS IN THE LABOUR FORMALIZATION PROCESS IN LATIN AMERICA DURING THE NEW MILLENNIUM

AVANCES Y RETROCESOS EN EL PROCESO DE FORMALI- ZACIÓN LABORAL EN AMÉRICA LATINA DURANTE EL NUEVO MILENIO

Recibido: 1/12/2020. Aceptado: 26/01/2021

Roxana Maurizio*
Ana Paula Monsalvo**
Sol Catania***
Silvana Martínez***

RESUMEN

Durante la década de los 2000 se ha observado una tendencia creciente en la formalidad laboral en varios países de América Latina. Sin embargo, luego de una importante reducción de la informalidad, este proceso se desaceleró, se detuvo o se revirtió en los últimos años, según el país. Este artículo presenta un análisis comparativo del proceso de formalización laboral durante el nuevo milenio en seis países de América Latina, Argentina, Brasil, Ecuador, México, Paraguay y Perú. En particular, este estudio evalúa la intensidad de la rotación ocupacional entre los trabajadores asalariados urbanos, enfocándose en los flujos de entrada a un puesto formal, y examina si este proceso incluyó a todos los grupos de trabajadores o si algunos se beneficiaron particularmente de esta dinámica. Los resultados brindan una guía útil sobre el diseño de políticas públicas destinadas a reducir la informalidad y mejorar la calidad de vida de los trabajadores y sus familias en América Latina.

Palabras clave: informalidad, rotación ocupacional, Latinoamérica.

* *Universidad de Buenos Aires, Facultad de Ciencias Económicas, Instituto Interdisciplinario de Economía Política (Universidad de Buenos Aires-CONICET), Buenos Aires, Argentina. ORCID <https://orcid.org/0000-0002-5114-6531>*

** *Universidad Nacional de General Sarmiento, Los Polvorines, Argentina. ORCID <https://orcid.org/0000-0003-1342-2790>*

*** *Universidad de Buenos Aires, Facultad de Ciencias Económicas. Becaria PROASIS, Instituto Interdisciplinario de Economía Política (Universidad de Buenos Aires-CONICET), Buenos Aires, Argentina. Silvana Martínez: ORCID <https://orcid.org/0000-0002-8597-2065>. Sol Catania ORCID <https://orcid.org/0000-0001-8501-8194>*

JEL CODE: J46, J63, N36

ABSTRACT

Since the 2000s an increasing trend in labour formality has been observed in several Latin American countries. However, after a significant reduction in informality, this process slowed down, stopped or reversed in recent years, depending on the country. This article presents a comparative analysis of the labour formalization process during the new millennium in six Latin American countries, Argentina, Brazil, Ecuador, Mexico, Paraguay and Peru. In particular, this study assesses the intensity of occupational turnover among urban salaried workers, focusing on the inflows to a formal position, and uncovers whether this process included all groups of workers or if some particularly benefited from these dynamics. Results provide useful guidance about the design of public policies aimed at reducing informality and enhancing the livelihoods of workers and families in Latin America.

Keywords: informality, labour turnover, Latin America

1. Introduction

Since the 2000s an increasing trend in labour formality has been observed in several Latin American countries. However, despite this positive evolution, informal employment continues to be one of the most distinctive characteristics in this region.

Informal employment is a very complex and heterogeneous phenomenon. It encompasses wage earners and self-employed, including employers and own-account workers. Likewise, informality may be found both in big firms and in micro-enterprises. However, the existence of a broad group of informal workers is mainly associated with a high presence of small, unstructured firms that operate with very low levels of productivity and competitiveness.

At the same time, labour informality is not reduced by a single determinant, but rather by a combination of various factors of different types. In particular, sustained job-generating growth enhances labour market predictability, which can promote the issuance of long-term contracts. In this context, formalization becomes more feasible. This is because, from the point of view of employers, a stronger demand for labour makes it less likely for workers to be laid off and consequently for employers to bear the associated costs. From the point of view of workers, a context of economic growth with job creation and drop in unemployment gives them a stronger hand when it comes to negotiating working conditions, which can also promote registration. However, while job-generating economic growth seems to be a necessary condition for the process of employment formalization, it is the interaction between that process and specific policies that determines policy effectiveness and the tangible results in terms of labour registration.

The main aim of this paper is to carry out an in-depth study of the labour formalization process during the new millennium in six Latin American countries -Argentina, Brazil, Ecuador, Mexico, Paraguay and Peru-, from a comparative and a dynamic perspective. In particular, this study assesses the intensity of occupational turnover among urban salaried workers, focusing on the inflows to a formal position; it uncovers whether this process included all groups of workers or if some particularly benefit-

ed from these dynamics; and it analyses the drivers of a strong reduction in informality during the first fifteen years of the new millennium.

Three aspects of this study are worth emphasizing. First, this paper addresses a particularly important issue considering the prevailing high informality in the region and the close correlation between informality, low productivity and poverty. Therefore, results will provide useful guidance to design public policies aimed at reducing informality and enhancing the livelihoods of workers and families in the region.

Second, it resorts to information on labour transitions in addition to the more traditional cross-section analysis. In this regard, this document contributes to the scarce but growing literature on occupational mobility in Latin America.

Third, a comparative analysis between six Latin American countries is carried out. This selection of countries allows us to have a broad picture of the Latin American labour markets, since they have occupational structures and dynamics that greatly differ from one another. Additionally, they account for about 70% of the total population in the region.

The document follows with a literature review about the approaches to informality and the incidence and evolution of formality in Latin America. Section 3 details the sources of information. Section 4 describes the methodologies used. Section 5 presents an overview of labour composition and the evolution of labour formality in the countries under study. Section 6 discusses the dominant traits in labour market turnover in Latin America. Section 7 focuses on the anatomy of the entries to a formal occupation. Section 8 assesses the extent to which the formalization process has implied a widening or a narrowing of the formality gaps throughout the period considered. Section 9 concludes.

2. Theoretical and empirical literature review

2.1 Approaches to informality

Labour informality is one of the categories of analysis that has greatly contributed to the characterization of labour conditions in Latin America.

The concept of informal sector (IS) emerged for the first time in the early seventies, in the International Labour Organization's (ILO) documents for

African countries (ILO, 1972). It was then developed in the Latin American region by the Regional Employment Program for Latin American and the Caribbean (PREALC for its acronym in Spanish), with the objective of explaining the growth of wide sectors of the population that were not able to participate in the processes of productive modernization through a formal labour market, in a context of relatively low levels of unemployment and a light countercyclical behaviour.

Under this “productive approach”, informality reflects the inability of the economies of the region to generate enough formal jobs in relation to the growth of the labour force. Given the shortage or lack of social protection mechanisms that provide an income to those who cannot access a job, some individuals decide to embark on any activity that would allow them to obtain an income that is sometimes barely enough to survive.

In the nineties, ILO (1993) defined a *productive informal sector unit* as one characterized by fixed assets that do not belong to the company but rather to their owners; therefore, it is often not possible to distinguish which expense should be borne by the company and which corresponds to the household. Also, labour relationships in these units are mainly based on personal and social ties. Given these characteristics, the IS is usually associated with small productive units with no clear separation between capital and labour, and low levels of productivity. For this approach, the functioning logic of enterprises in the IE is survival more than accumulation. The jobs generated in this sector constitute the employment in the informal sector (EIS).

The 15th and 17th International Conference of Labour Statistics (ICLS) of ILO have established the classification criteria for formal and informal workers: according to the “productive approach”, the EIS is defined as the workers employed in small productive units that are not legally registered as firms, employ a reduced amount of capital and make limited use of technology.

Along with these conceptual developments based on a “productive approach”, informal employment (IE) is another concept that has developed in more recent years. Based on a “legal approach”, IE refers to a different dimension of informality because it focuses directly on job conditions. In

particular, this approach associates informality with the evasion of labour regulations, defining IE as that of workers not covered by labour legislation.¹

In recent years ILO has gone further in the distinction between IE and EIS. According to Hussmanns (2004, pp 2) *“Employment in the informal sector” and “informal employment” are both measures that are useful for analytical and policy-making purposes, as they refer to different aspects of the “informalisation” of employment and to different targets for policymaking. One of the two concepts cannot replace the other. However, the two concepts need to be defined and measured in such a way that they are consistent and that one can be clearly distinguished from the other”*.

2.2 Hypothesis on the existence and persistence of informality

There are different arguments on the existence and persistence of informality in the developing world and, in particular, in Latin America. From the *voluntary choice* perspective, workers and firms choose their optimal level of engagement with the institutions of State depending on their valuation of the net benefits associated with formality and the State’s enforcement efforts.

In this line, De Soto (1986) argues that the origin and persistence of informality in developing countries would be a response to the complicated and expensive regulations that production units must comply with, even those of small size. Similarly, Perry et. al (2007) conclude that workers and firms make cost–benefit analyses about whether to cross the line into formality, and frequently decide against it.

From another perspective, informality does not stem from workers’ preference based on economic rationality but rather, in many cases, it is the only opportunity for employment (ECLAC, 2008). At a more aggregate level, a highly heterogeneous production structure maintains the informal sector due to the limited capacity of higher-productivity sectors to fully absorb the labour force (Infante, 2011).

However, the heterogeneity existing within informality allows both approaches to be complementary rather than mutually exclusive. In particular, Fields (1990) reconciles these two views by identifying different

segments within informality: “easy-entry” and “upper-tier”. While informality is a last resort for the first segment of workers who seek to earn some income to survive, for the second segment, it is a preference over formal employment. Entry to the latter is restricted by requirements of financial capital and human capital. Therefore, Fields (1990) emphasises the duality that characterises informal employment by differentiating between free-entry and restricted-entry components. For those workers excluded from formal employment and upper-tier informal jobs, accepting a lower-paying informal position can be the only employment possibility.

