Analysis of labour informality in Chile: measurement, characteristics and main drivers

Rodrigo Silva Jerez

Received: 10/01/2024
Accepted: 13/09/2024

Abstract

In this article, labour informality in Chile is examined through an analysis of its measurement, trends and driving factors. The article contains a review of the theories and methods used to measure informality, as well as a quantitative analysis that draws on data from the National Employment Survey of the National Institute of Statistics of Chile. The study comprises a descriptive overview of trends in informality and an inferential analysis using logit and probit regression models. The findings show that the probability of being in informal employment is higher for women and for those who have a lower level of education and are engaged in small businesses and in low-productivity sectors. These trends have been consistent over time, underscoring the need for policies that take into account both individual characteristics and those of the productive environment in order to address labour informality in Chile.

Keywords

Employment, labour market, informal sector, economic theory, measurement, econometric models, employment statistics, Chile

JEL classification

J46, J21, J31, C25, O17

Author

Rodrigo Silva Jerez is a political scientist and has a master's degree in economic policy and public economics. Email: rodrigo.silva.jerez@gmail.com.

I. Introduction

The labour market in Latin America and the Caribbean is characterized by high levels of informality. In most countries, the informal employment rate exceeds 50%, and, in some extreme cases, such as in the Plurinational State of Bolivia and Honduras, more than 80% of workers have informal jobs. According to the International Labour Organization (ILO), there are at least 140 million informally employed people in Latin America and the Caribbean, representing approximately 50% of the workforce. Chile and Uruguay have the lowest informal employment rates in the region, at less than 30%. In 2023, the informal employment rate in Chile stood at 27.24%. Although those rates are lower than the regional average, the job insecurity, poverty and lack of social protection associated with informality highlight the urgent need for action through public policies.

During the coronavirus disease (COVID-19) pandemic, informal employment rates fell more sharply than those of formal employment in several Latin American countries, including Chile. This led to a predictable outcome: the labour market recovery would be driven by informal work. In Argentina, Costa Rica, Mexico, Paraguay and Peru, more than 70% of the jobs created between mid-2020 and the first quarter of 2021 were informal, according to ILO. In Chile, that figure was 53% (Maurizio, 2021).

The aim of this article is to contribute to scientific research on labour informality, with a focus on the main drivers of informality in Chile. The study should lead to the production of meaningful information to guide and inform public policies, and to raise awareness, from the perspective of academic research, of a national objective related to the achievement of Sustainable Development Goal 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all) of the 2030 Agenda for Sustainable Development.

The study draws on data from the National Employment Survey of the National Institute of Statistics of Chile, which has included labour informality in its reporting since the third quarter of 2017. Logit and probit regression models were used for the study, as they are suitable for estimating probability functions and are often used in labour market studies.

Alongside the introduction, the article comprises three sections. The first section contains an overview of the theoretical and conceptual framework used to explain labour informality and sets out the variables used in the study. In the second, a descriptive analysis of labour informality in Chile is presented. The third section includes an analysis of the drivers that influence the probability of informal employment in Chile, followed by a presentation of the main findings.

II. Models and theoretical concepts applied to labour informality

Labour informality has been studied from various perspectives since it was identified as a unit of analysis, and the approach has evolved over time, in line with changes in the labour market and prevailing analytical approaches. There are at least five schools of thought aimed at explaining the existence of an informal economy and informal jobs (see table 1).

Table 1
Overview of theoretical approaches to informality

School	Approach	Cause	Authors
Traditional sector	Large labour surplus in developing countries is gradually absorbed into the modern industrial sector.	Inability of certain activities to be integrated into new economic opportunities.	Lewis, 1954
Dualist	Coexistence in Latin American cities of a modern sector with high-quality jobs and a sector dominated by informal employment (urban informal sector).	Imbalance between population growth rates and modern industrial jobs, and a mismatch between people's skills and the opportunities available.	Hart, 1973; Regional Employment Programme for Latin America and the Caribbean, 1976; Tokman and Souza, 1976; Tokman, 1978, 2004
Structuralist	Informality as an integral component of the modern economy. The informal sector is subordinated to the formal sector through productive decentralization.	The introduction of more flexible and efficient production systems results in productive decentralization, which fosters the informal subcontracting of goods and labour.	Portes, 1989; Portes et al., 1989
Legalist and "exit"	The legal and institutional frameworks entail high costs that hinder the formalization of certain segments. According to the exit view, some groups voluntarily choose informal employment because it is more beneficial.	Labour informality can be seen as a response to the complex legal system or as a voluntary choice resulting from a cost-benefit analysis of entering the formal sector.	De Soto, 1986; Maloney, 1999; Levy, 2008; Perry et al., 2007; Schneider, 2014
Integrated	Segmentation of labour informality according to economic risk and authority, as well as gender.	The causes vary depending on the segment of informality under consideration. This approach includes the causes set out under the other approaches.	Chen, 2012; Gagnon, 2009; Kanbur, 2009

Source: Prepared by the author, on the basis of Chen, M. A. (2007). Rethinking the informal economy: linkages with the formal economy and the formal regulatory environment. *DESA Working Paper* (46) (ST/ESA/2007/DWP/46). United Nations; Chen, M. (2012). The informal economy: definitions, theories and policies. *WIEGO Working Paper* (1). Women in Informal Employment: Globalizing and Organizing; De Soto, H. (1986). *El otro sendero: la revolución informal*. Editorial El Barranco; Gagnon, J. (2009). Moving out of bad jobs – more mobility, more opportunity. In J. P. Jütting and J. R. de Laiglesia (Eds.), *Is Informal Normal? Towards More and Better Jobs in Developing Countries*, 115–142. OECD Publishing; Hart, K. (1973). Informal income opportunities and urban employment in Ghana. *The Journal of Modern African Studies, 11*(1); Levy, S. (2008). *Good Intentions, Bad Outcomes: Social Policy, Informality, and Economic Growth in Mexico*. Brookings Institution Press; Kanbur, R. (2008). Conceptualizing informality: regulation and enforcement. *The Indian Journal of Labour Economics, 52*(1); Lewis, W. A. (1954). Economic development with unlimited supplies of labor. *The Manchester School, 22*(2), 139–191; Maloney, W. F. (1999). Does informality imply segmentation in urban labor markets? Evidence from sectoral transitions in Mexico. *The World Bank Economic Review, 13*(2), 275–302; International Labour Organization. (2013a). *The Informal Economy and Decent Work: A Policy Resource Guide — Supporting Transitions to Formality*; Ludmer, G. (2019). ¿Qué hay de nuevo en el viejo debate sobre las causas de la informalidad laboral? *Cuadernos de Economía Crítica, 5*(10), 99–121; Perry, G E., Maloney, W. F., Arias, O. S., Fajnzylber, P., Masonand, A. D. and Saavedra-Chanduvi, J. (2007). *Informality: Exit and Exclusion*; Portes, A. (1989). La informalidad como parte integral de la economía moderna y no como indicador de atraso: respuesta a Klein y Tokman. *Estudios Sociológicos, 7(*20), 369–374; Portes, A., Castells, M. and Benton, L. A. (Eds.) (1989). *The Informal Economy: Studies in Advanced and Less Developed Countries.* Johns Hopkins University Press; Regional Employment Programme for Latin America and the Caribbean. (1976). *El problema del empleo en América Latina: situación, perspectivas y políticas*; Schneider, F. (2014). The shadow economy and shadow labor force: a survey of recent developments. *IZA Discussion Paper* No. 8278. Institute for the Study of Labor; Tokman, V. E. (1978). An exploration into the nature of informal-formal sector relationships. *World Development, 6*(9/10), 1065–1075; Tokman, V. E. (2004). *Una voz en el camino: Empleo y equidad en América Latina: 40 años de búsqueda*. Fondo de Cultura Económica; Tokman, V. E. and Souza, P. R. (Eds.) (2004). *El empleo en América Latina: problemas económicos, sociales y políticos*. Siglo XXI.

1. Models

(a) Traditional sector

The first theoretical approach to labour informality emerged in the 1950s and 1960s and was focused on the continued presence of traditional activities in modern economies. During the post-war "golden age", Europe and the United States saw major improvements in employment and job security, driven by mass production, the formalization of employment contracts and the development of legal standards for labour relations. As part of this approach, labour informality was viewed through a modernizing lens, with the existence of a "traditional sector" in some developing economies. Subsistence

was the main objective of that sector, which was characterized by small-scale production units, low productivity and low wages. It was composed of surplus labour carried out by "petty traders, small holders and casual wage workers" (ILO, 2013a, p. 3). Under this approach, the persistence of traditional or small-scale forms of production in semi-industrialized countries was explained by growth in labour supply that exceeded the absorptive capacity of economic development, together with a mismatch between traditional skills and new economic opportunities. It was also believed that, through economic growth and the implementation of social policies, the sector would eventually be absorbed into the modern economy.

