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INSEAI WORKSHOP 1

Proceedings

Working papers from the **INSEAI Workshop 1**

Theoretical Context on Informal Activity.
Conceptual Framework.
Informality and Sustainable Growth Models.
Macro and Micro Perspectives

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PRESENTATION

PRESENTATION

By Santos M. Ruesga, Raul Lorente, Matthias Schulze-Böing and Danielle Carusi[1]

On November 20th and 21st, 2025, the first workshop of the INSEAI project took place: International Network for Knowledge and Comparative Socioeconomic Analysis on Informality and the policies to be implemented for its formalization in Europe and Latin America [https://www.inseai.eu https://cordis.europa.eu/project/id/101182756]. Following the project schedule, the team responsible for Work Package 1, from the University of Valencia (UVEG) and GEWAK, in coordination with the local team from the Universidade Federal Fluminense (UFF) and the central coordination team from the Universidad Autonoma de Madrid (UAM), organized this first workshop in a hybrid format: on-line and in person at the Universidade Federal Fluminense at Niteroi, Brazil. It also served as a mini-conference within the VI RISE-SASE 2025 meeting [https://sase.org/events/vi-rise-sase-2025/]. This first workshop of the INSEAI project is entitled "*Theoretical Context on Informal Activity. Conceptual Framework. Informality and Sustainable Growth Models. Macro and Micro Perspectives*" and compiles the theoretical work on the phenomenon of labour informality from the teams that make up the network in this first year of the project [https://www.inseai.eu/en/workshop-1].

The first workshop has been an excellent forum to share our work and research on informal employment, and to discuss, reach consensus and arrive at fruitful syntheses on our perspectives on the phenomenon, its manifestation in different socio-economic realities such as the various European countries and the various Latin American societies, as well as to make explicit the disagreements and different approaches we have on addressing the phenomenon of informal work, many of them derived from the multidisciplinary approach and the different disciplines from which we start, which on the other hand contribute a great richness to the project.

This first workshop began with an invited lecture by Professor François Roubaud, Senior Research Fellow at the French Research Institute for Sustainable Development (IRD) and a renowned international expert on informal employment. His lecture, entitled "*From macro dynamics to micro behaviours: what's new in research on informality since the 70's?*", offered an interesting overview of the research and conceptualization of the phenomenon of informal employment over the last five decades, from his own perspective and experience. He focused on the informal sector of the economy and informal employment, and the research carried out over these years in numerous countries and regions of Africa (Sub-Saharan Africa, South Africa, Cameroon, Madagascar), Europe, Asia (Vietnam), and America (Mexico, Brazil, Colombia, Peru, the Andean region, etc.). He highlighted numerous research questions (both micro and macro)

present in the debate: Working in the informal economy: choice (exit) or constraint (exclusion)?; Subsistence or dynamic economy? Integrated or marginal sector into the economy? Structural change: Informality corresponds to a transition between the traditional and the modern economy (Modernization theory) or is it here to stay?.

The conference had a very ambitious focus on the evolution over time of the different conceptualizations, definitions, and approaches to informality since the 1970s, the heterogeneity of the informal economy, and the diversity of causal factors for becoming or remaining informal, which explain the growth or stagnation of the phenomenon; as well as the main schools or currents of thought from which its study is based: a) Dualists, who, from a mostly Neo-Keynesian perspective, conceptualize informality as a survival or subsistence strategy derived from underdevelopment, and focus on an insufficient generation of formal employment by the modern sector, predicting that the progressive development of societies will reduce the phenomenon of informal employment; b) Structuralists, mainly of Neo-Marxist orientation, who conceptualize informality as a sector of the economy subordinate to, and interrelated with and functional to, the formal sector; and c) Legalists or Neoclassicals, of neoliberal orientation who approach informality as an individual and strategic choice whose object is to avoid the labour and tax regulation of the State and whose recipe to reduce it would constitute the State deregulation of the markets.

The conference also addressed methodological issues and how the measurement of informality has evolved, as well as the progress made by Generic 1-2-3 Survey Schemes: the first phase, the Labour Force Survey, which covers socio-demographic characteristics, labour market indicators, and employment; the second phase, a subsample of the Informal Production Units Survey (supply side); and the third phase, a subsample of the Household Survey (demand side), which focuses on expenditure, living conditions, informal sector demand, etc. The conference also covered the estimation of informal employment in the informal sector, the formal sector of the economy, and households in various aggregates, using data from the ILO and the OECD, and methodological innovations such as the use of Panel Surveys or *ad hoc* protocols for impact evaluation: quasi-experimental method. Roubaud closed his intervention with the presentation of several working papers: a) *Informal employment, COVID19 and crises: a counter-cyclical buffer for workers in bad times?*, in a comparison of Brazil and Mexico; b) *Good jobs or bad jobs (revealed preferences)? Earnings gap: premium or penalty? Informal vs. Formal sector workers*, in a comparison between Vietnam and Madagascar; c) *Do Informal Businesses Gain From Registration and How? Panel Data Evidence from Vietnam*, d) *Can tax enforcement on informal businesses encourage them to formalize? Empirical evidence from Vietnam*; and e) *Driving Toward Freedom and Precarity: Assessing the Impact of Ride-Sharing Apps on Labor Market Outcomes in Brazil*, where it addresses the relationship between Platformization and informal Jobs and whether Platformization supposes an Informalization of the labour market.

Following this interesting conference that inaugurated the workshop, the first block or Session 1: Theoretical and conceptual approaches was introduced, which includes two interesting

contributions on the topic from our teams from GEWAK (Germanyand) UOCRA-UNTREF (Argentina), and, respectively on: a novel approach to differentiating between regressive informality and transformative informality and Informality as a structural problem with economic causes.

Part 2, titled "*Around the Informal Economy and Sustainable Development",* features two presentations: the first a joint presentation by teams from BUES (Romania) and the University of Salerno (Italy) and the second by UBA/ Observatorio de la Deuda Social Argentina ODSA-UCA (Argentina). These presentations address, respectively, the following topics: Shadow economy and sustainable development using Global Sustainable Development (SDG) indicators, and an assessment of the impact of labour informality on the non-monetary deprivations of households, developing an interesting analysis of multidimensional poverty in Argentina for the period 2021-2024.

The third part, titled "Labour Markets and Informality," featured seven presentations from our teams at BUES (Romania); UBA, ODSA-UCA (Argentina), UBATEC (Argentna, PUJ (Colombia), UVEG (Spain), UCA (Argentina) and FUOCRA (Argentina). The titles of the papers presented were, respectively, “Uncovering the invisible workforce: labour input method applied to Romania’s informal employment”; “Digitalization and informality: a new occupational frontier in middle-income economies. a study on working conditions and job satisfaction”; “Labour transitions and inequality: occupational mobility, labour informality, and wages in Germany, Spain, italy, Poland, and Argentina (2022–2023)”, “Constitutional minimum wage, living wage, and informality in Colombia and Mexico”; “The rise of informal employment in Latin America and new forms of informality”, “Youth and labor informality: a comparative study of Argentina, Germany, Italy, Spain, and Poland” and “Labour informality: between the normative and the structural”.

The final Part, the 4th, places gender at the centre of the analysis. “Measuring Labor Informality with a Gender Perspective”, of UCB, from Bolivia, “Women’s Economic Autonomy and Overexposure to Informality in Conflict Contexts”,of DESH, from Colombia, “Structural Informality among Women Recipients of Social Programs”, of UBATEC, Argentina´, and the volume concludes with “Gender Inequality and Informality in Remote Work in Brazil”, of UFRJ&UFF, from Brazil.

To conclude Workshop 1, as at its opening, we also had an invited lecture by João Hallak, an expert researcher from the Brazilian Institute of Geography and Statistics (IBGE), who works in the areas of National Accounts and informality. His lecture, entitled “Informal Economy in Brazil: Informal Labor – Structural and Cyclical Results”, examines labor informality in Brazil using data from the 2022 Demographic Census and the Continuous National Household Sample Survey (PNADC), in line with International Labour Organization (ILO) recommendations. Informality has declined slightly over time, but it remains a structural feature of the Brazilian labor market, affecting around one-third of employed workers. Despite its broad employment share, informal

work accounts for a disproportionately small share of total labor income, reflecting persistent inequality.

We would like to thank the Society for the Advancement of Socioeconomics (SASE), organizer of the VI Ibero-American Meeting of Socioeconomics (RISE), for the opportunity they offered us to organize this workshop within the framework of debate and academic work offered at this VI Meeting.

Also, to the Fluminense Federal University for generously offering us their facilities to carry out this Workshop.

And, on the personal level, our thanks also go to Ana Urraca, alma mater of this Ibero-American meeting and fundamental support in the smooth running of this first workshop. Without their invaluable help, it would not have been possible.

And, last but not least, our recognition to Ana Viñas for her enormous task of editing these texts and taking care that not a word, phrase or paragraph was left out of context.

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[1] Santos M. Ruesga, INSEAI General Coordinator and Raul Lorente, Matthias Schulze-Böing and Danielle Carusi, Chairs of the WORKSHOP 1.