The notion that informal employment is heterogeneous is also discussed by Kucera and Roncolato (2008). According to them *“The question is not whether there exists some voluntary informal employment in developing countries, but rather how widespread it is and how this might vary for countries at different levels of development and for different workers, particularly men and women”* (Kucera and Roncolato, 2008: 2). Along this line, Kambur (2017) discusses what exactly informality is, proposing an approach that moves away from considering informality as a uniform category. Other authors also recognize the existence of heterogeneity within informal employment (Chen 2012; Grimm et al. 2012; De Vreyer and Roubaud 2013; Basu et al. 2018).

2.3 Evidence on the characteristics and evolution of informality

As for the composition of informality in terms of different attributes, some common patterns arise from the empirical studies.

Bertranou and Casanova (2013), Bertranou et al (2013) and Maurizio and Vázquez (2019) found a positive correlation between firm size and formality. According to Bertranou et al. (2013), in Argentina by the end of 2012, more than 80% of total non-registered employment was concentrated in firms with less than forty workers. Regarding the tasks performed, almost one out of two informal wage earners performed unskilled task, while the other half carried out operational ones. On the other hand, there were few workers performing professional or technical tasks within informal employment. Tenure had a positive impact on labour registration in

the region. These three studies also found an inverse relationship between education and informality in Latin America.

Another widely studied dimension of informality has been the wage gap between formal and informal workers and the presence of wage segmentation. Tornarolli et al (2014) confirm the existence of these gaps in almost all Latin American countries, both among women and men. Arias and Khamis (2008) also find significant wage penalties due to informality in Argentina. Tannuri-Pianto and Pianto (2002) use quantile wage regressions and selection models to analyse wages in formal, informal and self-employed workers in Bolivia. Their results seem to confirm the existence of segmentation at the lower quantiles of the earnings distribution. However, findings at higher quantiles are more consistent with a voluntary choice by high productive workers. Using different parametric and non-parametric econometric methods, Maurizio (2016) points to the existence of significant wage returns to formality in the six countries in the region, Argentina, Brazil, Chile, Mexico, Paraguay and Uruguay. Moreover, the wage gaps are not constant across the income distribution but larger at the lower extreme.

Few are the studies on the characteristics of the labour formalization process observed in many Latin American countries over the 2000s. According to ILO (2018), one of the most important transformations of Latin American labour markets is the process of formalization that has been observed since the beginning of the new millennium. Out of the 51 million jobs created in the region in the 2005-2015 decade, 39 million were formal jobs, thus evidencing the reduction of the informal employment rate in this period.

Maurizio and Vázquez (2019) show that the process of labour formalization in some Latin American countries took place in a period of strong total employment growth, which resulted in the creation of a significant volume of new formal wage-earning occupations. For example, the number of formal jobs rose by almost 60% in Argentina between 2003 and 2017, while total employment increased by 20%. In Brazil, these numbers are 40% and 20%, respectively. In Ecuador, Paraguay and Peru the number of registered jobs more than doubled during the new millennium. Authors

also find a U-shaped relationship between age and formalization for Argentina.

Bertranou et al. (2013) analyse, in particular, the employment formalization in Argentina from 2003 to 2012 as well as the public policies associated with that process. They conclude that labour policies, such as labour inspection, must be accompanied by production, tax, social and labour policies, along with a stable economic growth in order to foster formality. They also found that formalization was more intense among full-time workers and among those with an open-ended contract.

Along this line, Maurizio (2015) concludes that the interaction between job-generating growth and specific policies aimed at labour formalization determined the results observed in terms of labour registration in Argentina and Brazil. In addition, she finds that those informal workers that were initially located in the upper part of the distribution have the highest probabilities of becoming formal. This situation seems to be consistent with the fact that the process of formalization was more intense among those individuals that presented a “better” vector of observable attributes. However, they ended up in the lower deciles of the formal wage earners’ distribution. In other words, they transitioned from the upper part of the income distribution of informal wage earners to the lower part of the income distribution of formal wage earners. Maurizio and Vázquez (2019) confirm these findings in six Latin American countries: Argentina, Brazil, Ecuador, Paraguay and Peru.

Finally, some studies focus on the effects of the reduction in labour informality on labour income inequality (Amarante and Arim, 2015; Beccaria et al., 2020; Maurizio, 2015; Beccaria et al., 2015; Maurizio and Vázquez, 2015; ECLAC and ILO, 2014). One common finding is the positive correlation between the reduction in informality and the fall in wage inequality. ECLAC and ILO (2014) also studies the impact of the formalization process on gender wage gaps finding a heterogeneous effect across countries. In Brazil, Ecuador, Panama and Paraguay, the increase in formality narrowed the wage difference between men and women, given that among the latter the intensity of formalization was stronger. The formalization

process was, however, unequalizing in the Plurinational State of Bolivia and Colombia.

The aforementioned studies have focused on the period characterised by a reduction in informality. This paper contributes to that literature by incorporating the more recent years when, as mentioned before, the formalization process slowed down or reversed.

3. Sources of information

Data used in this paper come from regular household surveys carried out by the national statistical institutes of each country. Although these surveys are not longitudinal, their rotating panel sample allows flow data to be drawn from them. In such schemes, the total sample is divided into a certain number of household groups and each group remains in the sample for a given number of observation periods. Therefore, for each wave of the survey, one of these groups enters the sample while another one leaves. Consequently, it is possible to compare a given proportion of the sample between two or more waves.

For Argentina, the data source is the *Encuesta Permanente de Hogares* (EPH) carried out by the *Instituto Nacional de Estadística y Censos* (INDEC). Micro-data is available for 31 urban areas. As from 2003, after a major methodological change, the survey provides quarterly data. Households are interviewed in two successive quarters, stay out of the sample for the two following quarters and are interviewed again for two more quarters. Therefore, the transitions that can be analysed are those that occur between two yearly observations (in the same quarter of two successive years) or between two successive quarters. The theoretical overlapping sample between one quarter and the same quarter of the following year, as well as between two successive quarters, is 50%.

Brazil's data come from the *Pesquisa Mensal de Emprego* (PME) and the *Pesquisa Nacional por Amostra de Domicílios Contínua* (PNADC), conducted by the *Instituto Brasileiro de Geografia e Estatística* (IBGE). The PME covers six major urban areas and provides monthly information. In this survey, 25% of the sample is replaced every month. Households are observed during four consecutive months, stay out of the sample for eight months and

are interviewed again for another four months, allowing the construction of monthly and yearly panel data. Until 2003 each of these groups represented 25% of the total sampled households and, from that year on, the rotation groups represent 1/8 of the sample, two of which are interviewed each month. This scheme implies a theoretical overlapping of 75% of the sample in two successive months and of 50% in two successive years, thus avoiding “blind periods” (periods with no sample overlapping). The PME ended in 2015. The PNADC began to be carried out in 2012. It covers urban and rural areas. The survey is planned to have quarterly information collecting data of the whole sample during the 3 months. The sample rotation scheme adopted is 1-2 (5). In this scheme, the household is interviewed for 1 month and leaves the sample for 2 consecutive months, this sequence is repeated 5 times for each household before leaving the sample.

The *Encuesta Nacional de Empleo, Desempleo y Subempleo* (ENEMDU) in Ecuador is carried out by the *Instituto Nacional de Estadística y Censos* (INEC). It has a rotating sample scheme that allows building quarterly and yearly panels by interviewing each household up to four times. Data is representative of urban and rural areas. It collects information in March, June, September and December every year in 23 provinces of the country. Households are interviewed in two consecutive quarters, stay out of the sample for two quarters and are interviewed again for two additional quarters. The sample is divided into four groups that represent 25% of the sample, ensuring an overlapping of 50% during the same month of two consecutive years. Contrary to the procedures followed by other surveys, the ENEMDU replaces households that do not respond to the survey and thus it has a very low non-response rate (of around 3% of the initial sample).

The *Encuesta Nacional de Ocupación y Empleo* (ENOE) is the source of data for Mexico. It is conducted by the *Instituto Nacional de Estadística y Geografía* (INEGI) and has national representativeness. The sample rotation scheme involves keeping 80% of the sample overlapped between quarters and rotating the remaining 20%. Each household remains in the sample for 5 consecutive quarters before leaving the sample.

The Paraguayan *Encuesta Continua de Empleo* (ECE) is carried out by the *Dirección General de Estadística, Encuestas y Censos* and has national cover-

age. The scheme used corresponds to a panel sample, which implies visiting the same households a maximum of 5 times.

Finally, in the case of Peru, the *Encuesta Nacional de Hogares* (ENAHOG), the regular household survey conducted by the *Instituto Nacional de Estadística e Informática* (INEI), also covers urban and rural areas. The ENAHOG panel for the period under analysis includes two types of rotation scheme. The first one corresponds to the period 2002 to 2006 when the panel was fixed. The second type began in 2007; since then the rotation scheme is such that it renews the sample by 20% each year.

The period under analysis corresponds to the new millennium. However, specific years considered vary in each country according to data availability. In Argentina all years between 2003 and 2019 are analysed, 2003-2019 for Brazil (2003-2015 PME, 2015-2019 PNADC), 2003-2019 for Ecuador, 2004-2019 for Peru, 2005-2019 for Mexico, and 2010-2017 for Paraguay.

To obtain datasets that could be compared between countries, we included one transition for each individual, based on a one-year interval between observations. This enables us, for instance, to assess whether each person remained employed, became unemployed or left the labour force. In addition, yearly transitions between different work statuses are also identified.