(b) Dualist school

Through its employment missions to Africa in the 1970s, ILO noted that the traditional sector had not only persisted, but had also expanded into profitable activities, no longer limited to marginal survival work. ILO subsequently began referring to smaller-scale, low-technology, low-productivity activities carried out by family-based economic units as the "urban informal sector", and moving away from the term "traditional sector". The high prevalence of the urban informal sector was attributed to the fact that workers earned more in that sector than in agriculture. Formal and informal incomes thus coexisted in the economies studied. Formal incomes were characterized by their stability over time and derived from wages in the private and public sectors, as well as from transfers such as pensions and unemployment benefits. Informal incomes, in turn, were derived from self-employment in primary and secondary sector activities, distribution, small-scale transportation, transfers between individuals and certain illicit activities, such as trafficking in stolen goods, usury and prostitution (Díaz Andrade and Gálvez Pérez, 2015, p. 5).

The establishment of the Regional Employment Programme for Latin America and the Caribbean (PREALC) by ILO in 1968 spurred research on the urban informal sector that was focused on self-employment, involving mostly rural internal migrants who were unable to find employment in the modern sectors of Latin American economies. This approach was termed "dualist", as it envisioned the coexistence of a modern sector with higher and fixed wages, and a traditional sector with lower, more flexible wages and high mobility. According to PREALC, the urban informal sector was comprised of workers or businesses engaged in poorly organized activities, using simple technology and operating in highly competitive markets. They involved small-scale production units with few workers, precarious conditions, no public financing and an emphasis on survival rather than accumulation.

According to Ludmer (2019), the inability of Latin American economies to create formal jobs for rural internal migrant workers could be due to the limited capacity of the modern sector of peripheral economies to generate and appropriate economic surpluses, the small size of the domestic market, the way that the benefits of technological progress are distributed, the adoption of capital-intensive technologies and the transnational nature of industrialization (p. 104).

(c) Structuralist school

The structuralist school, led by Alejandro Portes, among others, views the informal sector not only as a remnant of the traditional economy, but also as a feature of capitalist development. Under this approach, the causes of informality can be found in the productive decentralization associated with globalization and changes in the social division of labour, which have called for more flexible production systems (Tokman, 2001, p. 12; Ludmer, 2019, p. 106). Informal subcontracting emerges as a result of attempts to minimize costs and maximize production. There is therefore a focus on the employment relationship and on its regulation or lack thereof.

Seen this way, the informal sector is not outdated or premodern, but is rather a component of the modern economy, operating under the formal sector to reduce costs and boost competitiveness. Labour informality is integrated into modern sectors through productive decentralization processes, both nationally and internationally (Portes et al., 1989, cited in Salazar-Xirinachs and Chacaltana, 2018).

Furthermore, the notion that growth causes the informal sector to shrink has been rejected, as periods of rapid economic development have coincided with its expansion (Bacchetta et al., 2009). The informal sector can thus be seen as a facilitator of capitalist economic activity.

The PREALC view on informality, which is focused on forms of production, has also been criticized. This view shifts the structural analysis towards compliance with labour laws and regulations. Under this framework, the State would play a central role through the verification of the social coverage of employment as an indicator of informality (Portes, 1989, cited in Ludmer, 2019).

Another driver of informality, according to the structuralist approach, is the relative abundance of labour, poorly organized unions and the ideological legitimacy of informal arrangements as a traditional practice (Portes and Benton, 1987, cited in Ludmer, 2019).

(d) Legalist school and "exit" view

The legalist school, led by Hernando de Soto, argues that the informal sector emerges because micro-entrepreneurs seek to avoid the costs and obligations associated with formal registration. From this perspective, informal enterprises pursue lawful objectives but partially or entirely fail to comply with legal regulations (Bromley, 1998, cited in Ludmer, 2019). Unlike the structuralist approach, which links informality to the dynamics of productive decentralization and economic subordination, the legalist school interprets it as a rational response to the high costs of formalization and excessive State regulation.

In the Latin American context, the legalist school maintains that the complexity of legal and administrative systems represents a significant barrier for rural migrants, who often enter the informal sector owing to difficulties in gaining access to the formal economy. Under this approach, the informal sector serves as an economic refuge for low-income workers, offering them alternative means of subsistence when they are excluded by formal institutions. The public policy proposals associated with this approach include tax reductions, the simplification of administrative procedures and greater labour market flexibility, with the aim of encouraging formalization.

The "exit" approach is a variant of the legalist approach under which informality is viewed as a way to evade State institutions. According to this approach, participation in the informal economy involves a cost-benefit analysis that considers the benefits of evasion and the consequences of being caught and punished (Schneider, 2014). The costs of formalization include taxes, social contributions, labour standards and administrative procedures (Schneider, 2005; Hassan and Schneider, 2016; Salazar-Xirinachs and Chacaltana, 2018). According to Schneider (2005), the main drivers of informality are the tax burden, social security costs, regulations and the quality of public goods. Institutional quality also plays a key role, as corruption discourages formal work, whereas a solid rule of law enhances the benefits of the formal sector (Schneider, 2014).

Levy (2008) argues that non-contributory social protection programmes may encourage informal labour, as they offer benefits without requiring contributions to the system. Kanbur (2009, cited in Salazar-Xirinachs and Chacaltana, 2018) highlights that, although laws are passed in Latin America and the Caribbean, they are not always enforced. While the legalist approach stresses the difficulty of registration procedures, the exit approach regards informality as a conscious decision to avoid complying with regulations, such as those related to taxes and social contributions. Despite their differences, both schools agree that there is focus on the decision to disregard the requirements of formal employment.

(e) Integrated approach

In the 1990s, the study of labour informality shifted towards a holistic or multi-segmented labour market approach (Chen, 2012) that integrates various schools of thought and considers different levels of economic risk and authority. According to this approach, informality consists of three segments: a lower-tier segment involving people engaged in survival activities, an upper-tier segment comprising micro-entrepreneurs who avoid taxes and regulations, and an intermediate-tier segment made up of microenterprises and workers subordinated to large enterprises (Bacchetta et al., 2009).

As proposed by Perry et al. (2007), published in the World Bank Latin American and Caribbean Studies collection, informality is classified according to its composition and drivers, distinguishing between exit (voluntary) and exclusion (involuntary) and including variants such as opportunistic and defensive evasion.

Kanbur (2009) simplifies this analysis by focusing on the State's capacity to enforce regulations, and distinguishes between activities that are compliant or non-compliant with regulations, activities that are adjusted to avoid regulations, and activities to which regulations are not applicable, with informality arising mainly when regulations are not complied with.

Chen (2012) further argues that structural imbalances and informal regulations also influence informality. The integrated approach recognizes the need to understand the transitions between informal and formal employment, which are influenced by individual, institutional and market factors (Gagnon, 2009; Jütting and De Laiglesia, 2009; Bacchetta et al., 2009), and stresses the need to consider multiple factors and occupational categories in the study of labour informality.

As the heterogeneous nature of situations in which informality occurs makes it impossible to pinpoint a single cause, the present study adopts the holistic approach. As shown below, the multidimensional nature of informality and its various manifestations across occupational categories make it difficult to explain through a single analytical approach.

2. Concepts

(a) From the informal sector to the informal economy

In the 1990s, an increase in informality prompted ILO to reconsider the definition of, approach to and scope of the informal sector. The approach taken by PREALC, which linked informality to enterprise size and productivity, did not adequately capture informal jobs in larger production units or the formalization of small enterprises. For that reason, at the ILO Fifteenth International Conference of Labour Statisticians (ICLS) in 1993, the definition was focused on legality and regulatory compliance instead of productivity. The informal sector was defined as units engaged in the production of goods and services on a small scale, with a low level of organization and informal labour relations (ILO, 1993).

That shift in focus made for a definition that was better suited to the changes in the labour market, as small enterprises with few workers were integrating into modern economies. Nevertheless, it still did not capture all aspects of informality. In 1997, the United Nations Statistical Division established the Delhi Group on Informal Sector Statistics to develop a more unified definition. That same year, the Women in Informal Employment: Globalizing and Organizing (WIEGO) network was established.[1] In collaboration with the Delhi Group and ILO, WIEGO broadened the definition to cover new types of informal employment in both formal and informal enterprises.