PARTE 1. THEORETICAL AND CONCEPTUAL APPROACHES

REGRESSIVE AND TRANSFORMATIVE INFORMALITY. OUTLINES OF A RESEARCH STRATEGY

By Matthias Schulze-Böing[2]

Summary

The paper explores a sociological perspective on informality, building on the assumption of dialectical interrelation of formality and informality and a dual nature of informality as a regressive social phenomenon on the one hand and a potential for progressive social change on the other on the level of society and the dual nature of restricting and enabling well-being at the level of individual action. Subsequently, the outlines of differential approaches to the governance of informality are presented.

Keywords: informality, modernization, governance, social reproduction

JEL code: B55.

1. Preliminary Remark

In this talk, I will propose a way to differentiate the concept of informality as a social phenomenon in a manner that is both relevant to political practice and theoretically substantial. First, I will explain the significance of informality in sociological theory of society and organization. Second, I will describe some key aspects of the political challenges associated with the phenomenon of informality. Building on this, I will then, thirdly, establish the distinction between regressive and transformative informality and explain its consequences for political practice.

2. Informality or the dual nature of social order

In sociology, the development of modern societies has consistently been discussed as a process of formalizing social relations.

Through the market logic of capitalist society, as Karl Polanyi most succinctly demonstrated in his book "The Great Transformation," economic relationships were detached from their embedding in a cultural and moral context and subjected to the logic of exploitation. The standards of tradition and historically developed moral concepts, for example, in determining "fair prices," were suspended in favour of a purely monetary-value-oriented calculus of utility. Regarding labour, the English historian E.P. Thompson described the displacement of "moral economics"—the culturally anchored and tradition-legitimized standards of fair wages—by the

logic of labour markets regulated by supply and demand as an extremely conflict-ridden process in the formation of a working class.

Karl Marx famously described the socio-economic logic of capital as a contradictory dual structure: on the level of the economic conditions of the market economy as a contradictory unity of the use value of commodities and their exchange value; on the level of production as a contradictory unity of concrete and abstract labour, as a regime of abstract societization that, however, in the process of the accumulation of capital, can only seemingly and not actually detach itself from the material basis of society and concrete labour as the basis of all creation of value.

The sociologist Max Weber described the emergence of modern bureaucracy as a process of rationalization and formalization of social relations and domination. In his famous "Philosophy of Money," Georg Simmel traced how, in connection with the spread of monetary transactions, formal thinking, calculability, and abstracted forms of the coordination of social life became established not only in economic conditions but also in the cultural "superstructure" of society.

Jürgen Habermas, a main representative of the Frankfurt School of Social Philosophy, described the process of modernization as the emergence of abstract system rationality at the level of coordination of social action, which increasingly undermines and, as he put it, "colonizes" the lifeworld-based foundation of action, thus depriving it of its autonomy and self-organization and subordinating it to the functional system imperatives of capitalist economy and formal law. The tense and contradictory dualism of system and lifeworld has since become a central top in the critical analysis of modern societies.

Anthony Giddens, to cite one final example from the various approaches to a sociology of modernity, described modernization in his book "Consequences of Modernity" as a process of "dis-embedding" social relations, that is, the detachment of social mechanisms from the contexts of life shaped by traditions, local cultures, and immediate personal relationships, as already described by Polanyi. On the one hand, this has unleashed enormous dynamism in social development, with the emergence of global markets and communication networks, the establishment of technological and scientific rationality, and also the liberation of individuals from the constraints of traditional bonds. The downsides of modernization, however, are the increased contingency of social relations, insecurity, and alienation, which repeatedly call into question the stability and cohesion of modern societies.

Modern society, therefore, is permeated by contradictions in its most elementary structures, contradictions that on the one hand keep it in motion, but on the other hand repeatedly plunge it into crises and conflicts. The duality of formality and informality, I argue, is a significant expression of this contradictory fundamental structure of modern society. It would certainly be an oversimplification to limit this to capitalist societies. As we have learned in recent history, even socialist societies cannot resolve this fundamental contradiction between system and lifeworld, between system integration and social integration, and indeed between formality and

informality. Abstract social systems depend on lifeworld structures and endanger themselves when they undermine these structures and threaten their continued existence. Society requires system integration and, at the same time, functioning social integration. If system integration becomes autonomous and social integration no longer takes place to a sufficient degree, the cohesion and, in the long term, the very existence of society is at risk, according to the thesis of David Lockwood, to whom Habermas also refers in this respect with his distinction between system and lifeworld.

In the tradition of communitarianism, civil society, also a sphere of informal self-organization within the social sphere, is emphasized as an important resource for social cohesion and democracy. At times, particularly in the social sciences, civil society has been readily invoked as a positive counter-image to the abstract concept of societization through the market and the state. A functioning civil society is undoubtedly an important element of an open and democratic society in many respects. However, as Jeffrey Alexander pointed out as early as the 1990s, it also has its dark sides: a lack of transparency, unchecked power relations, and exclusion along the lines of social milieus, ethnicities, traditions, and cultural identities.

The tension between market, state and civil society also reveals the contrast, but also the interdependence, of formality and informality.

Applied to the duality of formality and informality, this means that functioning informal structures are ultimately indispensable, especially in highly formalised systems. It is always about the duality of formality and informality. One should not simply understand lifeworld, civil society, or informality as positive qualitative opposites of formality to system, market, and state, or indeed formal structures. Lifeworld, civil society, and informality each have their dark sides – the constraints of tradition, personal power relations, lack of law and order, insecurity, and the “law of the jungle”. One must look closely to distinguish and assess the potential and risks of informality for a democratic and free society.

In (Marxist) industrial sociology, informal relationships and the subjectivity of the workforce were interpreted as disruptive factors to the profit-making interests of capital, and simultaneously as points of departure for strategies of resistance and representation of labour's interests against capital. Informality, in a sense, creates spaces of freedom that can limit capital's access to human labour. This may put the capitalist mode of the generation of value at risk, although it is creating spaces of uncertainty for the management and spaces of autonomy for the workers in the organization of the work process.

German sociologists Renate Mayntz and Niklas Luhmann have elucidated the function of informality, or "informal organization," for formal organizations, government agencies, companies, cultural institutions, universities, and associations. According to them, organizations cannot function without informal organization, without "kurze Dienstwege” (short lines of communication, as they are known in Germany), without personally based relationships of trust, and without agreements made outside the formal rules and regulations. Informal organization is

a sort of lubricant of formal organization. In a famous passage from his 1964 book "Function and Consequences of Formal Organization," Niklas Luhmann speaks of "useful illegality," which contributes to formal organizations achieving their organizational purpose. The attribute "useful" is crucial. It distinguishes "illegality" that is employed in accordance with the organization's purpose from rule violations that run counter to that purpose. If two colleagues disregard certain rules to quickly resolve specific problems in the production process, this can be productive for the company if adhering to all rules would have resulted in a longer production outage. Similarly, if a salesperson generously exchanges a purchased shirt even though the official return period has expired, this rule violation can secure a customer for the company and enhance its reputation. In contrast, "useless illegality" would include leaving work longer than permitted, watching YouTube videos during working hours instead of working on Excel spreadsheets, or even diverting tools and materials for personal use. Even within organizations, informality is not simply a resource that can be used free of charge by the formal organization; rather, it can pose a risk to the existence and functioning of organizations.

The coexistence of formality and informality is also a key element in the economic sphere. Estimates from the OECD and the ILO suggest that around 60 per cent of all economic activity worldwide takes place in the informal sector, significantly more in low-income countries, but still between 10 and 25 per cent in high-income countries. From a macroeconomic perspective, the informal sector is both a threat and a potential asset. The state loses tax revenue and social security contributions due to the informal economy. For those working in it, informality generally means foregoing union representation, the protection of labour and social security laws, and a high degree of job insecurity. At the same time, the informal economy generates income that protects against absolute poverty, ensures the supply of goods to the population, and represents a flexible potential that facilitates the economy's adaptation to changing market conditions, thus increasing its resilience towards uncertainty and turbulent environments. Furthermore, the informal economy is often a source of innovation and creativity that also benefits the overall economy. Here, too, it is the dual nature of informality that must be emphasized. It jeopardizes social cohesion through the segmentation of markets, the social divide between secure and precarious sectors, and the erosion of the legitimacy of institutions. At the same time, however, it can safeguard social reproduction and compensate for the dysfunctionality of institutions and formal regimes.

3. Informality. Transitional Mode or Trap?

Taking this a step further and not merely considering the coexistence of formality and informality in the economy and society, another dimension of the complex interplay between these two modes of sociality and socialization becomes apparent. In the temporal dimension, we see transitions from informality to formality and from formality to informality, both in individuals' work histories and in the life cycles of companies or entire industries. When a job in the formal economy is lost, informal employment is often the only way to earn an income. However, in

functioning labour markets, this informal employment can also serve as a stepping stone to a new job in the formal sector. Often, informal activity marks the beginning of careers in the formal economy. It allows individuals to gain work experience and build contacts that can be leveraged throughout their careers. Even small businesses, starting wholly or partially in the informal economy, can, under favourable circumstances, grow into the formal economy.