Our study is restricted to male workers between 15 and 65 years of age and female workers between 15 and 60. The upper limits correspond to the compulsory retirement ages in the countries being analysed and we have used them in an attempt to minimize the bias that might come from the exits of older individuals from the labour force. Those individuals for whom information was incomplete or inconsistent regarding personal or occupational variables were removed from the sample.

Since not all the surveys used in this study are representative of each country as a whole, and given that labour markets in rural areas and urban centres may behave differently, our analysis only covers urban areas. To obtain sufficient observations, yearly panels have been pooled in each country, so the results are the average for the period.

One potential problem arises from the fact that not every labour transition can be captured when matching two observations with a one-year

observation window. Given that a transition is identified by comparing these two waves, two or more symmetrical changes in the work status (or in other variables) might take place between those two moments without being captured by the observed data.

Another limitation of panel information is that the proportion of households and individuals that are actually interviewed in two successive moments can be smaller than the proportion of those that should be re-interviewed according to the sample rotation scheme. This loss of cases (“attrition”) is caused by different factors, e.g. people abandoning the panel or difficulties in the data collection process. If this loss is not random, it could introduce bias in the sample. However, there was no available information in the databases that allowed us to differentiate loss of data due to attrition from that associated with the survey rotation scheme. Therefore, an attrition bias correction was not possible. An indirect way to assess potential attrition effects (although it is not enough proof to discard its impact) is to compare key descriptive statistics from panel and cross-section data. We computed the formality rate among different groups of workers and found no relevant differences between them (Table A.1).

4. Measurement of labour formality and methodology

4.1 Measurement of labour formality

This study focuses on labour formality/informality among urban wage workers. In particular, the “legal approach” to informality is adopted. As mentioned before, this approach associates informality with the evasion of labour regulations, defining informal employment as the group of wage earners not covered by labour legislation.²

ILO recommendations indicate that wage earners “*are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits*”.³ The empirical identification of informal wage jobs in each country is based on available information derived from household surveys.

In Argentina, formal wage earners are those whose employers make payroll deductions to pay social security contributions. In Brazil, a wage-

earner is considered as formal if she has signed a labour contract. In Paraguay and Peru, formal workers are those enrolled in a pension system. In Ecuador those indicating that they receive social insurance from the job are construed as registered wage-earners. Finally, in Mexico formal workers are those receiving health insurance from the job.

When putting the legal approach into practice, we seek to make comparable the formal wage-earners identification criterion, which does not necessarily imply the same empirical implementation in each country given that household surveys capture this dimension in different ways. However, comparability is not very much affected because, although every country chooses different variables, they all share the same notion of informality, i.e. the non-fulfilment, or evasion, of the labour legislation and social security regulations.

The decision to identify formal workers exclusively within the group of wage earners is based, on the one hand, on the relevance of this group to understand the process of formalization and, on the other, on the availability of comparable information in the four countries. As for the former, it is in itself relevant to analyse the anatomy of formalization by looking at entries to a formal salaried job and at the reasons behind the decision of employers to register employees, and in particular, a certain subgroup of those workers. On the other hand, labour formalization of other job categories, such as independent workers, generally do not imply higher income or additional non-monetary improvements of job quality. Finally, the surveys employed do not always identify the registration condition for non-wage earners, and hence the formal/informal classification can only be made for wage earning jobs.

4.2 Analysis of occupational turnover

In addition to the descriptive analysis based on cross-section data, this study relies on econometric exercises from annual panel data. Starting with the dynamic analysis, the year-on-year transition matrices between different states (employed, unemployed and inactive) and different types of occupation (formal wage earner, informal wage earner, self-employed workers) are computed.

Then, in order to analyse the contribution of the different groups of workers to labour formalization, it is possible to start with the following equation:

$$\frac{f_{ij}}{F_j} = \frac{S_i \times P(E_{ij})}{F_j}$$

where:

f_{ij} indicates the transition from state i (any labour status other than a formal job) in t to state j (formal job) in $t + 1$

F_j indicates total transitions from any state in t to state j (formal job) in $t + 1$

S_i indicates the stock of non-formal individuals (informal or independent workers, unemployed or inactive) in t

$P(E_{ij})$ indicates the probability of transition from state i in t to state j (formal job) in $t + 1$

$i \neq j$

In turn, the probability of entering formality $P(E_{ij})$ can be decomposed into two factors: on the one hand, the probability of leaving the initial state (different from a formal job) $-P(E_{ij})-$, and on the other hand, the conditional probability of entering a formal job after leaving the initial state $-P(E_j|E_i)-$:

$$P(E_{ij}) = P(E_j|E_i) P(E_i)$$

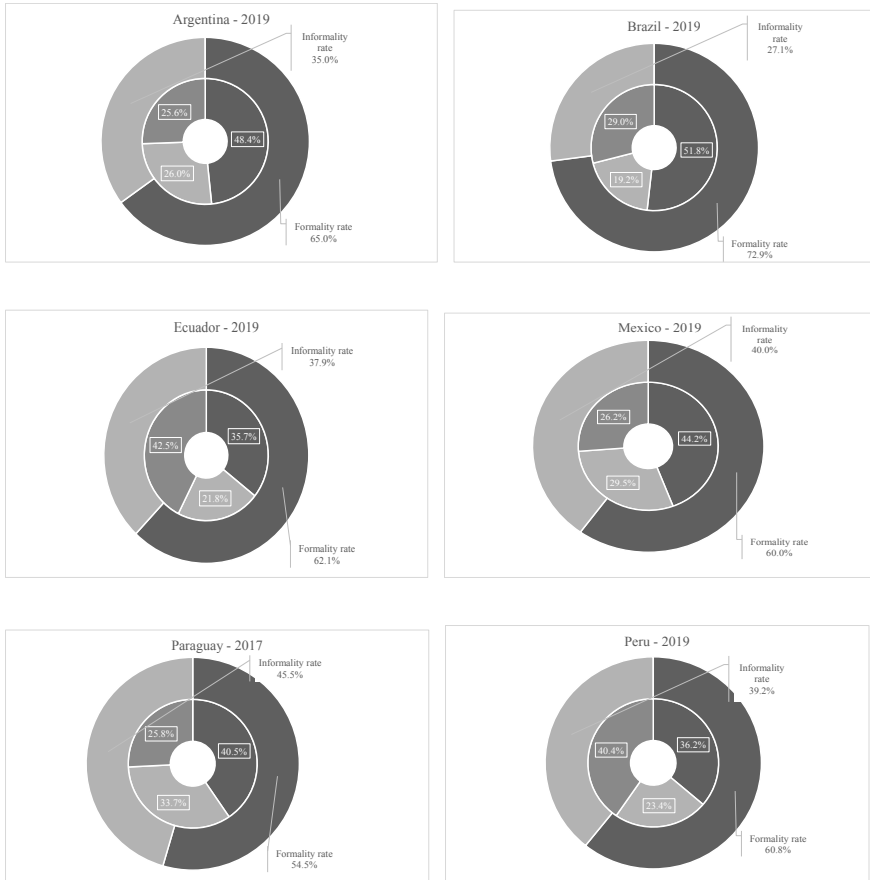
This decomposition allows the evaluation of the extent to which transitions to formality of given groups of individuals are associated with their relative participation in non-formal employment or with a higher probability of transiting to formality. Then, it is also possible to find out if the latter higher probability is in turn associated with the fact that these individuals exit the initial state more frequently or because they have greater possibilities of moving to formality once they abandon their initial state.

5. Labour composition and evolution of labour formality in Latin America during the new millennium

Towards 2014, 76% of all wage earners in the region were formal according to ILO estimates.⁴ These figures are the average of those corresponding to eleven countries weighted by population; the simple average of these countries' incidence is 70%. That share reaches 86% for those working in medium and large establishments (5 or more workers) and 44% for those in micro and small companies. When the comparison is made with total employment, it appears that formal wage earners represented a little more than half of the labour force (55%) of the region considering the weighted average; the simple average amounts to 48%. In other terms, about two thirds of all informal employees (63%) worked in small productive units and in the domestic service sector. Therefore, the proportion of those belonging to medium and large-sized establishments is far from negligible as it reaches almost a third of all wage earners.

However, behind this global panorama the composition of employment is highly heterogeneous among the countries considered in this study, which gives greater worth to the comparative analysis. As we can see in Figure 1, Brazil exhibits the highest level of wage formality in salaried employment (73%), followed by Argentina (65%), Ecuador, Peru and Mexico (about 60%) and, finally, by Paraguay (54%).

Figure 1. Employment composition in six Latin American countries



- Formal wage earners
- Informal wage earners
- Non-wage earners

Source: Authors' elaboration based on Household Surveys

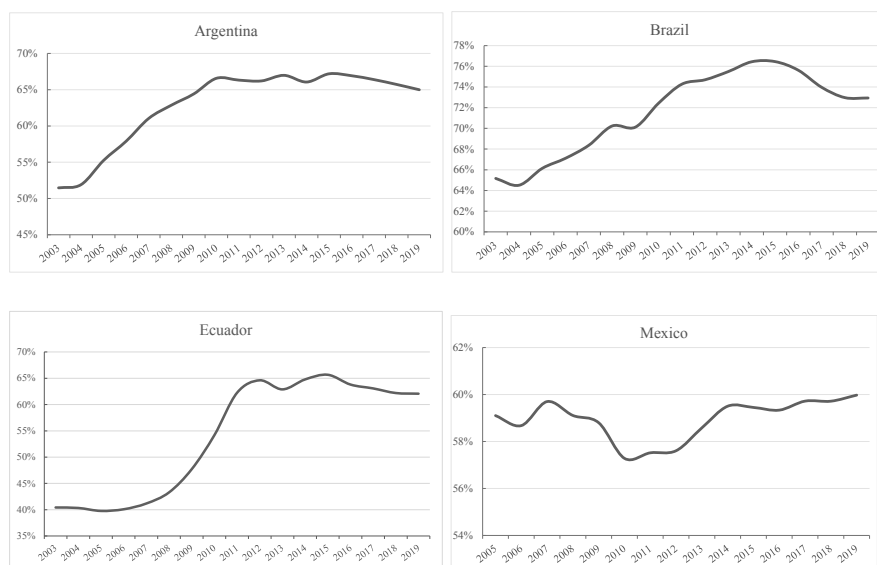
The ranking of countries is somewhat different when considering the share of formality in total employment due to the dissimilar incidence of self-employment. While in Brazil and Argentina around half of the urban employed are formal wage earners, this value drops to 44% and 41% in Mexico and Paraguay, respectively, and to 36% in Peru and Ecuador.