[1] WIEGO is a global network of researchers, grass-roots organizations and professionals dedicated to improving working conditions and economic opportunities for workers in the informal economy, especially women.

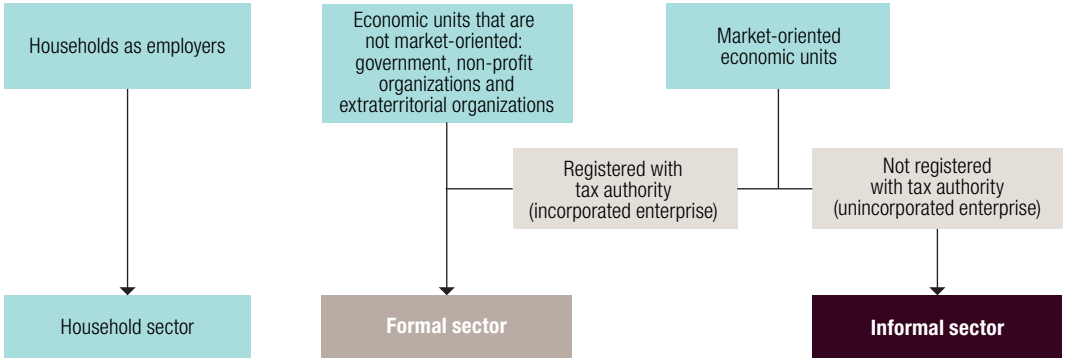
At the Seventeenth ICLS in 2003, the concept of "informal employment" was introduced, which approaches informality from the perspective of workers and their jobs. This gave rise to the concept of "informal economy", defined as the set of economic activities by workers and economic units that are —in law or in practice— not covered or insufficiently covered by formal arrangements (ILO, 2002). That definition enables a more precise analysis of the phenomenon in accordance with the different characteristics of each country.

(b) Informal sector

According to the Fifteenth ICLS, the informal sector can be broadly characterized as consisting of units engaged in the production of goods or provision of services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labour and capital as factors of production, and on a small scale. Labour relations —where they exist— are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees (ILO, 1993, para. 5).

In the same report, it is explained that, for statistical purposes, the informal sector is regarded as a group of production units which, according to the definitions and classifications provided in the United Nations System of National Accounts (Rev. 4), form part of the household sector as household enterprises or, equivalently, unincorporated enterprises owned by households as defined in paragraph 7 (ILO, 1993, para. 6). This definition excludes the public sector, financial and non-financial corporations, and non-profit organizations, enabling a more precise measurement of informal enterprises (see diagram 1).

Diagram 1
Classification of the informal sector by type of economic unit



Source: Adapted from National Institute of Statistics (2021). *Estadísticas de informalidad laboral: marco conceptual y manual metodológico*, p. 21.

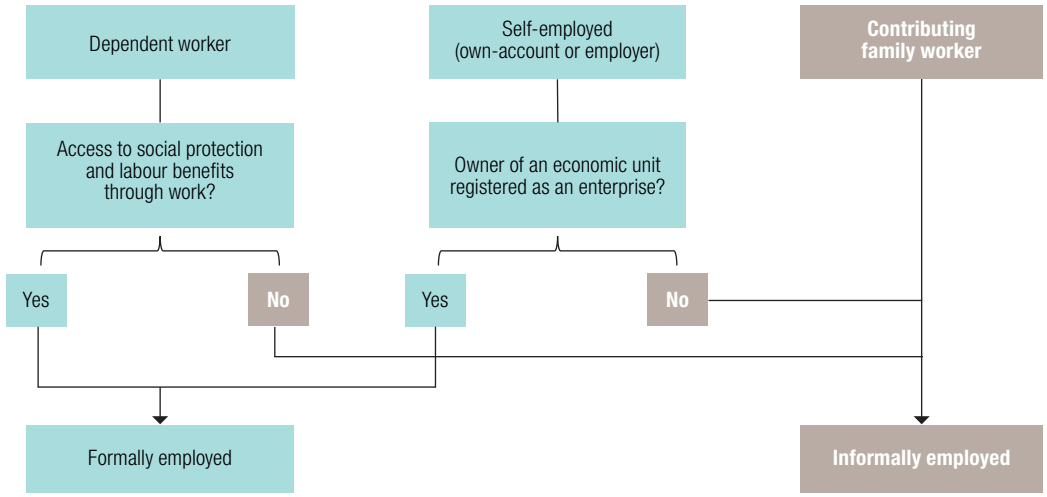
Moreover, a production unit must be engaged, at least in part, in market production to be considered part of the informal sector. Accordingly, those engaged exclusively in production for own final consumption or in domestic service are excluded. The informal sector is therefore defined as a "subset of household unincorporated enterprises with at least some market production" (ILO, 2013b, para. 2.92). These units are not registered with the tax authorities and do not keep separate accounting registers. Lack of registration is a common element in definitions of the informal sector. Schneider and Enste (2000), for example, define the informal sector as all economic activities that contribute to the gross national product but are unregistered.

(c) Informal employment

According to the Seventeenth ICLS, held in 2003, wage earners hold informal jobs when they have an employment relationship that is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits. Those workers may hold jobs in the formal sector, the informal sector or the household sector, and can be identified by their exclusion from regulated systems of labour exchange, such as social protection, labour rights and representation (ILO, 2013a).

One tool for determining whether a job is formal or informal is the International Classification of Status in Employment (ICSE-93), which is used to classify jobs on the basis of whether they are self-employment, dependent employment or contributing family employment (see diagram 2).

Diagram 2
Classification of informal employment



Source: Adapted from National Institute of Statistics (2021). *Estadísticas de informalidad laboral: marco conceptual y manual metodológico*, p. 25.

This approach recognizes both self-employed persons who work in small or unincorporated enterprises and wage earners without employer contributions to social protection (Chen, 2012, p. 8) The key breakthrough with such an approach is the acknowledgement that there are informal jobs outside the informal sector, enabling the inclusion of those individuals whose jobs are not regulated by labour legislation and do not provide social protection.

In summary, a distinction can be made between three concepts associated with informality: the informal sector, which involves unregistered and unincorporated production units (ILO, 1993); informal employment, which relates to jobs that lack social and legal protections (ILO, 2003); and the informal economy, which encompasses all units and activities that fall outside formal systems (ILO, 2002).

(d) Integrating the informal sector and informal employment

In 2013, the Delhi Group developed a unifying framework for analysing the relationships between jobs and production units, known as the Hussmanns matrix (see table 2). Under that framework, jobs are classified according to formality, on the basis of ICSE-93 for different economic units. In the matrix, production units are classified into three major groups:

(i) **Formal sector**, which includes government institutions, international organizations, non-profit organizations and legally incorporated enterprises.

(ii) **Informal sector**, which includes economic units belonging to the household sector that are not formally registered.

(iii) **Household sector**, which relates to households that hire employees to produce goods and services for their own final consumption, such as domestic service, security services and gardening.

The matrix serves to identify workers in the informal sector and those with informal jobs outside the informal sector:

- **Workers in the informal sector**: own-account workers and employers in informal economic units (boxes 3 and 4); contributing family workers in the informal sector (box 5); and wage earners in informal economic units (boxes 6 and 7; in the latter, the worker has a formal job, but the economic unit is informal).
- **Workers with informal jobs outside the informal sector**: wage earners with informal jobs in the formal or household sectors (boxes 2 and 8); domestic workers employed by households (box 9); and contributing family workers in formal sector enterprises (box 1).

The matrix yields the following indicators:

- **Informally employed**: sum of boxes 1–6, 8 and 9
- **Employed in the informal sector**: sum of boxes 3–7
- **Informally employed outside the informal sector**: sum of boxes 1, 2, 8 and 9
- **Formally employed**: sum of all boxes associated with the formal categories

Table 2
Hussmanns matrix: conceptual framework for labour informality

Production units, by type	Type of worker, by occupational category								
	Self-employed				Contributing family worker	Dependent worker			
	Own-account		Employer			Wage earner		Domestic worker	
	Informal	Formal	Informal	Formal	Informal	Informal	Formal	Informal	Formal
Formal sector		a		b	1	2	c		
Informal sector	3		4		5	6	7		
Household sector	d					8	e	9	f

Source: Adapted from National Institute of Statistics (2021). *Estadísticas de informalidad laboral: marco conceptual y manual metodológico*, p. 29.