This temporal dimension of informality, as far as I can see, has received little attention so far. Yet, in assessing whether informality represents a potential for social and economic development or a threat, it is also crucial to understand whether informality is a temporary mode of participation in the labour market and society for individuals or specific groups, or a persistent trap with few escape routes. For example, there is a wealth of evidence showing that migration is often closely linked to informality, not only in the form of irregular migration, but also in connection with the initial steps of integration into the host society. Informal networks are particularly important for migrants to gain a foothold in a foreign society. Informal labour markets are often the only way to quickly find work and income. Informal structures also play a significant role in housing markets, especially among the migrant population. These phenomena, too, have their advantages and disadvantages, as migration research has demonstrated in many respects. Undoubtedly, there are also highly undesirable side effects, including the scandalous exploitation of immigrants in the informal labour market, deplorable and exorbitantly expensive housing conditions, and business models that shamelessly exploit and perpetuate the misery of vulnerable immigrants. Nevertheless, the informal sphere can also be an important catalyst for successful processes of arrival and integration. However, this is only true if informality, in the temporal dimension, is a state from which transitions into the regular labour market, the regular housing market, and full participation in the host society are possible. In Europe, for example, in connection with the migration waves following the enlargement of the European Union to Southeast Europe after 2008, waves of growth in informal labour markets and informal and illegal economic activity could be observed, sometimes also linked to the misuse of social benefits. However, after some time, this activity partially transitioned into regular employment, thus normalizing itself. However, in some sectors such as the construction industry, the cleaning industry and certain services, irregular work has become entrenched and continues to pose major challenges to government regulatory policy.

We experience both informality as a transitional phase and informality as a trap of persistent precarious working conditions and living circumstances. And of course, it's also true that no society can afford to have a large portion of the population living and working outside the rules that apply to everyone. Informality can foster social cohesion under very specific conditions. But it can also massively undermine it and put it at risk.

It would therefore be important to be able to track how informality manifests itself in the time dimension, what material living conditions are associated with informality, what the conditions are for growing out of informal work, which groups succeed in this, and which do not, how social and economic regulations interact with the dynamics of informality and what influence politics can have here, etc.

There are, in principle, datasets that could be used for this purpose, such as the Socio-Economic Panel (SOEP) in Germany, which has been surveying around 30,000 representative individuals in approximately 22,000 households every year since 1984. This allows for the longitudinal study of life courses within the context of the respective socio-economic circumstances. The SOEP now plays a prominent role in international research, particularly in the fields of poverty research, labour market research, and the study of living conditions. Similar surveys seem to be available in a variety of countries, including Brazil, with its national household panel.

From a sociological perspective, informality is therefore a highly complex phenomenon that defies simple judgment and can only be grasped with a dialectical terminology, both empirically in terms of the social function of informality and normatively in terms of critical assessment and subsequent policy options.

4. Regressive and Transformative Informality. Proposal for a Conceptual Framework

Informality is a necessary component of social order and societal reproduction. Its function would be misunderstood if it were viewed solely as residual traditions or even exclusively as a social pathology to be contained and overcome.

We are always dealing with specific arrangements of informality and formality, which can take on very different forms in different societies and at different stages of societal development. One could speak here, using a term coined by the sociologist Norbert Elias, of "figurations," that is, a specific order that should not be conceived as static, but rather as dynamic and fluid.

Informal structures and practices can be "functional" in the sense of Mayntz and Luhmann, as they allow organizations to circumvent rigid bureaucratic structures and ensure their efficiency—organizations that would collapse under strict adherence to all rules ("working to rule"). Informal work can guarantee income and the allocation of goods and services, thus contributing to the reproduction of society. Informality and formality, seen in this light, can be complementary, supplementing each other and stabilizing society. The "latent" function of informality, in this sense, would indeed be to stabilize formal structures by relieving them of burdens and compensating for functional deficits. This certainly does not mean simply justifying informality in all its problematic aspects. However, if one wants to understand why informality is so important even in modern and developed societies, one cannot avoid considering its latent functions.

However, informality can also threaten social order, destabilize social institutions, and undermine cohesion.

The figurations of informality move, in a sense, on a scale between stabilization and destabilization, and it should be the subject of social science research strategies to examine these figurations of the various forms of informality and the equally multifaceted formal

structures and practice regulations in a society, in regions or in organizations, and to develop criteria according to which social phenomena can be classified in the multidimensional coordinate system between stability and destabilization.

From a dynamic, temporal perspective, the question arises as to what extent informality hinders or promotes social change. As we have seen, informal structures and practices can stabilize systems and thus slow down or prevent social change in a progressive sense.

There is indeed a dialectic between formality and informality. Moreover, informality itself has multiple faces. It can be an element of progress and the development of "life chances" in the meaning of Ralf Dahrendorf's concept. However, it can also be an expression and catalyst of social pathology and societal decline, the perpetuation of inequality and precariousness, and the destruction of life chances. One must therefore look closely and be prepared to deal productively with a certain degree of ambiguity and contradiction. For the social scientific study of informality, as well as for strategies to develop a progressive policy of informality, a conceptual framework is therefore necessary, which can emerge from an international scholarly discussion. As a first step in this discussion and as an initial suggestion, I propose distinguishing three types of informality:

- *conservative informality* is conceptualized as a type of informality preserving given patterns of socioeconomic reproduction, preserving social segregation and the segmentation of markets,
- *regressive informality* as informality undermining institutional orders and as drivers of precarization and destabilization beyond a given space of informal socio-economic activities,
- *transformative informality* as a driver of the enhancement of life-chances, extending the choice of individuals and allowing them to formalize work, businesses or other patterns of action step-by-step; in this respect, informality could even be seen as a supporting element in the development of a fair and inclusive society.

For example, conservative informality could be seen in the phenomenon of unregistered informal work in certain niches of the economy, which arises to circumvent regulations or save on taxes and social security contributions. At a macroeconomic level, it compensates for dysfunctions and rigidities of the regular labour systems, while at a microeconomic level, it creates a degree of flexibility and provides employment opportunities for marginalized groups, as well as offering well-established groups of workers the chance to generate supplementary income. By helping to offset the shortcomings of the formal economy, informal work stabilizes the system and the associated arrangement of informal and formal employment. I would subsume many phenomena of the informal economy in high-income developed countries under this type.

When informality undermines existing institutions and destabilizes the economic system, exacerbates inequality and leads to the spread of precarious working and living conditions—in

short, when informality triggers and intensifies a downward trend for certain groups, regions, or sectors—I would speak of regressive informality. It is an informality that increases insecurity, jeopardizes achieved standards of civilization, and triggers a downward social trend.

When employers in an otherwise prosperous environment rely on informal employment on a larger scale to cut costs and increase profits, as in agriculture in the US or Southern Spain, this would be an example of regressive informality. It undermines social standards, puts pressure on unionized companies, and promotes the spread of precarious employment. Regressive informality perpetuates precarious working and living conditions and diminishes life chances by reducing options and trapping people in unregulated personal dependencies. In fact, informality almost always has regressive elements. This is part of the dialectic of informality.

On the other hand, there are, of course, significant areas of the informal sector that also exhibit characteristics of alternatives to the dominant, capitalist economic system or, maybe better and more realistic, of pathways to transform capitalist societies into more inclusive and equity-based systems. These areas organize the reproduction of marginalized populations, are embedded in communities, and can, in various respects, be seen as the result of civil society self-organization. The "Economia Popular" in Argentina and other Latin American countries, as I learned from Marina Cardelli, a representative of the Confederation de Trabajadores de la Economia Popular (CTEP), not only has the character of a defensive self-help structure in a situation of exclusion and impoverishment, but also, in many aspects, the character of a socially offensive civil society self-organization. It sees itself as an important factor in overall economic value creation and can be considered a model of a solidarity-based form of work and economy. "We are a laboratory of social change," says Cardelli, thus also attributing a transformative potential to the Economia Popular. It embodies, at least in part, alternative principles of a needs-based and inclusive economy that can challenge the formal economy, which is currently in a state of perpetual crisis in Argentina. It incorporates elements of empowerment and what Amartya Sen describes as "capability"—the ability to act autonomously and in a way that fosters change. CTEP also aims to make the social achievements of the formal economy accessible to people in the Economia Popular and to form them into a social movement that fights for adequate legal frameworks for this sector of the economy, thereby gradually integrating it into the formal economy. If this process succeeds, the formal economy could also transform itself into a more solidarity-based and inclusive form. At the individual level, transformative informality provides and increases options for development, such as the ability to transition informal activities into formal ones and to strengthen social participation.

This proposed distinction between three types of informality is, of course, an idealization, and there is unlikely to be a one-to-one correspondence with reality. What is likely to be found in reality are always hybrid forms and arrangements of different forms of informality, and it would be the task of empirical socio-economic research to examine more closely which structures and dynamics exist in this regard in individual societies, which factors promote the emergence of transformative informality, and which factors promote the spread of regressive informality.