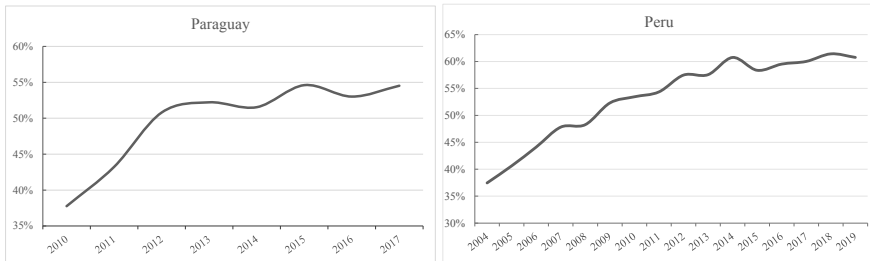
Therefore, these figures show that formal wage earners, those covered by labour regulation, represent a small portion (at most half) of the total urban employed. In Ecuador and Peru, this group of workers is even lower numerically than non-salaried workers.

However, although labour informality continues to be one of the distinctive characteristics in the region, its incidence has fallen in a significant number of Latin American countries during the new millennium.

In the six countries under study, labour formalization meant an increase of around 14 percentage points (pp) in Argentina and 8 pp in Brazil in the formality rate among salaried workers. Even more intense was this process in Ecuador, Paraguay and Peru, where the share of formal workers grew between 17 pp and 23 pp. Mexico, on the contrary, only experienced a slight increase, about 2 pp, between the two ends of the period (Figure 2).

Figure 2. Evolution in the formality rate among urban salaried employment during the 2000s





Source: Authors' elaboration based on Household Surveys

The labour formalization process in these countries during the 2000s has been associated, on the one hand, to a greater dynamism in the generation of new jobs in a macroeconomic context characterised by a relatively high and stable growth rate; and on the other hand, to the implementation of specific public policies aiming at reducing the costs of informality through varied incentive mechanisms.

Indeed, the business cycle is a relevant factor to consider when analysing the drivers of the decline in labour informality. There are theoretical arguments on both the demand and supply sides of the labour market that account for the countercyclical nature of informality. The functioning of the labour market becomes more predictable as a result of sustained economic growth, thus favouring an increase in long-term contracts. In this context, formalization becomes more feasible. In addition, a period of sustained growth in labour demand might also lower the expected probability of layoffs and consequently the probability of employers having to face the costs of firing a formal worker. Hence, the incentives to maintain informal labour relations, associated with the relatively lower costs of staff reductions in downward phases of the business cycle, are reduced. In this context, employers can benefit from the positive effects of long-term labour relations: productivity increases as a result of the intensification of training activities and higher levels of job engagement. There is evidence regarding the positive impact of the economic cycle on formalization (Bosch and Esteban-Pretel, 2009; Boeri and Garibaldi, 2007; Bosch and Maloney, 2008; Corsueil and Foguel, 2012).

Even when the evidence supports the procyclical behaviour of labour formality, economic growth seems a necessary but not sufficient condition. In particular, some of the specific policies implemented in these countries may also account for the process of formalization. Among them, incentives for employment formalization and labour inspections. Some studies have found positive impacts of the reduction of employers' contributions or the simplification of administrative procedures to register workers on formal labour demand (Castillo et al., 2012; Fajnzylber et al., 2009; Delgado et al., 2007; Monteiro and Assunção, 2012), while others have not found significant impacts (Cruces et al., 2010; Chacaltana, 2001, 2008). In addition, the few studies evaluating the impact of inspection seem to confirm that they have a positive effect on labour market formality (Almeida and Carneiro, 2009; de Andrade et al., 2013; Berg, 2010; Ronconi, 2010; World Bank, 2012).

However, after the significant increase in labour formality in the countries under analysis (except Mexico), this process slowed down, stopped or reversed in recent years, hand in hand with the weakening of the macroeconomic performance. As shown in Figure 2, the turning point seems to have been around 2014/2015. In Argentina, after a certain stagnation of the formality rate between 2010 and 2015, it fell 2 pp between that year and 2019. A similar situation is observed in Ecuador, with a slowdown in the increase in formality between 2012 and 2015 and a subsequent reduction of 4 pp over the last four years.

These two contrasting phases are also observed in Brazil where there was an increasing trend in formality until 2015 and a fall between 2015 and 2019 (-3.5pp). After the strong formalization process in Peru and Paraguay until 2014 and 2015, respectively, the proportion of formal workers remained relatively constant. Mexico experienced a different process from the rest of the countries considered. Initially, between 2007 and 2010, the formality rate reduced by 3 pp; then it remained at this level until 2012 and then experienced a slight increase of 2 pp, mainly between 2012 and 2014. As mentioned, as a net result of these contrasting dynamics the formality rate only increased by 2 pp throughout the period considered.

In all these cases, then the more recent behaviour of labour informality is particularly worrisome given that this phenomenon is far from being negligible in the region.

6. Dominant traits in labour market turnover in Latin America over the whole period

Starting with the dynamic analysis, the year-on-year transition matrices between different states (employed, unemployed and inactive) and different types of occupation are analysed. Table A.2 presents the average results for the whole period.

The first finding is that, as expected, formal workers in all the countries are more likely to remain in a formal job than the rest of workers. In particular, between 80% and 90% of initially formal wage earners were still formal workers one year later. Among informal workers, that percentage falls to about 50/55% (with the exception of Paraguay, where it is 64%). Own-account workers are in between, with about 62% to 76% remaining in a similar position after at least one year.

The lower labour stability of informal wage earners could be explained by the fact that they have low or none legal firing costs, thus making them attractive for employment in industries with unstable demand and for unstable occupations. Moreover, informal employees have a greater presence in small-scale firms, which are regularly exposed to risks that make them more vulnerable. As they operate with low capital/labour ratios, the decision to interrupt economic activity is easier. The higher occupational stability among formal wage-earners may be explained by the existence of firing costs as well as by the fact that they are more concentrated in big, more stable, companies.

Secondly, informal workers exiting that occupational category mostly transitioned to formality (Argentina, Brazil, Mexico and Paraguay) or to self-employment (Ecuador and Peru). However, even in this second group of countries, transitions between informality and formality are relevant. At least in part, this has to do with the process of formalization observed for most of the period considered. At all events, as mentioned before, half or more of those who were initially informal remained so after one year.

Even more, informal wage earners constitute the group (of workers) that transits with the greatest intensity towards unemployment.

Thirdly, the most frequent destination for non-salaried workers (most of them non-professional own-account) who leave their initial occupation is inactivity (except in Argentina, where these transits, although important, are somewhat less frequent than exits to an informal position).⁵ This was to be expected as the intermittence associated with these workers' typical occupations could imply that many of them do not actively seek a new job while "waiting" for a new demand of their services or products.

Fourthly, most non-professional own-account workers do not find formal jobs. Indeed, the percentage of transitions to a formal job is extremely low (less than 7%) in all countries. This type of workers and the inactive people are the two groups of individuals with the least probability of moving towards formality, even lower than the unemployed. Instead, their options are limited to precarious wage-earning positions or another form of own-account employment, probably of low quality as well.

Lastly, given that in Latin America, including the countries concerned, unemployment spells are relatively short – basically because of a lack or low coverage of unemployment insurance – only about 15% to 27% of individuals who were initially unemployed remained so one year later. In most cases, this reflects the high number of transitions to inactivity (19-30%) and informal jobs (13-35%). In all cases, it is evident that although the unemployed quickly leave this initial state, this does not translate into intense entries into formality, since in almost all cases (except in Brazil) less than 16% of those unemployed in one year are formal one year later. The same happens for the inactive people, for whom the probabilities of entering the workforce through a formal occupation are very low. Therefore, transits between informal, self-employment and inactivity are very frequent in all the countries.

In conclusion, four groups of people with different dynamics are observed in the countries concerned: (1) formal workers, almost all of whom remain in a formal occupation throughout the year in which they were

5 In Paraguay the frequency of transits to inactivity is not significantly different to the transits to informality.

observed; (2) informal wage earners who, despite the sizeable flows to formality observed during that period, exhibit high rates of permanency in jobs of that kind and significant flows to self-employment or unemployment; (3) self-employed workers with a low probability of entering a formal job and a higher probability of moving towards inactivity and informality; and (4) the unemployed or inactive people, who also have significant probabilities of entering an informal job and low chances of transiting into a formal occupation.

It can, therefore, be expected that -except for the first group- labour turnover in Latin America entails a vicious circle of low wages and no income,⁶ especially given the limited access to social protection in the region.