Note: Cells shaded in dark brown indicate workers who, by definition, do not exist in that type of production unit. For example, informal own-account workers cannot work in the formal sector. Cells shaded in white represent different types of informal jobs. Cells shaded in pink denote formal jobs. Box "d" relates to workers who produce goods and services for final consumption by their own household.

This study is based on the definitions of informal economy, informal sector and informal employment proposed by ILO, as well as on the integration of the two dimensions in the Hussmanns matrix and associated indicators. As indicated in the literature review, registration of activities is the defining factor in the classification of economic units as formal or informal, while access to protection and social rights through work is the factor that determines whether a job is formal.

(e) Drivers of labour informality

Labour informality is a multicausal phenomenon with micro and macroeconomic drivers. At the micro level, it is worth noting the individual and household characteristics that affect the propensity to informality. Several studies have shown that gender is an important factor, since there is a higher incidence of informality among women owing to challenges such as the high burden of domestic work and the lack of care policies (Cuevas Rodríguez et al., 2016; Mansilla, 2021). Level of schooling is also crucial: higher education levels tend to correlate with a lower likelihood of informality (Chong et al., 2008; Ibarra-Olivo et al., 2021; Mansilla, 2021). Age follows a U-shaped curve: the likelihood of informality is greater among young people and older adults (Abramo, 2021; Espejo, 2022).

Marital status and status within the household also play an important role and affect job searches and reservation wages (Uribe et al., 2008). Rural areas are associated with higher rates of informality, owing to the nature of productive activities in such areas (Perry et al., 2007; ILO, 2021). While immigration is related to higher rates of informality in certain contexts (Bosh and Farré, 2013; Lehmann and Zaiceva, 2015), in Chile no significant differences have been found between nationals and foreigners (Bustamante et al., 2022).

At the macro level, the size of the enterprise is one driver, and there is a higher incidence of informality among microenterprises because of their limited access to resources and technologies (Dabla-Norris et al., 2008). Economic sector also affects informality; industries with lower productivity levels and seasonal work, such as agriculture and services, tend to have higher rates of informality (Amuedo-Dorantes, 2004; Loayza and Sugawara, 2009).

III. Analysis of informality in Chile

1. Informality indicators in Chile

Workforce surveys are a valuable tool for measuring labour informality. Such surveys can include specific question modules aimed at capturing different types of informal work not reflected in administrative records, thereby providing flexible and comprehensive measurements.

In Chile, the National Employment Survey[2] has included a section on labour informality since 2017, which can be used to identify workers with informal jobs and employees in the informal sector,[3] according to ILO guidelines. Those estimates are used to calculate and publish two key indicators: the informal employment rate, which reflects the share of the total number of employees who hold informal jobs; and the informal sector employment rate, which reflects the share of individuals who are employed by informal enterprises or businesses, providing an approximation of the weight of informal economic units in the economy.

2. Labour informality in Chile: trends and main characteristics

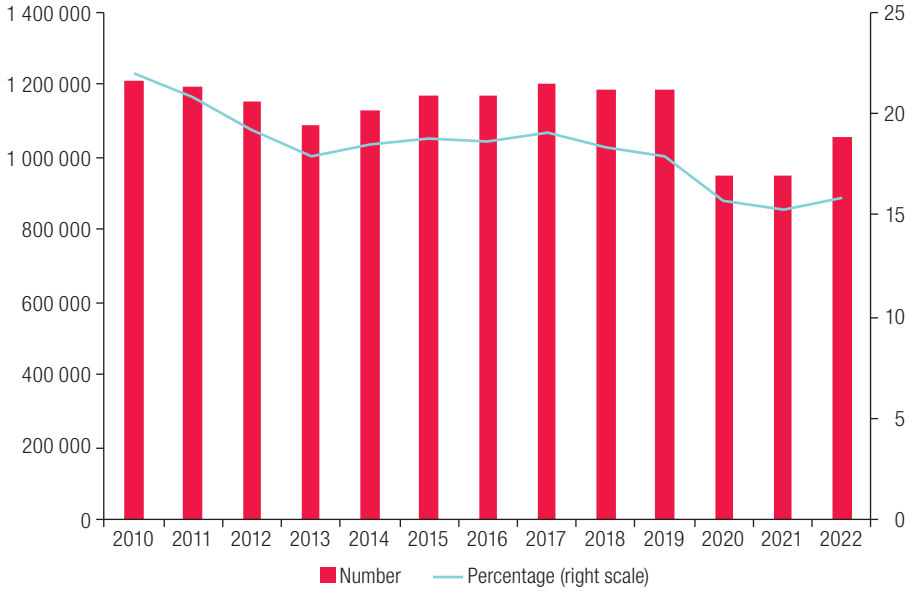
In Chile, labour informality indicators have been officially published since the National Institute of Statistics first released them for the July–September 2017 rolling quarter. The same estimation technique can be used, however, to calculate the informality rate among dependent workers since 2010, on the basis of whether their employer paid pension and healthcare contributions.

[2] A continuous household survey that classifies all working-age people (15 years and older) by their labour market status, with samples that are nationally and regionally representative and using rolling quarters.

[3] For more information on how labour informality is measured in Chile, see National Institute of Statistics (2021).

The overall trend has been a decline in the percentage of dependent workers with informal jobs since 2010 (see figure 1). That year, 22.1% of dependent workers, or some 1.2 million people, did not have pension or healthcare contributions. That figure trended downward until 2013 and then increased until 2017, at which point it held steady until 2019. Despite fluctuations in absolute terms, the share of dependent workers that held informal jobs has declined, which indicates that most of the jobs created during the period were formal jobs.

Figure 1
Chile: dependent workers with informal jobs, 2010–2022
(Number of workers and percentages)

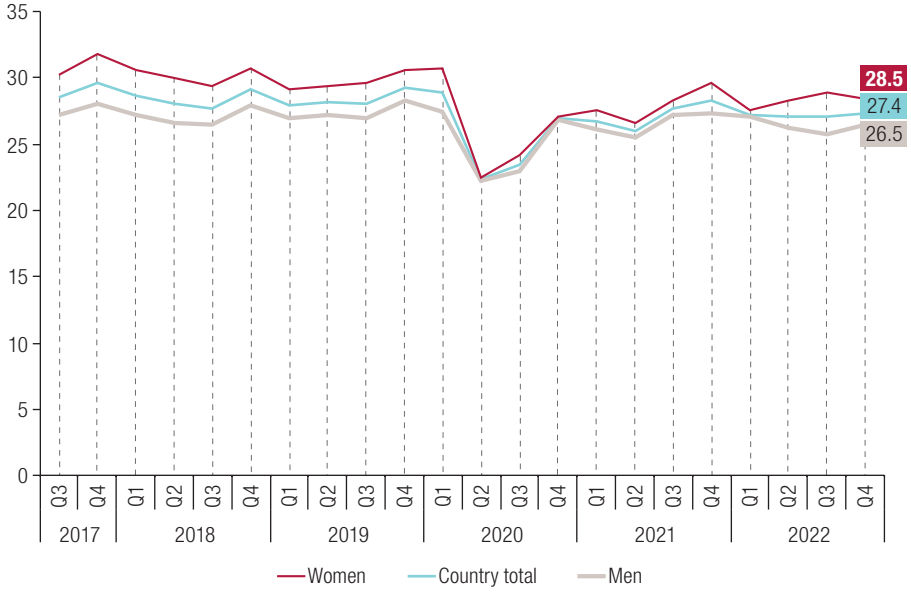


Source: Prepared by the author, on the basis of data from the National Institute of Statistics.

In 2020 and 2021, amid the pandemic, both the number of informal dependent workers and the share of the total number of workers that held informal jobs decreased, owing to an overall decline in labour participation and employment. In 2022, however, there was an increase in the number of both formal dependent workers and informal dependent workers, which was more pronounced among the latter. This reflects a partial recovery of employment after the pandemic, albeit with an increase in the share of informally employed workers.

Since measurement began, the highest rate of informal employment recorded was for the period October–December 2017 (29.6%), while the lowest rate was recorded for the period July–September 2020 (23.5%), during the pandemic, when the drop in informal employment outpaced that of formal employment (see figure 2). Prior to the pandemic, the informality rate ranged from 27% to 29%, which indicates a structural rate in the Chilean labour market. With respect to the gender gap, the informality rate was higher among women (29%–31%) than among men (26%–28%). The widest gap recorded was for the period October–December 2017, 3.7 percentage points, while the narrowest recorded was for the period April–June 2019, 2.2 percentage points. The overall drop in employment resulted in a narrowing of the gap to 1.1 percentage points in 2020 and to 1.4 percentage points in 2021. It widened to 2.3 percentage points in 2022, reflecting an increase in informality rates among women in the post-pandemic recovery.