Furthermore, social reality is always characterized by arrangements of formality and informality, which can mutually enhance but also limit each other and which change in social development, something we tentatively attempt to grasp with the concept of figuration adopted from Norbert Elias.

From there, a multitude of research questions can be formulated, including the important questions about the relationship between informality and social cohesion, social capital in a society, and issues of sustainability and resilience.

Finally, it would be necessary to examine to what extent the proposed categorization can serve to identify policy options regarding informality or the “governance of informality”.

While government policy towards regressive informality should logically take a more repressive approach, a selective approach would be advisable for "conservative informality," employing specific forms of intervention depending on the target group, occasion, and problem situation. For transformative informality, I envision considering constructive, partnership-based interventions. For example, providing guidance and targeted support to people registered as unemployed, receiving public assistance, and simultaneously engaged in informal work, helping them to gradually transition from informal (and illegal) work to formal (and legal) employment. This approach is preferable to simply suppressing informal activity in individual cases. A similar approach could be taken with informal businesses. A policy on informality can and should also include measures that modify the legal framework for activities, such as those of street vendors in Buenos Aires, to legalize informal, and often highly productive and valuable, activities.

This diagram summarizes this consideration:

Type of Informality	Regressive	Conservative	Transformative
Intervention Strategy	Repression, enforcing the law	Selective action, keeping a balance	Partnership and empowerment

5. Conclusion

Informality is a complex phenomenon that requires a nuanced approach in both research and practical policy. It has productive aspects that are essential for the healthy development of society. However, informality can also be an expression of societal decline, the erosion of social capital, and the destruction of life chances. These two aspects often intertwine, making a close examination of the relevant social phenomena crucial for developing appropriate political strategies to address informality. The interdisciplinary collaboration fostered by the INSEAI network offers excellent opportunities to develop suitable research strategies in this area.

[2] Dr. rer. pol. Matthias Schulze-Böing had been Head of Department for Employment, Statistics and Integration Policies of the Municipality of Offenbach am Main for almost 30 years, after having worked as a researcher on organizational and labour-market topics at several universities in Germany. Further on and parallel to this he was

CEO of MainArbeit, the Municipal Jobcenter of the City of Offenbach. He retired in 2021. Schulze-Böing was chair of the Committee for Employment and Social Policies within the Council of European Municipalities and Regions, Brussels, full member of the Social-Policy-Committee of the German Association for Public and Private Welfare (Deutscher Verein) and Chair of the National Network of Jobcenter-Directors (Bundesnetzwerk Jobcenter). Currently he is Chair of GEWAK, a scientific association, based in Frankfurt am Main and working on a variety of research-projects. Further on he is working as consultant to government and social service organizations and is member of the advisory boards of the Research Institute for Social Cohesion (FGZ-RISC). GEWAK is a member organization of the INSEAI-Network.

INFORMALITY IN LATIN AMERICA: A STRUCTURAL PROBLEM WITH ECONOMIC CAUSES. THE ARGENTINIAN CASE.

By Diego Masello[3]

Summary

Nowadays, most of the approaches in Latin America on informality are based on the analyse of the kind of workforce that are within these countries, most of these analyses are done in a structural view or of employment-registered view. However, besides the structural problem of informality there is also an economic problem behind this phenomenon.

Hence, this paper will intend to describe the weight of the Argentinian informal economy as an original contribution and to assess this perspective in relation to future public policies.

The general goal of the study is to characterize a growth model based on the dynamic potential of informal workers and productive units in Argentina.

Besides this general objective, there are other specific goals. First, to describe the main axes of the dynamic potential model as a growth strategy in a country with high levels of informality; second, to estimate the gross added value of Argentine informal economy, and finally, to analyse the complementarity between the shadow economy perspective and the structural view of informality.

The methodology design is based on secondary sources, mainly micro databases that allow the processing of micro data with multiple purposes. Also, we will use the theoretical frame of dynamic potential matrix that was used in several studies in Lima, Perú and Guayaquil, Ecuador. This methodology and its theoretical frame are based on the behaviour of two large dimensions, on one hand, the way in which each productive unit reproduces its capital and, on the other hand, the mode in which the productive units are inserted in the market.

Among preliminary results, we can point out a gross added value estimate of Argentinian structural informality at 6,4 per cent of Argentinian GDP, and it represents 10 per cent of private consumption. All this without considering other dimensions of the so-called underground economy. Besides, in terms of workforce it affects 35 per cent of those who are employed. For these reasons it is a very important issue to analyse for public policies towards diminishing informality within the countries of Latin America region.

Overall, the initial conclusion will address the importance that informality has for the countries of Latin America both, in its structural view related to the labour market and in the "underground economy" view, which reflects the important weight in relation with the GDP that the informality has in our countries.

Keywords: Structural informality, Non-registered employment, Non-observed economy

JEL Code: O170

1. Introduction

Is well known that the Latin-American informality researchers studied the informality phenomenon based on the structural approach, following two main perspectives. On one hand, the Latin American structural economist, for example: Prebisch (1993), who takes several issues of Lewis' work (1954, 1958); Pinto (1965); Nun (1971); Quijano (1972); Carbonetto (1985) among others. On the other hand, we have the commonly known OIT perspective, based on the work of Hart (1971, 1973); Singer (1972); Tokman (1995). Both explain the informality by its structural causes and how these causes affected the labour market.

However, despite the several works about informality, in Latin American countries there is a lack of studies that characterize this phenomenon from its economics causes and its impact on the whole economy of those countries. For example, we have not enough studies based on analyze what is known as "*underground economy*" or "*shadow economy*" or "*non-observe economy*". For this reason, the paper combines a structural characterization of the amount of structural informality with a view of the weight that this sector has for all the entire economy. For this purpose, we use as empirical evidence, the data of Argentina in 2024[4].

Following Dell'Anno (2022), the OCDE recognizes two methods to estimate the Non-Observe Economy, on the one hand, the econometric method and on the other hand the National Accounting Approach (NA). We will use the second, the NA approach. This is an indirect method that is based on several economics statistics that mostly are produced by the governments.

Mainly, we used macroeconomic data and labour market micro data. The National Statistics and Census Institute (INDEC) of Argentina produced the information.

[1]It is important to put clear that this work does not include data of the level of tax payment, because we haven't data of the Argentina's Control Agency. For this reason, we focalized data on registered or non-registered employment. However, in very likely that many cases studied in this paper also are in irregular situation related to the commitment of tax payment.

Objectives

The general goal is to describe the weight of the Argentinian informal economy as an original contribution and to assess this perspective related to future public policies.

Besides, we can point out these specific goals:

• To estimate the gross added value of Argentine informal economy.

• To analyze the specific contribution of structural informal sector to the entire economy by sector and company size.

• To specify the weight of non-registered employment that comes from structural informality in comparison with the one that results from evasion or circumvention of labour laws or labour regulations.

2. State of the art

In Latin America and in Argentina, we have several theoretical perspectives and methodological approaches on informal employment or informal sector or the informal economy. Briefly, there is a mainstream of studies that have calculated the size of the non-registered employment, the percentage of non-registered workers and their weight in relation to the whole labour market, being published monthly.

Besides, in Argentina, there are other perspectives: a structural approach to informality, following the ILO tradition also the Latin American structural economist tradition. This view becomes especially important during the last forty years, when Argentina's social and productive structure had been split in two or three sectors increasingly separated from each other. Also, and particularly in Argentina, we have a concept of "popular economy" which refers, although partially, to the informal economy. However, this concept is not shared in the same meaning within the Latin American region, different countries have their own way to refer to the population that has precarious jobs.

On the other hand, in Latin America, there are few studies of the weight of the informal economy from an economic perspective, most of these studies were published by public organizations (the statistical institutes of several countries) or by multilateral organisms like ECLAC, OECD or ILO, among others. Despite Argentina's lack of a stream of research on the economic weight of the informal economy, we can point out researches of the Central Bank of the Republic of Argentina or some isolated works. Besides, we can find other studies about the economic weight of informality made by several civil society organizations, such as CIPPEC, Fundar, Mediterranea, etc.

As a result of this starting point, the present paper intends to achieve a first exploratory glance at the issue. Mainly, the work was led to help in building a provisional baseline useful to think about the economic problem that the informal economy represents to our countries.

3. Methodology

The methodology design is based on secondary sources, mainly micro databases that allow the processing of micro data with multiple purposes. The sources are the microdata of continue household survey and the national accounts data, both produced by the National Statistics and Census Institute (INDEC) of Argentina.