7. The anatomy of the entries to a formal occupation

Considering that the period under study is mostly characterised by a trend towards labour formalization, the following analysis will be focused exclusively on flows into formality. Table A.3 presents the results of the decomposition of entries into formality from a labour status different from a job registered in the social security system. Column I shows the distribution of non-formal workers in the first observation, column II the probability of exit from this initial state, column III the conditional probability of transiting to a formal job, column IV the entry rate to a formal job, and column V the contribution of each group to the formalization process, mediated by a change of occupation or labour status (.).

In all the countries the major contribution to new formal jobs (column V) comes from individuals who were informal wage earners, followed by inactive people (Argentina, Brazil and Mexico), self-employed (Ecuador and Peru) or unemployed (Paraguay) in the first observation.

In the case of inactive individuals, the high contribution derives mainly from the fact that they represent a relatively large group among initially non-formal workers (column I). In contrast, the group of unemployed, although smaller in number, exhibits higher exit rates from that state (column II) and higher conditional probabilities of transiting to formality after exiting unemployment (column III), in comparison with inactive.

The higher importance of informal salaried workers in this kind of flow in comparison with unemployed is because the former constitutes a larger group and they exhibit higher conditional probabilities of entering formality after leaving the initial state. As mentioned, the relatively higher exit rates from unemployment and, therefore, the relatively shorter duration of these episodes compared to those of employment are expected, especially in countries where unemployment benefits are very low or null. This is because when it becomes a matter of survival, individuals are quick to accept any labour opportunity that they are offered.

The contribution of self-employed workers, especially in Ecuador and Peru, reflects their relatively high proportion among the initial non-formal workers. In all cases, it is observed, as mentioned, that these workers have greater job stability - and therefore lower exit rates - than informal salaried workers. In all the countries, in addition, the lower conditional probabilities of transitioning to formality are again observed (compared to informal wage earners).

Individuals (and, in particular, workers) with an intermediate educational level — i.e. complete secondary and incomplete tertiary education — contribute to a larger extent to the transitions between non-formality and formality. The relatively smaller contribution made by workers with a university education to these transitions is mainly explained by their smaller number among non-formal individuals and, in Argentina, Brazil and Paraguay, also by their relatively lower probability of exiting the initial job. Nevertheless, in all the cases, once they have exited a non-formal job, they have a significantly higher conditional probability of entering a formal job. Workers with higher education usually are better qualified to obtain a formal job once they have left the initial informal position.

Differences between women and men are also significant, where men explain around two thirds of total entries to a formal position (except in Brazil where they account for 50%). This is mostly explained by the fact that men have a relatively higher conditional probability of transiting to formality after leaving the initial state. This seems consistent with the greater difficulties that women have in the Latin American labour market, a stylized fact largely documented in the empirical literature for the region

(Alaniz et al. 2020; ILO, 2014; Beccaria and Paz, 2016; ECLAC and ILO, 2019). This gap widens even more when only the group of those employed in the first observation is considered. In addition to the factor just mentioned, the higher male incidence among those initially employed also explains this result. This is so despite the greater occupational stability - and, therefore, the lower job exit rate - that men have, even in an informal job.

Prime-aged individuals and, in particular workers, made the greatest contribution to inflows towards formality, accounted for more than half of total transitions to a formal position. In all the cases, their high contribution derives mainly from the fact that they represent a relatively large group among initially non-formal workers. In addition, once they exit their jobs, they face higher probabilities of transiting to a formal salaried position. Consistent with the literature for the region (Maurizio, 2011; Cunningham and Salvagno 2011), young people experience the highest occupational turnover. However, except in Brazil and Paraguay, this does not translate into higher conditional probabilities of entering formality.

The findings regarding the contribution to the formalization process of workers according to the size of the firm are heterogeneous across countries: while in Argentina, Ecuador, Mexico and Paraguay workers in small business contributed the most to these types of transitions, in Peru those working in medium-sized firms accounted for the majority of these transitions, while in Brazil the greatest flows to formality were verified among workers initially in large companies. However, a positive correlation between this dimension and the probability of becoming formal is found in all countries.

This is the result of both the increasing exit rate from a non-formal job according to the size of the firm, and the positive correlation between the former and the conditional probability of entering a formal job. It is worth mentioning that a significant part of non-formal workers from large companies transited to another large company after leaving the initial position. Therefore, these transitions might be associated with the fact that formality rates are higher in this type of firm compared to the rest. Also, workers in large companies are more likely to have a wider social network that provides them with more information on employment opportunities

in other companies with the same characteristics. Lastly, there could be a signalling effect whereby workers from large companies might be considered more suitable by future employers to occupy a formal position.

Finally, workers with lower tenure have made the greatest contribution to the flows between non-formality and formality in all the countries considered (except in Mexico). This is mainly because a longer duration on the job reduces exit rates.⁷ In Brazil, Ecuador and Mexico, additionally, the conditional probability of entering formality decreases as tenure increases. This pattern is really striking because it means that workers with lower tenure have greater chances of entering a formal job once they have abandoned their initial informal occupation. Going back to the scarring hypothesis, it could be said that going through informality results in lower chances of getting a formal job, and that the chances get smaller as the duration of the informality episode increases.

8. Bridging the formality gap?

Considering that the formalization process has shown different intensity across individuals and workers, it is interesting to evaluate to what extent this process has involved a widening or a narrowing of the formality gaps throughout the period considered. Table A.4 shows the formality rate among different groups of salaried workers at the beginning of the 2000s and the entry rate to a formal position over the period.

Some groups of workers that presented a relatively initial higher formality rate benefited more intensely from this process. In particular, both the initial formality rate and the speed of the formalization process (proxied by the entry rate) grew with the level of education.

In Argentina, Peru and Brazil, the formality rate among men was higher than among women. In the first two countries, in addition, the dynamics of formalization tended to exacerbate the initial gaps. However, the opposite happened in Ecuador, Mexico and Paraguay: the initial formality rate was lower among men although they were formalised with more intensity than women.

7 Evidence for this negative relationship between the latter variables is commonly found in the international literature.

A reducing formality gap pattern is found in relation with age. In particular, the lower rate of formality among young people is the rule in all countries. Additionally (except in Peru) this group of workers experienced the highest entry rates.

On the contrary, both the initial formality rate and speed of the formalization process increase with the firm size. Then, the formality gaps according to this dimension have significantly widened over the period in all cases.

Finally, the opposite situation appears in the case of tenure, since the gaps have been narrowed due to the higher intensity of formalization among workers with less job duration, who exhibited lower formalization rates at the beginning of the period.

9. Final remarks

This paper analysed the labour formalization process that took place during the new millennium in six Latin American countries -Argentina, Brazil, Ecuador, Mexico, Paraguay and Peru-, from a comparative and a dynamic perspective. In particular, this study assessed the intensity of occupational turnover among urban salaried workers, focusing on the inflows to a formal position and evaluated whether this process took place for all groups of workers or if some of them particularly benefited from these dynamics.

However, after the significant increase in labour formality in the countries under analysis (except Mexico), this process slowed down, stopped or reversed in recent years, hand in hand with the weakening of the macroeconomic performance. This behaviour is particularly worrisome given that labour informality is far from being negligible in the region.

To a certain extent, this is associated with the countries' productive structures, where a very high proportion of enterprises have low productivity and competitiveness levels that constrain the improvement of working conditions. Therefore, in order to secure the trends of employment generation with labour formalization, as well as the consolidation of labour institutions, productive policies aiming at enhancing high efficiency and systemic competitiveness need to be continuously strengthened within a long-term economic development strategy.

References

- Alaniz, E.; T. Gindling, C. Mata and D. Rojas (2020). "Transforming informal work and livelihoods in Costa Rica and Nicaragua", WIDER Working Paper 2020/100, Helsinki.
- Almeida, R. and P. Carneiro (2009) 'Enforcement of Labor Regulation and Firm Performance', *Journal of Comparative Economics* 37(1): 28-46.
- Amarante, V. and R. Arim (2015). *Desigualdad e Informalidad. Un análisis de cinco experiencias latinoamericanas*, CEPAL-Ministerio de Asuntos Exteriores de Noruega.
- Arias, O. and M. Khamis (2008). "Comparative Advantage, Segmentation and Informal Earnings: A Marginal Treatment Effects Approach", IZA DP No. 3916:
- Basu, A.K.; N. Chau; G. Fields and R. Kanbur (2018). "Job Creation in a Multi-sector Labour Market Model for Developing Economies", *Oxford Economic Papers*, 71(1): 119-44.
- Beccaria, L., R. Maurizio and G. Vázquez (2015). "Recent decline in wage inequality and formalization of the labor market in Argentina", *International Review of Applied Economics*, vol. 29, issue 5, pp. 677-700, ISSN: 0269-2171.
- Beccaria, L. and J. Paz (2016). "La inserción precaria de mujeres y los jóvenes en el mercado laboral en América Latina y sus consecuencias para instituciones laborales", Documento de Trabajo, CEPAL.
- Beccaria, L.; R. Maurizio and A. Monsalvo (2020). "Beyond the returns to education: distribute impact of urban salaried labour formalization in Latin America during the 2000s", *Journal of Development and Change*, ISSN: 0012-155X (forthcoming).
- Berg, J. (2010) "Laws or luck? Understanding rising formality in Brazil in the 2000s". ILO Working Paper No 5. Brasília: International Labour Office.
- Bertranou, F., and L. Casanova. (2013). *Informalidad laboral en Argentina: Segmentos críticos y políticas para la formalización*. Buenos Aires: Organización Internacional del Trabajo.
- Bertranou, F.; L. Casanova, M. Jiménez and M. Jiménez (2013). "Informalidad, calidad del empleo y segmentación laboral en Argentina", Documento de Trabajo Nro.2, Oficina de País de la OIT.
- Blau, F., M. Ferber and A. Winkler (2002) *The economics of women, men, and work*, Upper Saddle River: Prentice Hall.
- Boeri, T. and Garibaldi, P. (2007) 'Shadow Sorting', in Frankel, J. and C. Pissarides (eds.) *NBER International Seminar on Macroeconomics 2005*, pp. 125-63. Cambridge: MIT Press.
- Bosch, M. and Esteban-Pretel, J. (2009) 'Cyclical informality and unemployment'. CIRJE Discussion Paper No 613.Tokyo: CIRJE.
- Bucheli, M. and M. Furtado (2001) "Impacto del desempleo sobre el salario. Una estimación de la pérdida salarial para Uruguay", Documento preparado por la Oficina de CEPAL en Montevideo, en el marco del Convenio de Cooperación Técnica entre la CEPAL y el Gobierno de Uruguay - Ministerio de Economía y Finanzas.
- Castillo, V., S. Rojo Brizuela and D. Schleser (2012) 'El impacto de las políticas labo-
-