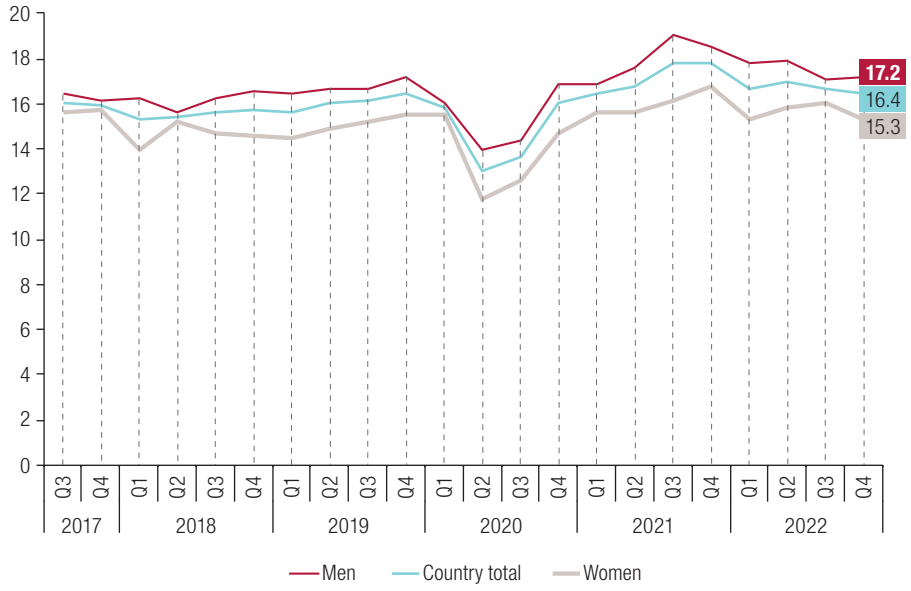
Figure 2
Chile: informal employment rate, country total and by sex, 2017–2022
(Percentages)



Source: Prepared by the author, on the basis of data from the National Institute of Statistics.

Between 2017 and 2019, the informal sector employment rate hovered at 16% and was slightly higher among men (see figure 3). It fell to 13% in 2020, during the pandemic, but climbed to nearly 18% in 2021, exceeding pre-pandemic averages. This indicates that informal economic units absorbed a large portion of the jobs generated during the economic recovery.

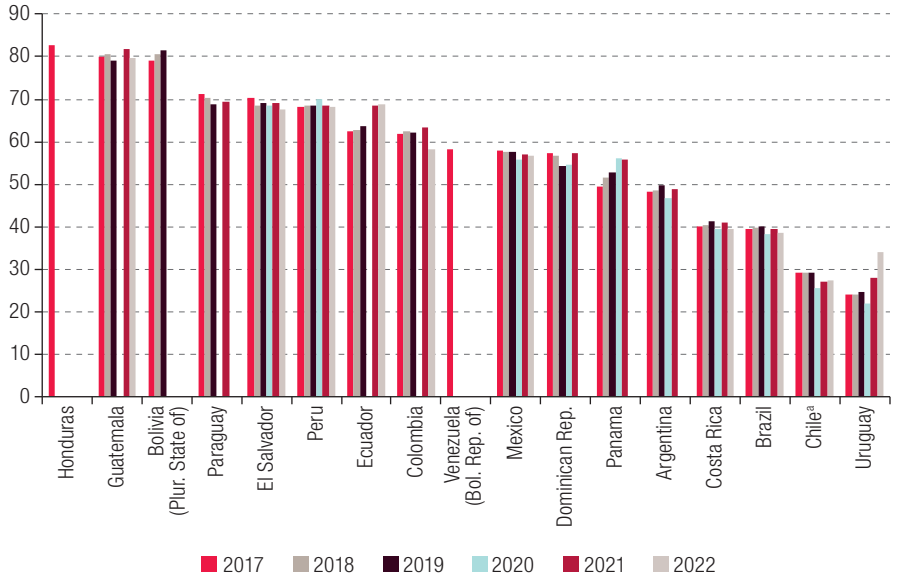
Figure 3
Chile: informal sector employment rate, country total and by sex, 2017–2022
(Percentages)



Source: Prepared by the author, on the basis of data from the National Institute of Statistics.

Compared with other Latin American countries, the percentage of informal workers in Chile is low among countries that use continuous employment measurement surveys, with only Uruguay reporting a lower rate. Although criteria vary by country and not all countries take regular measurements, Chile stands out favourably in the region with respect to labour informality (see figure 4).

Figure 4
Latin America (17 countries): informal employment rates, 2017–2022
(Percentages)



Source: Prepared by the author, on the basis of data from the International Labour Organization.
[a] Because the period July–September 2017 was the first rolling quarter in which Chile began to officially measure informality, the figure for that year reflects only the second half of the year.

3. Development of probabilistic models

Qualitative response econometric models are used to analyse the variables that affect the probability of having an informal job and being employed in the informal sector, since informality is modelled as a discrete phenomenon. This means that the dependent variables have a value of 1 or 0.

(a) Logit model

The logit model is a statistical technique used to study problems associated with binary decisions. It is commonly used to determine the impact of various factors on phenomena such as poverty and employment and is applied when the response variable is binary.

The logit model relates the variable Y_i to the variables Y_{2i}..... Y_{ki}, using the following equation:

$$Y_i = \frac{1}{1+e^{-(\beta_1+\beta_2 X_{2i}+ \ldots +\beta_k X_{ki})}} + u_i \quad (1)$$

Or in compact form:

$$Y_i = \frac{1}{1+e^{-X_i\beta}} + u_i = \frac{e^{-X_i\beta}}{1+e^{-X_i\beta}} + u_i \quad (2)$$

In functional form, the model can be expressed as:

$$Y_i = \Lambda(X_i\beta) + u_i \quad (3)$$

where:

- $\Lambda(Xi\beta)$ is the logistical function.
- u_i is a random variable with normal distribution $N(0,\sigma 2)$.
- Y_i can have values of 0 or 1, to indicate the fact of belonging to a category.

(b) Probit model

The probit model also relates Y_i to a set of X_i variables, but uses a cumulative standard normal distribution function to estimate probabilities:

$$Y_i = \Phi(X_i\beta) + u_i \quad (4)$$

where Φ is the standard normal distribution function. Both the logit and the probit models are comparable, even though the probit model tends to have more pronounced distribution curve tails.

(c) Marginal effect of explanatory variables

In both models, the rate of change in the probability of an event occurring is influenced by explanatory variables. In the logit model, the rate of change is calculated as $\beta_j P_i(1 - P_i)$, while in the probit model, it is calculated as $\beta_{jf}(Z_i)$, where $f(Z_i)$ is the density function of the standardized normal variable.

The logit and probit models are quite comparable, the main difference between them being that the logit model has slightly flatter tails, which means that the normal or probit curve approaches the axes much faster than with the logit curve.

(d) Logit and probit models applied to labour informality

The variables included in the models are presented below (see table 3):

Table 3
Summary of the variables included in the models

Dependent variables		
Informal_occup	Informal_occup = 1	Dependents that do not have healthcare and pension contributions based on their employment relationship with an employer. Employers and own-account workers are considered to be in informal employment if the company, business or activity they carry out is in the informal sector (registration with the Internal Revenue Service). Unpaid family members (of the household) are by definition all in informal employment, given their linkage with the economic unit in which they work
Informal_sector	Informal_sector	Employed in informal economic units, i.e. without being registered with the Internal Revenue Service or accounting
Independent variables		
Gender	Female = 1, male = 0	Gender of person employed
Age bracket	Age per five-year tranche	
Head of household	Head of household = 1, other = 0	
Level of education	Highest approved level of education	1. Never studied, 2. Nursery, 3. Kindergarten, 4. Basic or primary, 5. Common track, 6. Professional and technical track, 7. Humanities 8. Technical training centre 9. Professional institute, 10. Teacher training, 11. University, 12. Postgraduate, 13. Master's, 14. Doctorate

Independent variables		
Foreigners	Foreigners = 1, nationals = 0	Workers by nationality
Rurality	Rural = 1, urban = 0	Workers by type of stratum
Married	Married = 1, others = 0	Marital status of the worker
Enterprise size[a]	Type of enterprise by number of workers	1. Microenterprise (between 1 and 9 workers), 2. Small enterprise (between 10 and 49 workers), 3. Medium-sized enterprise (between 50 and 199 workers), 4. Large enterprise (200 workers or more)
High-productivity sectors[b]	Economic sectors by level of productivity	Includes electricity, gas and water supply, financial and insurance activities, mining and quarrying
Medium-productivity sectors[b]	Economic sectors by level of productivity	Includes trade, transportation, information and communications, professional, scientific and technical activities, and manufacturing industries
Low-productivity sectors[b]	Economic sectors by level of productivity	Includes construction, lodging and food service activities, other service activities, agriculture, administrative and support services, and arts and entertainment activities
Occupational group	Employed population by occupational group (Chilean Classification of Occupations (CIUO 08.CL))	1.Elementary occupations, 2. Machine operators and assemblers, 3. Craft and trade workers, 4. Farmers, agricultural, livestock and fishery workers, 5. Service and retail workers, 6. Administrative support personnel, 7. Technicians and mid-level professionals, 8. Professionals, scientists and intellectuals, 9. Executives and managers

Source: Prepared by the author.