Also, we will use the theoretical frame of the dynamic potential matrix that was used in several studies in Lima, Perú and Guayaquil, Ecuador. This methodology and its theoretical frame are

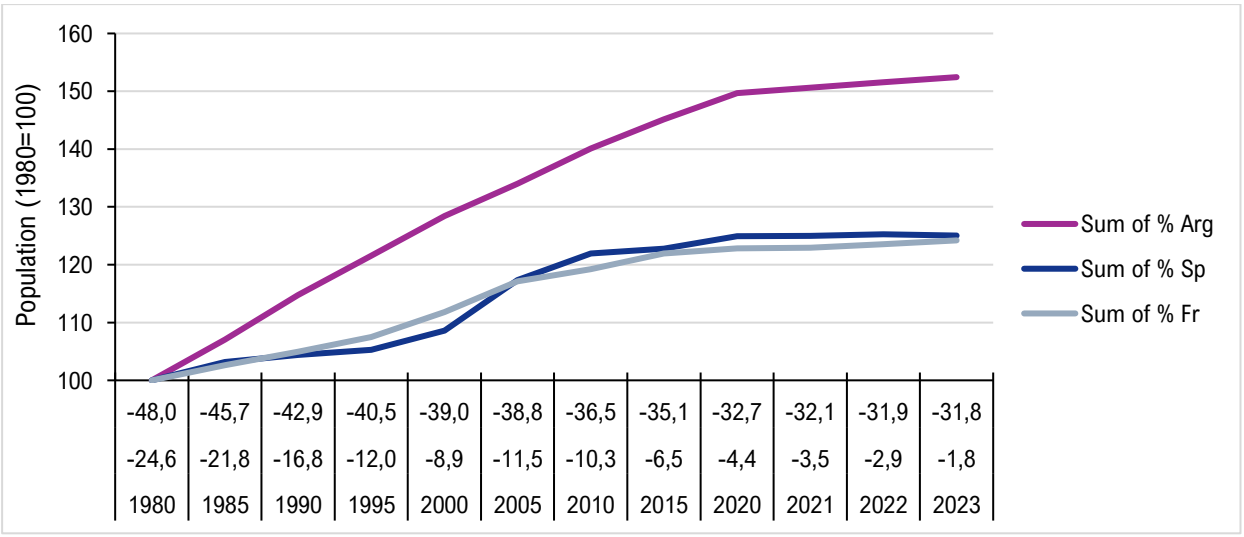
based on the behaviour of two large dimensions: on one hand, the way in which each productive unit reproduces its capital and, on the other hand, the mode in which the productive units are inserted in the market.

Within the methodology, we have two main hypotheses to contrast. First, there is a relation between the non-registered employment and the structural informality, such that most of the non-registered employment comes from the informal sector. Second, the weight of the informal economy is large enough to make public policies for this phenomenon.

4. Results and Comments. Argentina's socio-productive breach

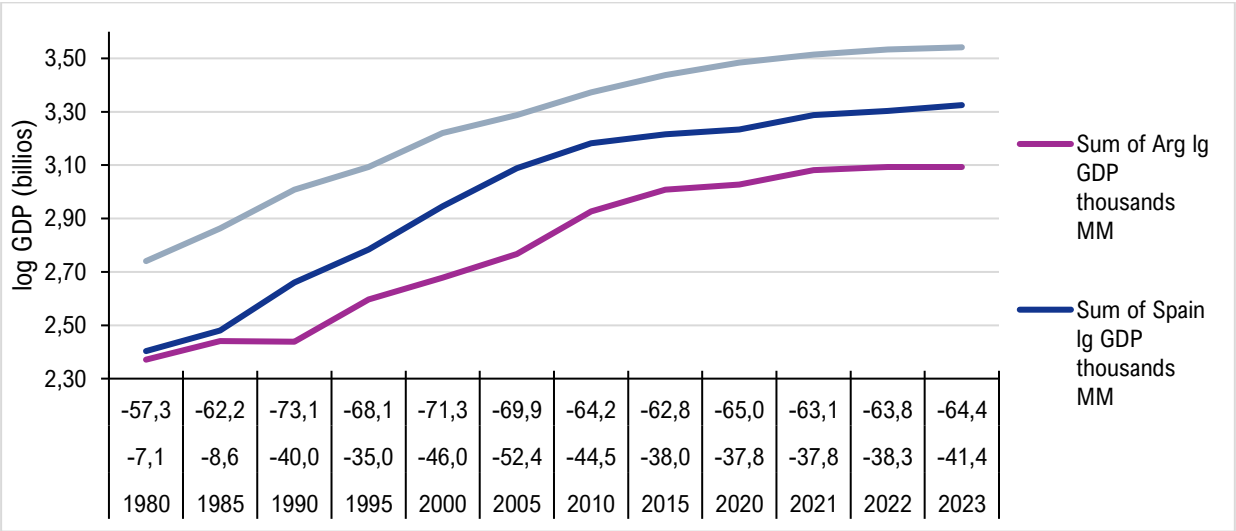
During the last forty years, Argentina has suffered a structural breach that has consolidated the informality problem and separated our country from the path of the other developed countries. For example, in the Figures below (Figure 1 and Figure 2), we show that in 1980 Argentina had 25 per cent less population in comparison with Spain and 48 per cent less in comparison with France. Nowadays, this gap has decreased to only 2 per cent in comparison with Spain and ten points less in comparison with France. However, on the other hand, the path of GDP was backward, starting in Argentina in 1980 with a difference of 7 per cent in comparison with Spain and 57 per cent with France, and today this gap has increased to 41 per cent in comparison with Spain and to 64 per cent with France. These numbers show above all that the stagnation Argentina has had, and also it is a proxy of what we call "the structural fracture", which has impacted the social and productive dimensions.

Figure 1. Population evolution 1980 – 2023 (1980=100)



Source: own elaboration based on data from OECD and World Bank (Argentina, Spain and France percentages of population).

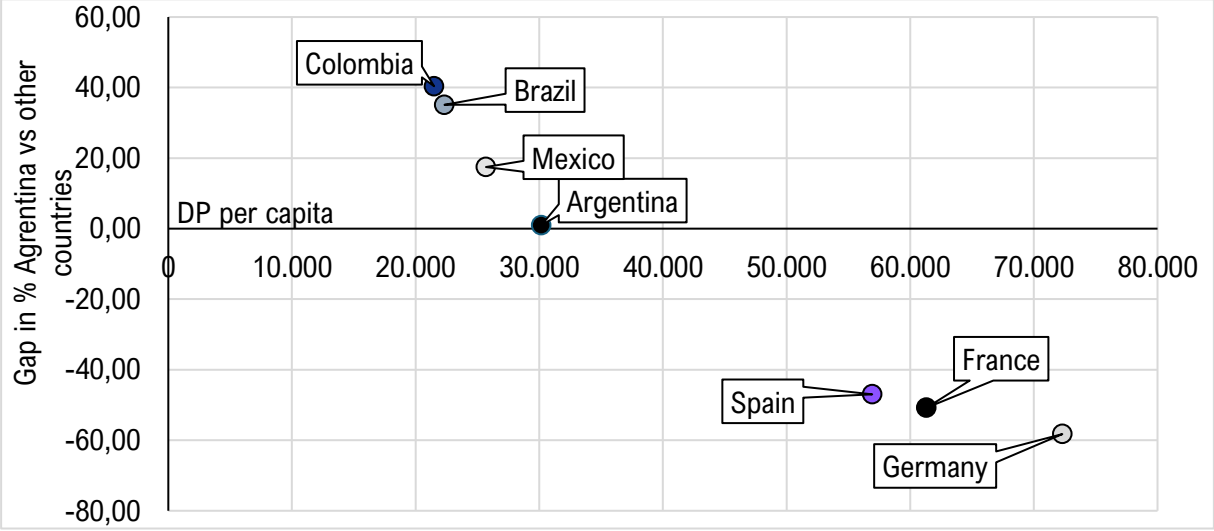
Figure 2. GDP evolution 1980 – 2023 (Log. GDP billions)



Source: own elaboration based on data from OECD and World Bank (Argentina, Spain and France)

Another way to see Argentina's process could be to analyze the GDP and GDP per capita in international current dollars in comparison with several developed countries. Because, for Argentina that idea was, in the words of Shumway (2005), our "guiding fiction": the idea of becoming an industrialized and developed country. Besides, we included in the comparison other large countries of Latin America.

Figure 3: Distance with Argentina (GDP per capita and %)



Source: own elaboration based on data from World Bank.

The following graphic shows that the GDP per capita gap between Argentina and the developed countries[5], which have a social and productive structure much more homogeneous. Therefore, Argentina is 47 per cent below of Spain, minus 51 per cent of France and minus 58 per cent of Germany. Also, we did the comparison with large Latin America countries, and we can see Argentina 40 per cent above Colombia, 35 per cent above Brazil and 17 per cent over Mexico. In spite of the position of Argentina above the last group of countries, it is within the same zone,

both related to the lower level of GDP per capita and for the distance between Argentina and the other two groups of countries.