- rales contracíclicas sobre el empleo asalariado registrado', in MTEySS-ILO (eds.) *Macroeconomía, empleo e ingresos: debates y políticas en Argentina frente a la crisis internacional 2008-2009*, pp. 216-59. Buenos Aires: MTEySS-ILO.
- Chacaltana, J. (2001). "Reforma en la contratación y el despido en el Perú de los noventa", *Revista Economía*, vol. 24, No. 48, Lima, Catholic University of Peru.
- Chacaltana, J. (2008). "Una evaluación del régimen laboral especial para la microempresa en Perú, al cuarto año de vigencia", Lima, International Labour Organization (ILO), unpublished.
- Chen, M. (2012). "The Informal Economy: Definitions, Theories and Policies". WIEGO Working Paper 1. Cambridge, MA: Women in Informal Employment Globalizing and Organizing.
- Cid, J. and J. Paz (2001): "El tránsito por el desempleo en la Argentina. Determinantes y consecuencias sobre el empleo" *Anales de la AAEP*, <http://www.aep.org.ar>.
- Corseuil, C. and M. Foguel (2012) 'Economic Expansion and Increase in Labour Market Formality: A Poaching Approach', *Revista Brasileira de Economia* 66(2): 207-224.
- Cruces, G., S. Galiani and S. Kidyba (2010) "Payroll Taxes, Wages and Employment: Identification through Policy Changes", CEDLAS Working Paper Nro. 93.
- Cunningham, W. and J. Salvagno (2011) 'Youth Employment Transitions in Latin America'. Policy Research Working Paper No 5521. Washington: World Bank.
- Delgado, G., A. Querino, A. Campos, F. Vaz, L. Rangel and M. Stivali (2007) 'Avaliação do Simples: Implicações à Formalização Previdenciária'. Texto para discussão No 1277, Brasília: IPEA.
- De Soto, H. (1986) *El otro sendero: la revolución informal*, Editorial Ausonia, Lima
- De Vreyer, P. and F. Roubaud (eds) (2013). *Urban Labor Markets in sub-Saharan Africa*. Washington, DC: World Bank.
- de Andrade, G. M. Bruhn and D. McKenzie (2013) 'A Helping Hand or the Long Arm of the Law? Experimental Evidence on What Governments Can Do to Formalize Firms'. Policy Research Working Paper No 6435. Washington: World Bank.
- ECLAC and ILO (2014). "Formalización del empleo y distribución de los ingresos laborales", *Coyuntura laboral en América Latina y el Caribe*, Nro. 11, Santiago.
- ECLAC and ILO (2019). "Coyuntura Laboral en América Latina y el Caribe. Evolución y perspectivas de la participación laboral femenina en América Latina", Nro. 21, Santiago.
- Fajnzylber, P.; W. Maloney and G. Rojas (2009) 'Does formality improve micro-firm performance? Quasi-experimental evidence from the Brazilian SIMPLES program'. IZA Discussion Paper No 4531, Bonn: IZA.
- Fields, G. (1990). "Labour Market Modelling and the Urban Informal Sector: Theory and Evidence". In D. Turnham, B. Salomé, and A. Schwarz (eds), *The Informal Sector Revisited*. Paris: Organisation for Economic Co-operation and Development.
- Grimm, M.; P. Knorringa and J. Lay (2012). "Constrained Gazelles: High Potentials in West Africa's Informal Economy". *World Development*, 40(7): 1352-68.

- Hussmanns, R. (2004) 'Measuring the informal economy: From employment in the informal sector to informal employment', Policy Integration Department Working Paper No 53. Geneva: International Labour Organization.
- ILO (2014). "Thematic Labour Overview 1: Transition to Formality in Latin America and the Caribbean" (Revised version) Lima: ILO, Regional Office for Latin America and the Caribbean, 2014. 76p.
- ILO (2018). "Políticas de Formalización en América Latina. Avances y desafíos", Salazar-Xirinachs, J. and Chacaltana, J. (eds.), Oficina Regional para América Latina y el Caribe
- ILO (2002) *Resolution concerning decent work and the informal economy*. Governing Body, 285th Session, Seventh item on the agenda, Geneva.
- ILO (1993) *Resolution concerning statistics of employment in the informal sector*, The Fifteenth International Conference of Labour Statisticians, Geneva.
- Infante, R. (ed) (2011). *El desarrollo inclusivo en América Latina y el Caribe. Ensayos sobre políticas de convergencia productiva para la igualdad*, CEPAL, Santiago.
- Kanbur, R. (2017). "Informality: Causes, Consequences and Policy Responses", *Review of Development Economics*, 21(4): 939–61.
- Kucera, D. and L. Roncolato, (2008) 'Informal employment: two contested policy issues', *International Labour Review* 147 (4): 321-48.
- Maurizio, R. (2011) *Inestabilidad en el mercado de trabajo. Un análisis dinámico para Argentina*. La Plata: Editorial de la Universidad de La Plata.
- Maurizio, R. (2015) "Transitions to formality and declining inequality: Argentina and Brazil in the 2000s", *Journal of Development and Change*, vol. 46, issue 5, pp. 1047-1079.
- Maurizio, R. and G. Vázquez (2015) "Desigualdad e informalidad en América Latina: el caso del Ecuador", en Amarante, V. y R. Arim (ed.) *Desigualdad e Informalidad. Un análisis de cinco experiencias latinoamericanas*, CEPAL-Ministerio de Asuntos Exteriores de Noruega.
- Maurizio, R. (2016). "Labor market and income distribution in Latin America in times of economic growth: advances and shortcomings", in Damill, M.; M. Rapetti and G. Rozewurcell (ed) *Macroeconomics and Development: Essays in Honour of Roberto Frenkel*. Columbia University Press. ISBN: 9780231175081
- Maurizio, R. and G. Vázquez (2019). "Formal salaried employment generation and transition to formality in developing countries. The case of Latin America", Employment Working Paper No. 251, ILO-Geneva.
- Monteiro, J. and J. Assunção (2012) 'Coming out of the shadows? Estimating the impact of bureaucracy simplification and tax cut on formality in Brazilian micro-enterprises', *Journal of Development Economics* 99(1): 105-115.
- Perry, G., W. Maloney, O. Arias, P. Fajnzylber, A. Mason, and J. Saavedra-Chanduvi (2007). *Informality: Exit and Exclusion*. Washington, DC: World Bank.
- Ronconi, L. (2010) 'Enforcement and Compliance with Labor Regulations', *Industrial and Labor Relations Review* 63(4): 719:36.
- Tannuri-Pianto, M. and D. Pianto (2002). "Formal-informal differentials in Brazil. A
-

semi-parametric approach”, paper presented at Graduate School of Economics, Getulio Vargas Foundation.

The World Bank (2012) “Ecuador. Las caras de la informalidad”, Informe No. 67808-EC, Oficina Regional para América Latina y el Caribe.

Tornarolli, L., Battistón, D., Gasparini, L., and Gluzmann, P. (Mayo de 2014). Exploring trends in labor informality in Latin America, 1990-2010. Documentos de trabajo del CEDLAS (159).