[a] The classification of enterprises by size according to the number of workers is based on the statute governing small and medium-sized enterprises in Chile (Act No. 20416).

[b] The classification by productivity is based on the output report of the Ministry of Economic Affairs, Development and Tourism (2017). *Informe de resultados: productividad laboral sectorial y por tamaño de empresa a partir de microdatos*. *Cuarta Encuesta Longitudinal de Empresas*. https://www.economia.gob.cl/wp-content/uploads/2017/08/Bolet%C3%ADn-productividad-laboral-ELE4.pdf.

The variables selected for these models, identified as relevant by the literature, include sociodemographic, occupational and economic unit characteristics. The expected findings from the documentary review and previous empirical studies are summarized below (see table 4).

Table 4
Summary of expected findings

Factor	Description of expected sign	Expected sign
Gender	Women have a higher probability of being in informal employment.	(+)
Age bracket	Younger and older persons have a higher probability of being in informal employment.	U-shape
Level of education	People with a higher level of education have a lower probability of being in informal employment.	(-)
Nationality	Foreign workers have a lower probability of being in informal employment.	(-)
Rurality	People in rural areas have a higher probability of being in informal employment.	(+)
Marital status	Married people have a lower probability of being in informal employment.	(-)
Head of household	Heads of households have a lower probability of being in informal employment.	(-)
Enterprise size	The larger the enterprise size, the lower the probability of being in informal employment.	(-)
Productivity of economic sectors	The more productive the economic sector, the lower the probability of being in informal employment.	(-)
Occupational group	The higher the skill level and specialization, the lower the probability of being in informal employment.	(-)

Source: Prepared by the author.

(e) Analysis of marginal effects in logit and probit models applied to informal employment

The marginal effects of the logit model applied to informal employment are presented below (see table 5):

Table 5
Findings of the logit model applied to informal employment

	Marginal effects of the logit model				
Variables	2018	2019	2020	2021	2022
Gender	0.0418734***	0.0354074***	0.0224523***	0.0371533***	0.0352271***
Age bracket	0.001693***	0.0039355***	0.0033624***	0.0024994***	0.00359***
Level of education	-0.008802***	-0.0093646***	-0.0099507***	-0.0098122***	-0.0135973***
Enterprise size	-0.1559438***	-0.1573669***	-0.1400276***	-0.1561363***	-0.1633011***
High- productivity sectors	-0.1343412***	-0.1305215***	-0.1218706***	-0.124341***	-0.1264911***
Medium-productivity sectors	-0.0737662***	-0.0749891***	-0.0656161***	-0.0716264***	-0.07123***
Low- productivity sectors	-0.034773***	-0.0364774***	-0.0451887***	-0.0560823***	-0.0485345***
Foreigners	-0.0504063***	-0.0542212***	-0.0463312***	-0.0318987***	-0.0107782**
Rurality	0.0043924*	0.0001798	0.0073428**	0.0027201	-0.0005346
Occupational group	-0.0266409***	-0.0258266***	-0.0205177***	-0.0214573***	-0.0215589***
Married	-0.0609373***	-0.0641372***	-0.0568258***	-0.0555305***	-0.0528753***
Head of household	-0.0508561***	-0.05209***	-0.077523***	-0.0657152***	-0.0644984***

Source: Prepared by the author.
Note: *** p<0.01; ** p<0,05; * p<0.1, without a score meaning that it is not significant.

With regard to sociodemographic variables, the following expected findings were observed:

- **Gender**: The positive and significant coefficient of gender shows that being female increases the probability of being in informal employment. That probability decreased slightly between 2018 and 2020 but rose again in 2021 and 2022.
- **Age bracket**: As pointed out in the theory section, the effect of age on informality would function as a U, with informality being concentrated at its extremities, which correspond to young and older persons. Although the coefficients are small, the fact that they are positive and significant shows that as people get older, even if only slightly, the probability of them being in informal employment increases. That result is consistent over the years.
- **Level of education**: The negative and significant coefficients suggest that the higher the level of education, the lower the probability of being in informal employment. That effect seems to have strengthened in 2022, when the ratio was at its most negative.
- **Nationality**: Being a foreigner is associated with a lower probability of being in informal employment, although that effect declined significantly in 2022. Bustamante et al. (2022) have already observed that prior to the health crisis, lower levels of informality were often registered among foreigners compared with nationals, but that after the pandemic, that advantage started dissipating, reflecting a significant change in that group's labour dynamics.
- **Rurality**: In some years (2018 and 2020), the probability of being in informal employment rose slightly among people living in rural areas. That effect was not consistent and lost significance in other years (2019, 2021 and 2022).
- **Marital status**: The probability of being in informal employment is lower among married people, an effect which remained constant during the period.
- **Head of household**: The probability of being in informal employment drops sharply for heads of households, an effect that is markedly visible for all the years analysed.

The analysis of the incidence of occupational group on the probability of labour informality was based on the characteristics of the occupation.

Occupational group: The International Standard Classification of Occupations (ISCO) developed by ILO classifies occupations according to skill levels. The table shows that the probability of being in informal employment decreased by between 2.6% (2018) and 2.0% (2020) as the complexity and diversity of tasks increased.

With respect to the factors associated with the productive structure, the model contains the variables of enterprise size (differentiating between micro-, small, medium-sized and large enterprises) according to the number of workers, together with a selection of economic sectors, according to their level of productivity (high, medium and low).

Enterprise size: The coefficients are negative and highly significant, indicating that working in a larger enterprise significantly reduces the probability of being in informal employment. That effect is consistent and appears to have intensified in 2022.

Productivity levels: Working in high-productivity sectors reduces the probability of being in informal employment, and that effect remained constant over the years. Working in medium-productivity sectors also reduces that probability, although the effect is weaker compared with the effect in high-productivity sectors. In low-productivity sectors, that effect is also negative, although less so than in medium- and high-productivity sectors.

In summary, the greater the size and productivity of the enterprise in which a person works, the lower the probability of that person being in informal employment, a fact that has been highlighted in other studies on Latin America and the Caribbean (Beccaria and Maurizio, 2018).

To corroborate the findings, the model is now replicated on the basis of a probit model (see table 6).

Table 6
Findings of the logit model applied to informal employment

	Marginal effects of the probit model				
Variables	2018	2019	2020	2021	2022
Gender	0.0405954***	0.0328597***	0.0195616***	0.0365664***	0.0351***
Age bracket	0.0026055***	0.0052117***	0.0048442***	0.0038118***	0.0050449***
Level of education	-0.0072702***	-0.0079728***	-0.008857***	-0.0090872***	-0.0132488***
Enterprise size	-0.1581649***	-0.1600119***	-0.1443231***	-0.1614534***	-0.1674243***
High-productivity sectors	-0.1475413***	-0.1426706***	-0.1360638***	-0.1417982***	-0.1452064***
Medium-productivity sectors	-0.0881304***	-0.0905248***	-0.0811414***	-0.0905459***	-0.0895767***
Low-productivity sectors	-0.0465477***	-0.0482748***	-0.0580975***	-0.0732572***	-0.0635572***
Foreigners	-0.0542764***	-0.0589892***	-0.0502598***	-0.0334402***	-0.0102778**
Rurality	0.0099808***	0.0046428*	0.0111041***	0.006105**	0.0028855
Occupational group	-0.0266659***	-0.0256104***	-0.0204103***	-0.0212469***	-0.0210231***
Married	-0.0666105***	-0.0706416***	-0.0622767***	-0.0616509***	-0.0587489***
Head of household	-0.0543499***	-0.0560071***	-0.0841472***	-0.0717042***	-0.0703543***

Source: Prepared by the author.
Note: *** p<0.01; ** p<0.05; * p<0.1, without a score meaning that it is not significant.