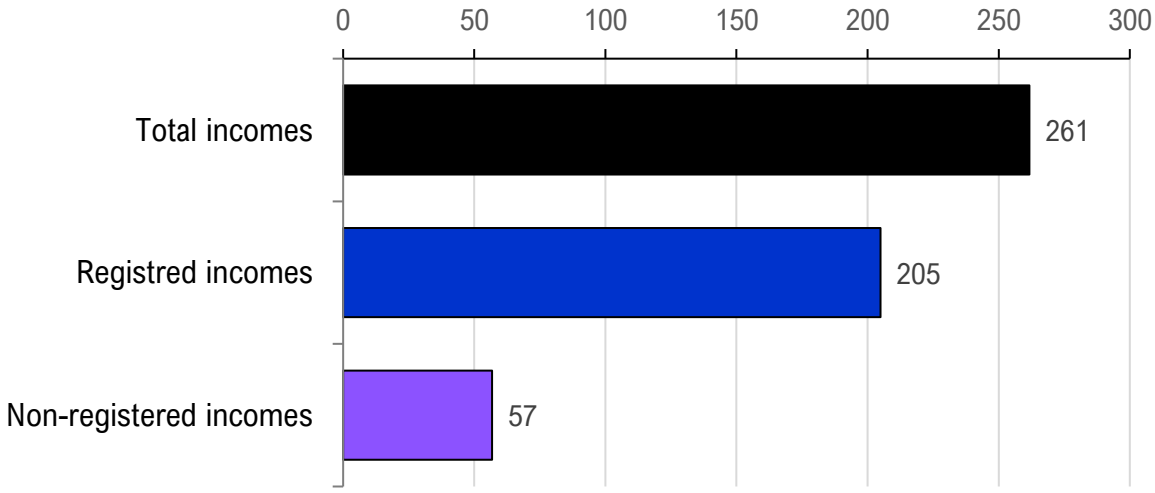
5. Approach to the size of Argentina's informal economy

As we pointed out before, in Latin America as well as in Argentina, there are several studies about the informality from the labour market perspective, but there are few or no studies that estimate the size of the informal economy in monetary terms. In 2024, Argentina's GDP in current prices was of U$S638[6] billons and the consumption (which contribute with aggregate demand), which represents roughly 49 per cent of GDP (US$310 billion), was built from the income of salaried workers, self-employed and small business owners.

Therefore, our analysis was focused on the informality which comes from non-registered employment within each of the last categories, where the whole income is outside the labour regulations, and because of this, it isn't contributing to personal contributions and employer contributions. The graphic below represents the total income and which of this is registered or non-registered. As we can see, the non-registered income accounts for 22 per cent of total revenue, and it represents 57 billion dollars.

This amount, by itself, reflects that Argentina and probably most of the Latin American countries have a very important economic and financial problem due to circumvention of labour regulations. Besides, Argentina has a large productive problem related to this economic condition, and, as we'll see later, the relation between both will contribute to explaining the whole outlook on the informality phenomenon.

Figure 4. Incomes by registration requirements (U$S billion 2024)

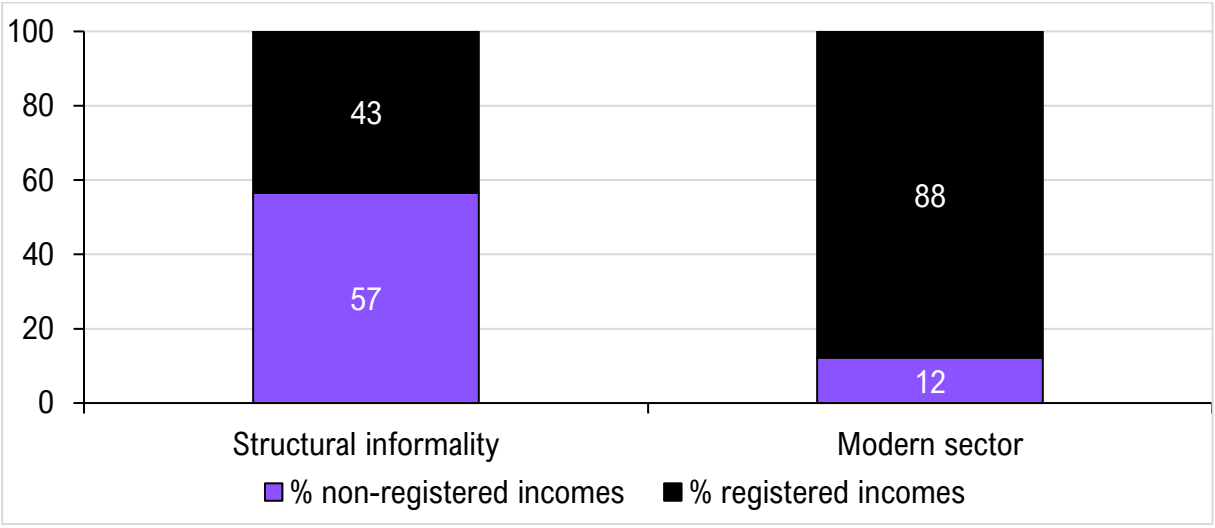


Source: own elaboration based on data from the World Bank.

On the other hand, when we look into the composition of incomes, we can distinguish which comes from the modern sector and which comes from structural informality, the first is around U$S16 billion while the second reaches U$S21 billion. Is that to say, in absolute numbers, the

second is bigger, which reflects a certain association between the structural labour problems and non-registered activities. When we establish the comparison with the total incomes of which sector (Figure 5), we have that on one hand, the non-registered income from the modern sector reach 12 per cent of the total modern incomes, and on the other hand, the non-registered income from the structural informality rises to 57 per cent. Hence, within structural informality, more than half of the total income is non-registered.

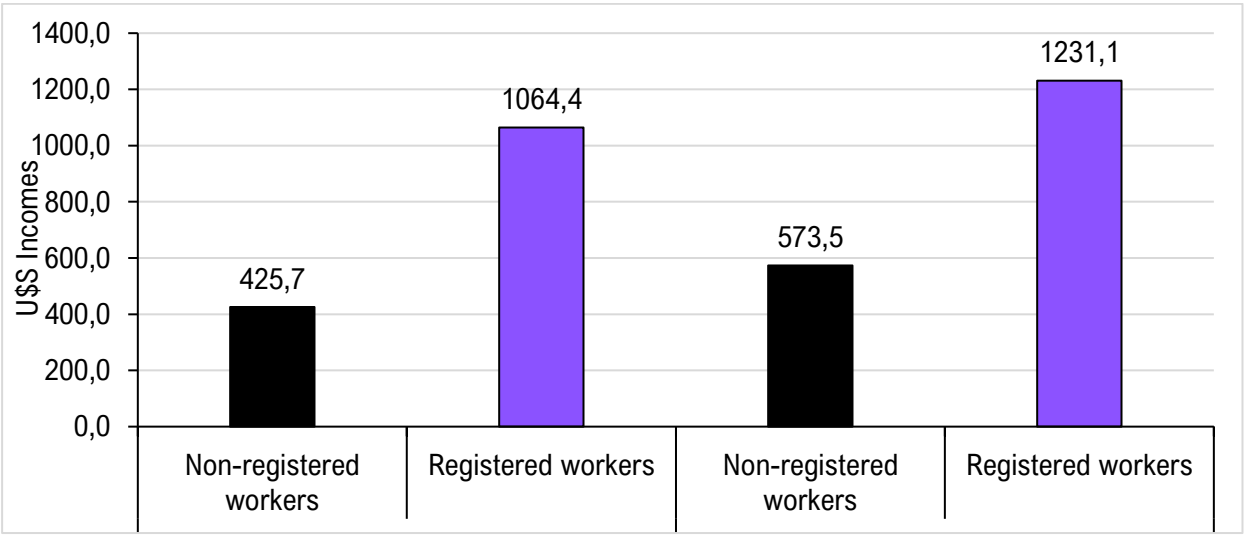
Figure 5. Registration requirements by sector (%)



Source: own elaboration based on data from the World Bank.

However, if we analyze the situation from the amount of workers, we find that non-registered workers within structural informality are 75 per cent of the total workers. The difference is explained because of the average of structural informal workers earning less incomes in comparison with modern workers (Figure 6).

Figure 6. Average income in current U$S (2024)



Source: own elaboration based on data from the World Bank.

Then, we have what in sociology is known as an alternative relation among the sector to which

workers belong, the registered or non-registered condition and the level of income that they could earn. Therefore, a person earns less income because he is a non-registered worker and even earn lesser income because he belongs to the structural informal sector.

Then, we have two dimensions of different levels influencing the size and the shape of Argentina's informal economy. On one hand, the structural dimension, which explains informality long-term behaviour, is also a proxy of Argentinian's social and productive.

problem. On the other hand, the legal dimension, which explains two main short and middle term and non-structural behaviours: first, the circumvention of labour regulations for those who come from the modern sector, and second, the inability to comply with the current regulations for those who come from the structural informality sector.

6. Conclusions

Through these pages, we found to establish a provisional characterization of a part of Argentina's informal economy, using data that was provided by the national accounts plus the microdata on the labor market.

Following this way, we showed:

During the last forty years, Argentina was consolidating a structural breach which affected deeply its social and productive structure.

Nowadays the Argentina's informal economy is large enough to be considered an important problem, due to the consequences that it brings to the labor market and the consequences that it brings to the size of the non-observed economy.

The structural informal sector employs more than 35 per cent of occupied and 71 per cent of these workers are non-registered.

There is a relation where both the structural dimension of informality and the legal dimension of non-registered employment contribute to explaining the lower average income of these workers.