ANNEX TABLES

Table A1. Formality rate from cross-section and panel data

Groups	ARGENTINA				BRAZIL				ECUADOR				MEXICO				PARAGUAY				PERU				
	CROSS		PANEL		CROSS		PANEL		CROSS		PANEL		CROSS		PANEL		CROSS		PANEL		CROSS		PANEL		
	2003	2019	2003	2019	2003	2019	2003	2019	2003	2019	2003	2019	2003	2019	2003	2019	2003	2019	2003	2019	2003	2019	2003	2019	
Education	17	13	17	13	29	20	25	21	10	12	9	14	13	7	12	7	8	8	9	9	9	4	5	4	6
Less compl. Secondary	20	29	21	31	30	42	32	40	20	31	28	28	21	25	21	25	26	43	24	44	24	13	26	12	28
Comp. Secondary - Incomp. Tertiary	15	23	14	22	12	21	16	22	11	19	14	17	18	19	20	18	4	3	2	3	2	21	30	18	28
Complete tertiary	52	65	52	66	70	83	73	82	41	62	52	59	52	52	53	51	38	55	35	56	35	37	61	34	62
Gender																									
Women	20	28	20	29	30	38	32	39	17	26	21	24	20	21	20	19	17	23	13	25	13	24	11	24	
Men	32	37	32	37	40	45	41	44	24	36	31	35	32	31	33	32	21	31	22	31	25	37	23	38	
TOTAL	52	65	52	66	70	83	73	82	41	62	52	59	52	52	53	51	38	55	35	56	37	61	34	62	
Age																									
Less than 25	5	5	5	3	13	11	14	11	4	6	5	5	9	7	9	6	5	8	5	9	2	7	1	8	
25-45	30	37	31	41	42	48	38	41	23	36	30	35	32	30	32	29	24	35	24	34	23	34	22	32	
More than 45	17	23	17	21	15	24	21	30	13	20	17	20	11	16	13	16	8	12	6	13	12	21	11	22	
TOTAL	52	65	52	66	70	83	73	82	41	62	52	59	52	52	53	51	38	55	35	56	37	61	34	62	
Firm size																									
Less 6 employees	6	9	7	8	7	6	6	6	3	7	2	7	3	2	3	2	2	3	2	3	3	3	7	3	7
6-40 employees	18	21	19	22	4	3	3	4	9	13	13	12	19	18	19	18	12	17	13	20	7	13	6	14	
More than 40	28	35	27	35	59	74	63	72	29	43	37	41	30	31	31	30	21	35	18	33	28	41	25	40	
TOTAL	52	65	52	66	70	83	73	82	41	62	52	59	52	52	54	50	35	55	33	56	37	61	34	61	
Tenure																									
1 year or less	7	5	7	5	14	15	14	10	18	29	21	26	8	8	8	7	7	9	7	10	8	21	8	21	
>1-5 years	15	19	15	19	31	40	31	42	7	15	10	14	19	20	18	20	12	18	12	20	13	19	10	19	
More than 5	30	41	30	41	25	29	28	30	15	19	22	19	25	24	27	25	19	27	16	26	20	21	21	22	
TOTAL	52	65	52	66	70	83	73	82	41	62	52	59	52	52	54	51	38	55	35	56	42	61	39	62	

Source: Authors' elaboration based on Household Surveys

Table A.2: Transitions matrices for the whole period

Country	Occupation in t	Occupation in t+1				
		Formal	Informal	Own-account	Unemployed	Inactive
Argentina	Formal	87,5%	5,4%	2,6%	2,0%	2,6%
	Informal	14,1%	55,0%	11,2%	6,8%	13,0%
	Own-account	5,3%	12,8%	68,0%	4,1%	9,8%
	Unemployed	11,5%	23,7%	12,1%	25,7%	27,0%
	Inactive	2,9%	9,4%	4,9%	6,5%	76,3%
Brazil	Formal	85,6%	4,3%	2,5%	2,5%	5,1%
	Informal	23,6%	49,8%	10,9%	4,2%	11,5%
	Own-account	6,4%	7,2%	76,0%	1,3%	9,2%
	Unemployed	24,9%	13,1%	6,8%	26,5%	28,8%
	Inactive	5,6%	4,3%	4,0%	4,2%	81,9%
Ecuador	Formal	84,9%	5,1%	4,4%	2,1%	3,4%
	Informal	13,1%	55,2%	18,9%	4,0%	8,8%
	Own-account	4,0%	11,3%	70,3%	2,0%	12,4%
	Unemployed	15,0%	20,9%	16,5%	18,0%	29,6%
	Inactive	2,7%	6,0%	10,3%	4,7%	76,3%
Mexico	Formal	78,0%	10,1%	3,7%	2,6%	5,6%
	Informal	15,9%	54,1%	12,3%	3,6%	14,1%
	Own-account	5,0%	13,6%	62,1%	1,7%	17,5%
	Unemployed	22,9%	24,6%	11,1%	14,5%	26,9%
	Inactive	4,0%	8,6%	8,5%	2,5%	76,3%
Paraguay	Formal	86,4%	6,9%	2,7%	2,2%	1,8%
	Informal	11,7%	64,3%	9,8%	7,0%	7,2%
	Own-account	2,3%	10,8%	70,5%	5,4%	11,0%
	Unemployed	10,7%	35,2%	8,0%	27,0%	19,1%
	Inactive	2,3%	12,7%	8,0%	9,4%	67,6%
Peru	Formal	79,1%	8,6%	5,9%	3,4%	3,0%
	Informal	13,4%	54,0%	15,8%	5,5%	11,3%
	Own-account	4,1%	9,6%	72,6%	3,4%	10,3%
	Unemployed	11,4%	20,3%	14,6%	20,7%	32,9%
	Inactive	3,0%	11,4%	14,6%	9,2%	61,8%

Source: Authors' elaboration based on Household Surveys

Table A.3. Inflows to a formal job by different groups of individuals

ARGENTINA						BRAZIL					
Characteristics	Distribution of non-formal workers in <i>t</i>	Exit rate bw. <i>t</i> and <i>t+1</i>	Conditional prob. of transitioning to a formal job	Entry rate to a formal job	Contribution to inflows to a formal job	Characteristics	Distribution of non-formal workers in <i>t</i>	Exit rate bw. <i>t</i> and <i>t+1</i>	Conditional prob. of transitioning to a formal job	Entry rate to a formal job	Contribution to inflows to a formal job
All individuals						All individuals					
<i>Informal wage earner</i>	24	45	31	14	49	<i>Informal wage earner</i>	16	50	47	24	38
<i>Self-employed</i>	21	32	17	5	16	<i>Self-employed</i>	23	24	27	6	15
<i>Unemployed</i>	9	74	15	11	15	<i>Unemployed</i>	7	74	34	25	18
<i>Inac tive</i>	45	24	12	3	19	<i>Inac tive</i>	53	18	31	6	29
TOTAL	100	35	20	7	100	TOTAL	100	29	35	10	100
Education						Education					
<i>Less compl. Secondary</i>	56	37	11	4	35	<i>Less compl. Secondary</i>	52	30	25	7	37
<i>Comp. Secom - Inc.</i>	36	43	20	9	47	<i>Comp. Secom - Inc.</i>	36	39	35	14	48
<i>Terc.</i>	9	40	34	13	18	<i>Complete Tertiary</i>	11	34	39	13	15
TOTAL	100	39	17	7	100	TOTAL	100	34	31	10	100
Gender						Gender					
<i>Women</i>	55	37	14	5	42	<i>Women</i>	53	33	29	9	47
<i>Men</i>	45	42	20	8	58	<i>Men</i>	47	36	33	12	53
TOTAL	100	39	17	7	100	TOTAL	100	34	31	10	100
Age						Age					
<i>Less than 25</i>	34	40	15	6	30	<i>Less than 25</i>	27	43	31	14	35
<i>25-45</i>	38	43	20	9	51	<i>25-45</i>	29	41	35	15	41
<i>More than 45</i>	27	33	14	5	19	<i>More than 45</i>	44	23	25	6	24
TOTAL	100	39	17	7	100	TOTAL	100	34	31	10	100
Initially occupied						Initially occupied					
Education						Education					
<i>Less compl. Secondary</i>	53	43	16	7	38	<i>Less compl. Secondary</i>	46	36	29	11	37
<i>Comp. Secom - Inc.</i>	34	46	25	11	42	<i>Comp. Secom - Inc.</i>	37	40	39	16	44
<i>Terc.</i>	13	36	40	15	20	<i>Complete Tertiary</i>	17	35	44	15	19
TOTAL	100	43	22	9	100	TOTAL	100	38	35	13	100
Gender						Gender					
<i>Women</i>	42	45	19	9	38	<i>Women</i>	43	40	34	14	44
<i>Men</i>	58	42	24	10	62	<i>Men</i>	57	36	36	13	56
TOTAL	100	43	22	9	100	TOTAL	100	38	35	13	100
Age						Age					
<i>Less than 25</i>	17	59	19	11	21	<i>Less than 25</i>	14	58	40	23	25
<i>25-45</i>	49	44	25	11	56	<i>25-45</i>	39	39	40	15	45
<i>More than 45</i>	34	35	18	6	23	<i>More than 45</i>	47	30	28	8	30
TOTAL	100	43	22	9	100	TOTAL	100	38	35	13	100
Size of firms						Size of firms					
<i>Less 6 employees</i>	77	41	16	7	56	<i>Less 6 employees</i>	71	31	26	8	44
<i>6-40 employees</i>	17	46	32	15	28	<i>6-40 employees</i>	5	41	39	16	6
<i>More than 40</i>	6	54	46	25	16	<i>More than 40</i>	24	55	49	27	50
TOTAL	100	43	21	9	100	TOTAL	100	38	35	13	100
Tenure						Tenure					
<i>Less than 1 year</i>	32	55	21	12	40	<i>Less than 1 year</i>	23	56	40	22	39
<i>1-5 years</i>	34	44	22	10	34	<i>1-5 years</i>	35	40	35	14	36
<i>More than 5 years</i>	34	31	23	7	26	<i>More than 5 years</i>	42	26	30	8	25
TOTAL	100	43	22	9	100	TOTAL	100	38	35	13	100