The findings of the probit model corroborate those of the logit model.

- **Gender**: In both models, gender has a positive and significant effect on the probability of being in informal employment. This suggests that women have a higher probability of being in informal employment, and that effect remained constant over the years in both models.
- **Age bracket**: In both models, age bracket has a positive and significant effect, indicating that the probability of being in informal employment rises slightly with age.
- **Level of education**: The coefficients are negative and significant in both models, indicating that a higher level of education reduces the probability of being in informal employment. That effect was stronger in 2022 in both models.

- **Nationality**: In both models, the probability of being in informal employment is lower among foreigners, although the effect decreased considerably in 2022, especially in the probit model.
- **Rurality**: Although the effect of living in a rural area is positive in both models, it is weaker in the logit model and loses significance in some years. In contrast, in the probit model, the effect is consistent and significant for almost all years, except 2022.
- **Marital status and head of household**: In both models, the probability of being in informal employment decreases for persons who are married and head a household. Those effects are consistent across the years.
- **Occupational group**: Belonging to occupational groups of greater specificity and complexity consistently reduces the probability of being in informal employment in both models.
- **Enterprise size**: The findings for both models show that working in a larger enterprise significantly reduces the probability of being in informal employment. This is one of the most pronounced and consistent effects in both models.
- **Productivity sectors**: In both the logit and the probit models, working in high- and medium-productivity sectors reduces the probability of being in informal employment, with more pronounced effects in high-productivity sectors. Working in low-productivity sectors also reduces that probability, although to a lesser extent than in high- and medium-productivity sectors.

In summary, both models show great consistency in their estimated effects, with minor differences in the magnitude of the coefficients. This reinforces the robustness of the findings obtained and suggests that the determinants of informal employment identified are quite solid, regardless of the statistical model used.

(f) Analysis of marginal effects in logit models applied to employment in the informal sector

This section includes the estimated marginal effects of the logit model applied to employment in the informal sector during the period from 2018 to 2022. It was decided not to use a probit model for this variable, since the low frequency of events in certain categories could compromise the robustness of the findings. Nonetheless, the logit model provides marginal effects which, although small, are statistically significant and consistent across the time period (see table 7).

Table 7
Findings of the logit model applied to employment in the informal sector

	Marginal effects of the logit model				
Variables	2018	2019	2020	2021	2022
Gender	0.0010427***	0.0012206***	0.0015656***	0.0016352***	0.0021688***
Age bracket	0.0000312***	0.000035***	-0.00003**	-0.0000125	0.0000184
Level of education	-0.0002772***	-0.0002731***	-0.0004937***	-0.0004003***	-0.0006847***
Enterprise size	-0.0079057***	-0.0090913***	-0.0114568***	-0.0118212***	-0.0169362***
High-productivity sectors	-0.0008246***	-0.0009795***	-0.0014863***	-0.0016069***	-0.0021664***
Medium-productivity sectors	0.000281***	0.0003808***	0.0009163***	0.0008423***	0.0012124***
Low-productivity sectors	0.0019632***	0.002106***	0.0025731***	0.0027372***	0.0039469***
Foreigners	-0.0008568***	-0.001097***	-0.0013494***	-0.0009619***	-0.001068***
Rurality	-0.0003868***	-0.0003603***	-0.0003558***	-0.0006682	-0.0010963***
Occupational group	-0.0004713***	-0.0005584***	-0.0007742***	-0.0007535***	-0.0010837***
Married	-0.0007092***	-0.0008726***	-0.0012669***	-0.0012389***	-0.0016318***
Head of household	-0.0002338***	-0.0002098***	-0.0008231***	-0.0005767***	-0.0009821***

Source: Prepared by the author.
Note: *** p<0.01; ** p<0.05; * p<0.1, without a score meaning that it is not significant.

The effects of the variables analysed are set out below:

- **Gender**: Over the years, there is a positive and significant effect on the probability of women being in informal employment. That effect increased slightly between 2018 and 2022, indicating a higher probability of women working in the informal sector during that period.
- **Age bracket**: The effect of age bracket on the probability of being in the informal sector is small and presents values that are significant but close to zero, which suggests a limited effect. The effect also changes direction in different years, which points to possible instability in the relationship between age and employment in the informal sector.
- **Level of education**: Level of education has a negative and significant effect on the probability of working in the informal sector, which increased in magnitude in 2022. This reinforces the notion that a higher level of education reduces the probability of being employed in that sector.
- **Nationality**: Being a foreigner has a negative and significant effect on the probability of being in the informal sector during the years analysed. That negative effect indicates that foreign workers have a lower probability of being in the informal sector, although the effect decreased slightly between 2018 and 2022.
- **Rurality**: Residing in rural areas also has a negative and significant effect on the probability of being in informal employment. Unlike what happens with informal employment, the relationship between rurality and employment in the informal sector is negative. Similar to the case of foreigners, the magnitude of the negative effect associated with rurality has decreased slightly over time.
- **Marital status and head of a household**: Being both married and the head of a household significantly reduces the probability of being in the informal sector. These findings are consistent across the years.
- **Occupational group**: Belonging to an occupational group with greater complexity and diversity of tasks is associated with a lower probability of being in the informal sector. This negative and significant effect was constant throughout the period studied.
- **Enterprise size**: Enterprise size has a negative and significant effect on the probability of being in the informal sector and tends to increase in magnitude over time. This shows that working in larger enterprises reduces the probability of being in informal employment.
- **Productivity sectors**: High-productivity sectors have a negative and significant effect on the probability of being in the informal sector, which suggests that those sectors are more formalized; by contrast, medium- and low-productivity sectors have positive and significant effects, which indicates a greater probability of informality in those sectors.

In summary, although the marginal effects are mostly small, their statistical significance and temporal consistency allow relevant conclusions to be drawn about the determinants of employment in the informal sector.

IV. Conclusions

Labour informality is multidimensional and caused by diverse factors, ranging from institutional frameworks and macroeconomic conditions to individual and family characteristics. The analysis in this study focused on microeconomic determinants, as well as on the individual, family and productive unit characteristics that affect the probability of labour informality and the nature of employment in the informal sector. To that end, the article draws on data from the National Employment Survey of the National Institute of Statistics of Chile.

The probabilistic models applied (logit and probit) confirm that, in the context of Chile, the effects of the variables identified in the literature as determinants of labour informality are congruent with theoretical expectations. Sociodemographic characteristics, such as old age, a lower level of education and lower skill and specialization levels, increase the probability of informal employment. Informality is also more prevalent among women and people living in rural areas, and more common in small economic units and low-productivity sectors.

The analysis of the informal sector showed that sociodemographic and productive variables have significant marginal effects on the probability of being in informal employment. Being a woman, having a lower level of education, working in a small business and being employed in low-productivity sectors increase the probability of being in the informal sector. These effects remain consistent over time, underscoring the need for policies that address both individual characteristics and those of the productive environment in order to reduce labour informality in Chile.

In incorporating these observations, a broader approach in which the different dimensions addressed in the conceptual review are examined is essential. Informality is linked not only to individual characteristics or to those of the productive environment, but also to the interaction between the two types in a specific socioeconomic context. For example, the precarious nature of small economic units and gender-based labour segmentation reflect inadequacies in the institutional framework and in public policies aimed at inclusion and formalization, in addition to failures in the labour market.

Accordingly, recommendations for addressing labour informality should go beyond the improvement of productive sectors and professional training. It is necessary to promote comprehensive development in which productive development, technological innovation and technical and vocational education policies are aligned with labour inclusion and gender equity policies. This means boosting the productivity of the most dynamic sectors and also transforming working conditions in traditionally informal sectors through more complex industrial processes and more skilled and formal jobs. At the same time, access to and retention in technical education as well as training programmes that provide skills certification should be strengthened, in order to facilitate the effective transition to formality, with a gender perspective that reflects the greater vulnerability of women to informality.

Lastly, a holistic approach calls for the consideration of both the drivers of informal employment and those of employment in the informal sector, and the recognition of the interactions between the multiple dimensions that affect informality. This will make it possible to have a complete diagnosis and to craft more effective and equitable measures in the fight against labour informality in Chile.

Bibliography

Abramo, L. (2021). Policies to address the challenges of existing and new forms of informality in Latin America. *Social Policy Series* (240) (LC/TS.2021/137). Economic Commission for Latin America and the Caribbean.