Finally, it is important to consider these two dimensions (structural and normative/regulative) if we want to apply an effective and efficient public policy to reduce these phenomena. Therefore, as we pointed out (Masello, 2021, pp. 29-30), the concept of informal employment designates two different kinds of phenomena: on one hand, non-registered employment which comes from a structural problem and on the other hand, non-registered employment which comes from a decision of circumventing the labor rules.

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[4] It is important to put clear that this work does not include data of the level of tax payment, due to we haven't data of the Argentina's Control Agency. For this reason, we focalized on data of registered or non-registered employment. However, it is very likely that many cases studied in this paper also are in irregular situation related to the commitment of tax payment.

[5] It is necessary to explain that the comparison has done whit Argentina as a reference point. Then, the gaps were calculated as how each country is in percentages above or below Argentina.

[6] The calculations were made with an average value exchange rate to $914,74 by dollar.

PARTE 2. AROUND THE INFORMAL ECONOMY AND SUSTAINABLE DEVELOPMENT

SHADOW ECONOMY AND SUSTAINABLE DEVELOPMENT. A MULTIVARIATE PERSPECTIVE USING SDG INDICATORS

By Roberto Dell'Anno, Adriana Ana Maria Davidescu, Eduard Mihai Manta, Cristina Maria Geambasu and Zouhair Ennaoumi[7]

Summary

This study explores the relationship between the shadow economy and sustainable development by analyzing 150 countries from 2000 to 2022. Using a multivariate framework that combines Principal Component Analysis (PCA) and linear regressions, the research identifies latent dimensions of sustainability: human capital and infrastructure, governance-cooperation, environmental performance, and decent work and institutional coherence. The results highlight that SDG 8 (Decent Work and Economic Growth) is the strongest negative predictor of informality, suggesting that enhancing decent work conditions and institutional quality is crucial for reducing undeclared labor. Other SDGs, such as SDG 5 (Gender Equality), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action), show significant but context-dependent impacts. The findings indicate that progress toward sustainable development does not automatically reduce informality; rather, it depends on the coherence and integration of economic, social, and institutional policies aimed at formalization and sustainable growth.

Keywords: shadow economy, SDGs, decent work, multivariate analysis, PCA, policy integration

JEL codes: E26, O17.

1. Introduction

The shadow economy continues to represent a persistent structural challenge for both advanced and emerging economies, undermining fiscal stability, social protection systems, and fair competition. While there has been progress globally on the UN 2030 Agenda for Sustainable Development, widespread informality still exists: according to the ILO (2024), nearly 2 billion workers, some 58 per cent of the global labour force, are still engaged in informal employment. The persistence of this presence shows that economic growth per se is not able to provide the guarantee of formalization and that it must necessarily be within a multi-dimensional framework of analysis, such as that of the Sustainable Development Goals (SDGs), which allows a comprehensive picture of the reasons for the existence of informality.

Over the past 20 years, the determinants of the shadow economy have been studied in the scientific literature from many perspectives. These early studies brought forward by Schneider and Enste (2000) and Medina and Schneider (2020) have drawn attention to the role of taxation, regulation and income effects, whilst more recent studies by Williams and Horodnic (2019) and Dell'Anno et al. (2025) have emphasised the behavioural, institutional and structural aspects of informal activity. There has been, though, a lack of analysis into how progress on the SDGs, which are a much more multi-dimensional framework involving economic, social, environmental and governance aspects, affects or is connected to the shadow economy. The integration of the SDG framework into the analysis thus offers a much larger approach to the analysis of the balance between formal and informal sectors, positing that informality can not only relate to economic performance but to issues of social inclusion, quality of governance and sustainable environmental performance.

Within this context, SDG8 (Decent Work and Economic Growth) stands at the core of the debate. It captures both the quantitative expansion of employment and the qualitative dimensions of work, including productivity, fairness, and security, and has been linked throughout the literature to reduced informal activities and greater trust in institutional systems (ILO, 2024; Williams and Horodnic, 2019). Yet the extent of the links between SDG 8 and other of the SDG indicators, such as issues of innovation (SDG 9), equality (SDG 10) and governance (SDG 16) remains unexplored.

The present paper contributes to this field of literature by utilising a Principal Component Regression (PCR) format, using it as a reflective analysis of how all the SDGs may jointly contribute to explaining the degree of presence of the shadow economy in work situations. The study finds latent development dimensions, like social inclusion, governance coherence, environmental balance, and decent-work formalization, that account for cross-country differences in informality by applying PCA to SDG indicators, which lowers multicollinearity.

In addition to its empirical results, this study adds value by connecting two different lines of literature: studies on informal economic behavior and studies on sustainable development. In addition to expanding on current theories, this method offers policymakers practical advice on how to match formalization tactics with more general sustainable development goals.

2. Objectives

The primary aim of this study is to evaluate and quantify the structural determinants of the shadow economy on the basis of its multidimensionality in the context of Sustainable Development Goals (SDGs). In the Principal Component Regression (PCR) framework, the analysis will review how progress made collectively on the 2030 Agenda affects the informal economy, taking into account the problem of multicollinearity between the 17 SDG indicators. More specifically this study aims to: (i) extract latent development dimensions underlying cross-country variation in SDG performance using PCA; (ii) assess the direction and magnitude of the

relationship between each SDG dimension and the size of the shadow economy; (iii) highlight the critical role of SDG 8 (Decent Work and Economic Growth) as a formalization channel linking employment quality, productivity, and governance effectiveness.

Building on theory and empirical findings from Schneider and Enste (2000); Williams and Horodnic (2019); Medina and Schneider (2019); and ILO (2024), the study evaluates the following central hypothesis:

H0: Progress toward the SDGs has no significant association with the size of the shadow economy.

H1: Advancements in SDGs, particularly in SDG 8, SDG 10, and SDG 16, are significantly associated with reductions in the shadow economy.

Consequently, it emerges through this framework that informal activity is conceptually viewed as a systemic outcome of development encompassing simultaneously economic development variables together with the activity of social, environmental, and institutional developments inherent in the SDG architecture.

3. State of the art

The pledge of leaving no one behind was a fundamental pillar of the 2030 agendas that requires world leaders to pursue success and prosperity while maintaining environmental sustainability and equity, but commitment to this pledge is very difficult when a large share of economic activities is outside the reach of laws, social protection schemes, and taxation systems. These informal activities are considered a crucial barrier to sustainable development goals rather than just a secondary consequence. Now, nearly in every region of the world, these workers and firms operating in this informal sector suffer from a lack of rights, difficulties in accessing capital and markets, and weak insurance schemes.

For identification's sake, we state the concepts used based on international labour organization (ILO) recommendations. Under the ILO conceptualization, the Informal economy term refers to all economic activities done by workers and firms that are not covered or insufficiently covered by formal arrangements. Within this umbrella concept the informal employment is job based which refers to all types of jobs lacking social protection coverage and insurance, whether they are operating in the formal enterprises, informal firms or households; and informal sector that is enterprise based, which are all type of jobs located in households unincorporated market enterprises that are not registered and/or do not keep complete accounts (ILO 15th ICLS), everyone who operates in these unregistered units (owners, hired hands, contributing family workers…) are considered as employed in informal sector as the firm itself is informal. On the other hand, the shadow economy, our core dependent variable, is the underground part of the non-observed economy (NOE), that is, all legal production activities that are deliberately concealed from public authorities to circumvent social security laws, avoid taxes, and administrative reporting.

The measurement of these distinct concepts requires different methods. For the employment side, direct techniques are used as labour force and business surveys, official administrative data, and audit records, which are used to construct the proportion of informal employment in total employment (SDG indicator 8.3.1) disaggregated by sex or sector. These methods' strengths can be seen in their conceptual alignment, as it mirrors what it exactly claims, which is that a job is informal if it lacks legal and social protection and benefits. These direct survey methods face other limitations as what is called under-reporting, which comes from the response bias due to the fear of sanctions or social stigma. Another drawback is the coverage error that comes from the missing very small units such as street vendors who move locations or seasonal workers. Instead, measurement of shadow economy requires the use of different indirect methods, since these type of activities are intended to avoid observations, researchers recently rely more on these indirect methods and model based techniques as currency demand approach, electricity consumption, night time lights, and latent variable models (MIMIC/SEM) that combines policy and institutional causes (taxes, regulations, institutions) and statistical anomalies indicators (cash intensity, survey accounts gaps) to estimate the hidden output or added value. Medina and Schneider (2020) stated that the average shadow economy share of the GDP is 30.9 per cent for 157 countries over the period between 1991 and 2017. According to them, the MIMIC model should also include the night lights as an indicator when the purpose is to estimate how much legal output is being hidden.