ECUADOR						MEXICO					
Characteristics	Distribution of non-formal workers in <i>t</i>	Exit rate bw. <i>t</i> and <i>t+1</i>	Conditional prob. of transiting to a formal job	Entry rate to a formal job	Contribution to inflows to a formal job	Characteristics	Distribution of non-formal workers in <i>t</i>	Exit rate bw. <i>t</i> and <i>t+1</i>	Conditional prob. of transiting to a formal job	Entry rate to a formal job	Contribution to inflows to a formal job
All individuals						All individuals					
<i>Informal wage earner</i>	20	45	29	13	46	<i>Informal wage earner</i>	25	46	35	16	49
<i>Self-employed</i>	32	30	14	4	22	<i>Self-employed</i>	24	38	13	5	15
<i>Unemployed</i>	4	82	18	15	12	<i>Unemployed</i>	4	85	27	23	11
<i>Inac five</i>	44	24	12	3	21	<i>Inac five</i>	47	24	17	4	24
TOTAL	100	33	18	6	100	TOTAL	100	35	23	8	100
Education						Education					
<i>Less compl. Secondary</i>	58	31	9	3	30	<i>Less compl. Secondary</i>	42	37	11	4	26
<i>Comp. Secun - Inc. Terc.</i>	36	40	20	8	52	<i>Comp. Secun - Inc. Terc.</i>	46	42	18	8	50
<i>Complete Tertiary</i>	6	45	36	16	17	<i>Complete Tertiary</i>	13	45	29	13	24
TOTAL	100	35	16	6	100	TOTAL	100	40	17	7	100
Gender						Gender					
<i>Women</i>	55	35	12	4	42	<i>Women</i>	56	37	14	5	41
<i>Men</i>	45	36	20	7	58	<i>Men</i>	44	44	21	9	59
TOTAL	100	35	16	6	100	TOTAL	100	40	17	7	100
Age						Age					
<i>Less than 25</i>	31	35	14	5	28	<i>Less than 25</i>	32	43	16	7	33
<i>25-45</i>	40	39	19	7	52	<i>25-45</i>	40	42	19	8	48
<i>More than 45</i>	29	30	13	4	20	<i>More than 45</i>	28	35	14	5	19
TOTAL	100	35	16	6	100	TOTAL	100	40	17	7	100
Initially occupied						Initially occupied					
Education						Education					
<i>Less compl. Secondary</i>	59	35	12	4	35	<i>Less compl. Secondary</i>	42	44	12	5	27
<i>Comp. Secun - Inc. Terc.</i>	33	43	25	11	49	<i>Comp. Secun - Inc. Terc.</i>	44	48	20	9	48
<i>Complete Tertiary</i>	7	40	40	16	16	<i>Complete Tertiary</i>	14	48	32	15	25
TOTAL	100	38	19	7	100	TOTAL	100	46	19	9	100
Gender						Gender					
<i>Women</i>	40	43	15	6	34	<i>Women</i>	40	50	14	7	33
<i>Men</i>	60	35	23	8	66	<i>Men</i>	60	44	22	9	67
TOTAL	100	38	19	7	100	TOTAL	100	46	19	9	100
Age						Age					
<i>Less than 25</i>	15	52	18	10	19	<i>Less than 25</i>	20	59	17	10	24
<i>25-45</i>	49	39	22	9	58	<i>25-45</i>	48	45	21	9	53
<i>More than 45</i>	36	31	15	5	23	<i>More than 45</i>	32	39	16	6	23
TOTAL	100	38	19	7	100	TOTAL	100	46	19	9	100
Size of firms						Size of firms					
<i>Less 6 employees</i>	84	36	14	5	58	<i>Less 6 employees</i>	81	44	13	6	56
<i>6-40 employees</i>	12	45	35	16	26	<i>6-40 employees</i>	15	52	32	17	31
<i>More than 40</i>	4	57	51	29	16	<i>More than 40</i>	4	64	43	28	13
TOTAL	100	38	19	7	100	TOTAL	100	46	18	8	100
Tenure						Tenure					
<i>Less than 1 year</i>	48	48	21	10	65	<i>Less than 1 year</i>	23	58	18	10	31
<i>1-5 years</i>	18	33	19	6	16	<i>1-5 years</i>	34	48	17	8	37
<i>More than 5 years</i>	34	27	15	4	19	<i>More than 5 years</i>	43	37	15	6	32
TOTAL	100	38	19	7	100	TOTAL	100	46	16	7	100

PARAGUAY						PERU					
Characteristics	Distribution of non-formal workers in <i>t</i>	Exit rate bw. <i>t</i> and <i>t+1</i>	Conditional prob. of transiting to a formal job	Entry rate to a formal job	Contribution to inflows to a formal job	Characteristics	Distribution of non-formal workers in <i>t</i>	Exit rate bw. <i>t</i> and <i>t+1</i>	Conditional prob. of transiting to a formal job	Entry rate to a formal job	Contribution to inflows to a formal job
All individuals						All individuals					
<i>Informal wage earner</i>	34	36	33	12	62	<i>Informal wage earner</i>	24	46	29	13	48
<i>Self-employed</i>	23	30	8	2	8	<i>Self-employed</i>	38	27	15	4	24
<i>Unemployed</i>	10	73	15	11	17	<i>Unemployed</i>	8	79	14	11	14
<i>Inactive</i>	33	32	7	8	12	<i>Inactive</i>	31	38	8	3	14
TOTAL	100	37	17	6	100	TOTAL	100	39	17	7	100
Education						Education					
<i>Less compl. Secondary</i>	55	43	6	3	27	<i>Less compl. Secondary</i>	39	39	6	2	15
<i>Comp. Secom - Inc. Terc.</i>	43	49	18	9	70	<i>Comp. Secom - Inc. Terc.</i>	48	47	14	7	52
<i>Complete Tertiary</i>	2	47	13	6	2	<i>Complete Tertiary</i>	13	50	31	16	32
TOTAL	100	46	12	5	100	TOTAL	100	44	14	6	100
Gender						Gender					
<i>Women</i>	54	46	9	4	43	<i>Women</i>	53	44	10	4	36
<i>Men</i>	46	45	15	7	57	<i>Men</i>	47	45	19	8	64
TOTAL	100	46	12	5	100	TOTAL	100	44	14	6	100
Age						Age					
<i>Less than 25</i>	33	50	11	5	32	<i>Less than 25</i>	34	52	9	5	25
<i>25-45</i>	46	48	14	7	55	<i>25-45</i>	41	44	18	8	54
<i>More than 45</i>	22	36	9	3	13	<i>More than 45</i>	25	34	16	5	22
TOTAL	100	46	12	5	100	TOTAL	100	44	14	6	100
Initially occupied						Initially occupied					
Education						Education					
<i>Less compl. Secondary</i>	52	43	8	4	28	<i>Less compl. Secondary</i>	38	36	6	2	17
<i>Comp. Secom - Inc. Terc.</i>	45	44	23	10	69	<i>Comp. Secom - Inc. Terc.</i>	47	43	12	5	51
<i>Complete Tertiary</i>	3	39	20	8	3	<i>Complete Tertiary</i>	15	41	26	10	32
TOTAL	100	43	15	7	100	TOTAL	100	40	12	5	100
Gender						Gender					
<i>Women</i>	43	45	13	6	38	<i>Women</i>	46	37	9	3	32
<i>Men</i>	57	42	17	7	62	<i>Men</i>	54	43	14	6	68
TOTAL	100	43	15	7	100	TOTAL	100	40	12	5	100
Age						Age					
<i>Less than 25</i>	21	51	16	8	25	<i>Less than 25</i>	23	61	8	5	24
<i>25-45</i>	54	45	16	7	58	<i>25-45</i>	48	40	14	6	57
<i>More than 45</i>	25	35	13	4	17	<i>More than 45</i>	29	23	14	3	19
TOTAL	100	43	15	7	100	TOTAL	100	40	12	5	100
Size of firms						Size of firms					
<i>Less 6 employees</i>	70	41	7	3	35	<i>Less 6 employees</i>	79	26	6	1	24
<i>6-40 employees</i>	19	46	24	11	34	<i>6-40 employees</i>	14	89	16	14	40
<i>More than 40</i>	11	47	37	17	31	<i>More than 40</i>	7	99	24	24	36
TOTAL	100	43	14	6	100	TOTAL	100	40	12	5	100
Tenure						Tenure					
<i>Less than 1 year</i>	34	54	15	8	42	<i>Less than 1 year</i>	41	59	13	8	58
<i>1-5 years</i>	32	43	17	7	34	<i>1-5 years</i>	30	35	13	5	26
<i>More than 5 years</i>	34	34	14	5	24	<i>More than 5 years</i>	30	16	17	3	16
TOTAL	100	43	15	7	100	TOTAL	100	39	13	5	100

Source: Authors' elaboration based on Household Surveys

Table A.4. Initial formality rate and exit rate by different groups of workers

	ARGENTINA		BRAZIL		ECUADOR		MEXICO		PARAGUAY		PERU	
	Initial formality rate	Entry rate	Initial formality rate	Entry rate	Initial formality rate	Entry rate	Initial formality rate	Entry rate	Initial formality rate	Entry rate	Initial formality rate	Entry rate
Education												
Less compl. Secondary	36	7	62	11	24	4	35	5	17	4	15	2
Comp. Secon - Inc. Terc.	59	11	77	16	65	11	55	9	53	10	29	5
Complete Tertiary	81	15	87	15	83	16	77	15	71	8	64	10
TOTAL	52	9	73	13	52	7	53	9	35	7	34	5
Gender												
Women	47	9	70	14	58	6	54	7	37	6	29	3
Men	57	10	76	13	48	8	53	9	34	7	38	6
TOTAL	52	9	73	13	52	7	53	9	35	7	34	5
Age												
Less than 25	28	11	63	23	29	10	38	10	23	8	6	5
25-45	56	11	78	15	52	9	58	9	39	7	43	6
More than 45	60	6	74	8	69	5	59	6	38	4	47	3
TOTAL	52	9	73	13	52	7	53	9	35	7	34	5
Size of firms												
Less 6 employees	20	7	35	8	9	5	10	6	4	3	7	1
6-40 employees	55	15	56	16	43	16	59	17	41	11	27	14
More than 40	81	25	83	27	52	29	82	28	62	17	68	24
TOTAL	52	9	73	13	52	7	54	8	33	6	34	5
Tenure												
Less than 1 year	21	12	54	22	40	10	32	10	18	8	20	8
1-5 years	48	10	76	14	57	6	51	8	35	7	38	5
More than 5 years	87	7	84	8	71	4	69	6	58	5	69	3
TOTAL	52	9	73	13	52	7	54	7	35	7	39	5