Amuedo-Dorantes, C. (2004). Determinants and poverty implications of informal sector work in Chile. *Economic Development and Cultural Change*, *52*(2).

Bacchetta, M., Ernst, E. and Bustamante, J. P. (2009). *Globalization and Informal Jobs in Developing Countries*. International Labour Organization and World Trade Organization.

Beccaria, L. and Maurizio, R. (2018). Un análisis dinámico de los flujos de entrada a la formalidad en América Latina. *Revista de Economía Laboral*, *15*(2), 8–56.

Bosh, M. and Farré, L. (2013). Immigration and the informal labor market. *IZA Discussion Paper* (7843). Institute for the Study of Labor.

Bromley, R. D. (1998). Informalidad y desarrollo: interpretando a Hernando de Soto. *Sociológica*, *13*(37).

Bustamante, A., Cabezas, M., Gutiérrez, A., Niculcar, D. and Nilo, J. (2022). Informalidad laboral en tiempos de la COVID-19: análisis del mercado laboral chileno. *Informes Técnicos OIT Cono Sur* (27). International Labour Organization.

Chen, M. A. (2007). Rethinking the informal economy: linkages with the formal economy and the formal regulatory environment. *DESA Working Paper* (46) (ST/ESA/2007/DWP/46). United Nations.
Chen, M. A. (2012). The informal economy: definitions, theories and policies. *WIEGO Working Paper* (1). Women in Informal Employment: Globalizing and Organizing.
Chong, A., Galdo, J. and Saavedra, J. (2008). Informality and productivity in the labor market in Peru. *Journal of Economic Policy Reform*, *11*(4), 229–245.
Cuevas Rodríguez, E., De la Torre Ruiz, H. A. and Regla Dávila, S. O. (2016). Características y determinantes de la informalidad laboral en México. *Estudios Regionales en Economía, Población y Desarrollo*, *6*(35).
Dabla-Norris, E., Gradstein, M. and Inchauste, G. (2008). What causes firms to hide output? The determinants of informality. *Journal of Development Economics*, *85*(1–2), 1–27.
De Soto, H. (1986). *El otro sendero: la revolución informal*. Editorial El Barranco.
Díaz Andrade, E. y Gálvez Pérez, T. (2015). *Informalidad laboral: conceptos y mediciones*. Labour Directorate.
Espejo, A. (2022). Informalidad laboral en América Latina: propuesta metodológica para su identificación a nivel subnacional. *Project Documents* (LC/TS.2022/6). Economic Commission for Latin America and the Caribbean.
Gagnon, J. (2009). Moving out of bad jobs - More mobility, more opportunity. In J. P. Jütting and J. R. de Laiglesia (Eds.), *Is Informal Normal? Towards More and Better Jobs in Developing Countries*, 115–142. OECD Publishing.
Hart, K. (1973). Informal income opportunities and urban employment in Ghana. *The Journal of Modern African Studies*, *11*(1).
Hassan, M. and Schneider, F. (2016). Size and development of the shadow economies of 157 worldwide countries: updated and new measures from 1999 to 2013. *Journal of Global Economics*, *4*(3).
Ibarra-Olivo, E., Acuña, J. and Espejo, A. (2021). Estimación de la informalidad en México a nivel subnacional. *Project Documents* (LC/TS.2021/19). Economic Commission for Latin America and the Caribbean.
International Labour Organization. (1993). *Resolution concerning statistics of employment in the informal sector.* Fifteenth International Conference of Labour Statisticians. https://www.ilo.org/resource/resolution-concerning-statistics-employment-informal-sector
International Labour Organization. (2002). *Resolution and conclusions concerning decent work and the informal economy*. 90th session of the International Labour Conference. https://www.ilo.org/resource/resolution-and-conclusions-concerning-decent-work-and-informal-economy
International Labour Organization. (2003). *General report. Seventeenth International Conference of Labour Statisticians* (ICLS/17/2003/1).
International Labour Organization. (2013a). *The Informal Economy and Decent Work: A Policy Resource Guide Supporting Transitions to Formality*.
International Labour Organization. (2013b). *Measuring Informality: A Statistical Manual on the Informal Sector and Informal Employment*.
International Labour Organization. (2021). *Empleo informal en la economía rural de América Latina 2012-2019: un panorama y tendencias regionales pre-pandemia COVID-19*. Regional Office for Latin America and the Caribbean.
Jütting, J. P. and De Laiglesia, J. R. (2009). Dealing with informal employment: towards a three-pronged strategy. In J. P. Jütting and J. R. de Laiglesia (Eds.), *Is Informal Normal? Towards More and Better Jobs in Developing Countries*, 143–163. OECD Publishing.
Kanbur, R. (2009). Conceptualizing informality: regulation and enforcement. *The Indian Journal of Labour Economics*, *52*(1).
Lehmann, H. and Zaiceva, A. (2015). Redefining informality and measuring its determinants: evidence from the Russian labour market. *Journal of International Development*, *27*(4), 464–88.
Levy, S. (2008). *Good Intentions, Bad Outcomes: Social Policy, Informality, and Economic Growth in Mexico*. Brookings Institution Press.
Lewis, W. A. (1954). Economic development with unlimited supplies of labour. *The Manchester School*, *22*(2), 139–191.
Loayza, N. and Sugawara, N. (2009). El sector informal en México: hechos y explicaciones fundamentales. *El Trimestre Económico*, *76*(304). Fondo de Cultura Económica.
Ludmer, G. (2019). ¿Qué hay de nuevo en el viejo debate sobre las causas de la informalidad laboral? *Cuadernos de Economía Crítica*, *5*(10), 99–121.
Maloney, W. F. (1999). Does informality imply segmentation in urban labor markets? Evidence from sectoral transitions in Mexico. *The World Bank Economic Review*, *13*(2), 275–302.

Mansilla, P. (2021). Informalidad laboral en Chile: evolución, determinantes y propuestas para América Latina. *Documento de Trabajo* (106). Latin American Center for Economic and Social Politics.
Maurizio, R. (2021). Employment and informality in Latin America and the Caribbean: an insufficient and unequal recovery. *Labour Overview Series. Latin America and the Caribbean 2021*. International Labour Organization.
National Institute of Statistics. (2021). *Estadísticas de informalidad laboral: marco conceptual y manual metodológico*.
Perry, G. E., Maloney, W. F., Arias, O. S., Fajnzylber, P., Mason, A. D. and Saavedra-Chanduvi, J. (2007). *Informality: Exit and Exclusion*. World Bank.
Portes, A. (1989). La informalidad como parte integral de la economía moderna y no como indicador de atraso: respuesta a Klein y Tokman. *Estudios Sociológicos*, *7*(20), 369–374.
Portes, A., Castells. M. and Benton, L. A. (Eds.) (1989). *The Informal Economy: Studies in Advanced and Less Developed Countries*. Johns Hopkins University Press.
Portes, A. and Benton, L. A. (1987). Desarrollo industrial y absorción laboral: una reinterpretación. *Estudios Sociológicos*, *5*(13).
Regional Employment Program for Latin America and the Caribbean. (1976). *El problema del empleo en América Latina: situación, perspectivas y políticas*.
Salazar-Xirinachs, J. M. and Chacaltana, J. (Eds.) (2018). *Políticas de formalización en América Latina: avances y desafíos*. International Labour Organization.
Schneider, F. (2005). Shadow economies around the world: what do we really know? *European Journal of Political Economy*, *21*(3).
Schneider, F. (2014). The shadow economy and shadow labor force: a survey of recent developments. *IZA Discussion Paper* (8278). Institute for the Study of Labor.
Schneider, F. and Enste, D.H. (2000). Shadow economies: size, causes, and consequences. *Journal of Economic Literature*, *38*(1), 77–114.
Tokman, V. E. (1978). An exploration into the nature of informal-formal sector relationships, *World Development*, *6*(9/10), 1065–1075.
Tokman, V. E. (2001). De la informalidad a la modernidad. *Economía*, *24*(48), 153–178
Tokman, V. E. (2004). *Una voz en el camino. Empleo y equidad en América Latina: 40 años de búsqueda*. Fondo de Cultura Económica.
Tokman, V. E. and Souza, P. R. (Coords.) (1976). *El empleo en América Latina: problemas económicos, sociales y políticos*. Siglo XXI.
Uribe García, J. I., Ortiz Quevedo, C. H. and García Cruz, G. A. (2008). Informalidad y subempleo en Colombia: dos caras de la misma moneda. *Cuadernos de Administración*, *21*(37), 211–241. Pontifical University Javeriana.