After establishing the concepts and measurement techniques. The state of the art on these topics converges on two main stylized facts that would encourage the inclusion of the SDGs to explain the dynamics of the shadow economy across countries. We start by the most important fact, which is that 61.2 per cent of world's employed population, about two billion people, works informally (ILO; 2018a), this share varies across regions with 85.8 per cent in Africa, 68.6 per cent in Arab states, 68.2 per cent in Asia and Pacific, 40.0 per cent in the Americas, and 25.1 per cent in Europe and central Asia. Excluding the agricultural sector, this share declines to 50.5 per cent; with this non-agricultural informality still considerably high in both Africa and the Asia Pacific (ILO, 2018a). Additionally, several researchers argued that high informality economies have several issues as low income per capita, weak financial development, higher poverty, and lower capital accumulation (World Bank 2021, La Porta and Shleifer 2014, Docquier et al., 2017). These economies share another common factor, which is the procyclical nature where shadow economies tend to move together with the formal economy, as it is not just a secondary consequence due to development gaps, but rather a main cause that co-occurs with them and magnifies them.

The persistence of this phenomenon comes from different factors (Johnson et al.,1998), stating that the way rules are applied in practice is what shapes informality. They argued that in former soviet nations, the low revenue capacity and poor quality of public services are consistent with a large share of the unofficial economy. Torgler and Schneider (2009) instead emphasized on two core hypotheses: core hypothesis 1: higher tax morale (i.e. the intrinsic willingness to pay

taxes) reduces the size of the shadow economy, and core hypothesis 2: poorer institutional quality increases the size of the shadow economy. On the other hand, Dreher and Schneider (2010) concluded that in a setting where low income and weak governance, shadow economy and corruption support each other, while in high income economies, this link tends to be weak or reverse in some cases.

The standard approach adopted within the 2030 Agenda's global indicator framework (to measure progress beyond the GDP) is to use these SDG indicators as proxies for policy efforts and countries' capabilities in several fields and linking them to several outcomes and results as income, wellbeing and growth in one directional fashion (United Nations, 2015; Sachs et al., 2025). A large strand of the literature investigates whether the SDG progress is associated with a smaller size of the shadow economy in a cross-country setting. A conceptual clarification is needed, but we must distinguish between them, as the SDG 8.3.1 qualifies informal employment based on workers' status of only the main job or activity, while the shadow economy treats the undeclared production (UNSD/ILO, 2025).

The chosen set of variables included in our analysis is supported by existing literature. ILO (2015), through Recommendation No. 204, which concerns the transition from the informal to the formal economy, emphasizes that SDG 8 (Decent Work and Economic Growth) is essential for promoting productive employment, decent work, and sustainable growth. From a normative viewpoint, this transition toward formality requires a combination of simplified registration processes and compliance (lower registration costs, simplified tax and social contribution regimes), a set of incentives (access to procurement, training), and social benefits (maternity/paternity protection, decent work conditions and wages) (ILO, 2015). These measures require strong coordination and governance by the authorities; other measures needed as enforcement, audit, and anti-corruption laws (ILO, 2015). As these benefits are more credible and backed by the state institutions, the relative payoff of formalization increases while the informality declines (ILO, 2015). The SDG 16 encourages institutions to promote the rule of law and lower corruption, intending to reduce the concealment benefits and the size of the shadow economy (Johnson et al., 1998).

The usage of the SDG as a predictor of the shadow economy comes from the fact that several SDG indicators are linked to the concealed added values. These indicators do not have the same effect, as better decent work and strong institutions (SDG8 and SDG 16) on average should lower the shadow economy (ILO, 2015). SDG 12 and 13, on the other hand, can either increase or decrease the size of the concealment depending on enforcement and support offered to firms to shift toward formalization. Aghion et al. (2012) argued that strong mandatory enforcement reduces the benefit of concealment as firms get support during this transitional phase. Still, Blackman (2010) emphasized that weak regulatory performance and scarce resources allocated to audit agencies are linked to poor voluntary disclosure schemes, so he stressed that tightening standards without regulatory capacity can backfire. Instead progress in terms of gender equality and basic livelihood services (SDG 5 and SDG 6) can reduce the necessity driven informality,

as well planned and governed cities that strengthen local businesses and expand basic services increases workers productivity and livelihood security (Brown and Roever, 2016), tackling gender equity issues as women usually concentrated in the lower income group of informal workers (Chen, 2016).

The 2030 agenda and SDSN report stress the use of SDG progress as an explanatory variable, as it provides a robust and comparable metric with a goal to help tailor reform policies. Finally, exploring how these SDG metrics influence the shadow economy can help design actionable insights for better policies and reforms (United Nations, 2015; Sachs et al., 2025).

4. Methodology

The empirical analysis relies on two complementary datasets. The predictor variables consist of the 17 SDG indicators obtained from the United Nations Global SDG Database (UNSD, 2024). Indicators were selected to ensure conceptual representativeness and cross-country comparability across the economic, social, environmental, and governance pillars of the 2030 Agenda. The dependent variable, the shadow economy (SE) expressed as a percentage of GDP, was taken from Asllani et al. (2024), who estimate the informality ratio by the Multiple Indicators Multiple Causes (MIMIC) approach. This measure captures unobserved economic activity not recorded in official statistics, including informal employment, unreported income, and undeclared production. The merged dataset covers a balanced cross-section of countries for the period 2000–2022.

Incomplete country records are a common issue in international sustainable-development data. To address this, missing SDG values were imputed using the k-Nearest Neighbours (kNN) algorithm (Batista and Monard, 2002; Troyanskaya et al., 2001). For each missing observation x_{ij} (SDG j for country i) the algorithm identifies the k most similar countries based on Euclidean distance computed across all non-missing indicators and imputes the missing value as the average of those neighbours' values $\hat{x}_{ij} = \frac{1}{k}\sum_{r\in N_k(i)} x_{rj}$, where $N_k(i)$ denotes the set of k nearest neighbours to country i. In this study, $k = 5$ was selected after sensitivity testing, balancing accuracy and noise reduction (Kowarik and Templ, 2016). The kNN approach preserves the multivariate relationships among SDGs, unlike mean substitution or univariate interpolation, and is widely recommended for socioeconomic datasets with moderate missingness.

Given the high intercorrelation among SDG indicators, a PCR approach was adopted to extract orthogonal latent factors that summarize the multidimensional SDG structure while avoiding multicollinearity.

Let $y \in R^n$ denote the shadow-economy vector and $x \in R^{nxp}$ the standardized SDG matrix ($p = 17$). First, a Principal Component Analysis (PCA) decomposed the predictor matrix $X = UVD^T$, where V contains the eigenvectors (loadings) and $Z = XV$ are the orthogonal

component scores. The first K components explaining most of the variance were retained.

In the second stage, the shadow economy was regressed on the retained components $y = \alpha + Z_k\beta + \varepsilon$ and the coefficients were back-transformed into the SDG space $\gamma = V_k\beta$ allowing direct interpretation of each SDG's contribution to the shadow economy.

The optimal number of retained components (k) was chosen by minimizing the Root Mean Square Error of Prediction (RMSEP) through 10-fold cross-validation, following the implementation in the pls package in R (Mevik and Wehrens, 2007). The PCR specification ensures numerical stability and interpretability by modelling uncorrelated latent variables rather than collinear SDG indicators, thereby reducing estimation bias and improving generalization performance.

5. Results and comments

Given the potential endogeneity linking the shadow economy to its structural determinants, the Principal Component Regression (PCR) approach is not designed to establish causal relationships. Rather, it serves to identify the underlying correlation structure between multidimensional progress toward the 2030 Agenda and informal economic activity, while effectively mitigating multicollinearity among the SDG-related indicators.

To examine the associations between the structural drivers of the shadow economy, a PCR model was estimated using the 17 SDG indicators as explanatory variables. This approach allows for an integrated assessment of how multidimensional progress toward the 2030 Agenda relates to informal economic activity, while simultaneously addressing the issue of multicollinearity among SDG variables. The model used singular-value decomposition and 10-fold random cross-validation. As shown in Table 1, the RMSEP decreased sharply when the first few components were introduced, from approximately 16.3 (no components) to 11 after two components, stabilizing around 10 after 8–10 components. The optimal number of components selected through cross-validation was 10, as further additions did not substantially improve predictive accuracy.

The component-loading matrix (Table 2) reveals the structure of interrelations among the 17 SDGs and clarifies which latent factors drive the variation used in the PCR model. Each component represents an orthogonal dimension summarizing correlated SDG indicators, with positive loadings indicating direct and negative loadings inverse associations with that component.

High positive loadings on SDG 3 (Health), SDG 4 (Education), SDG 6 (Clean Water) and SDG 9 (Industry) indicate a broad social-development dimension associated with basic services and productive capacity. Strong negative loadings on environmental SDGs 14–15 suggest a growth–environment tension. This axis captures the trade-off between human capital accumulation and ecological preservation, a structural dynamic often observed in emerging economies.

Dominated by positive loadings on SDG 17 (Partnerships) and negative ones on SDG 10 (Reduced Inequalities) and SDG 12 (Responsible Consumption). This dimension reflects how governance and policy coherence evolve alongside social equity outcomes. Countries with strong partnerships but persistent inequality cluster along this component.

Table 1. Cross-validated RMSEP and variance explained by principal components

Components	RMSEP (CV)	RMSEP (adjCV)	% Variance in X	% Variance in Y (Training)	Cumulative % Variance in X
Intercept	16,27	16,27	—	—	—
1	11,16	11,16	55,9	95,7	55,9
2	11,03	11,03	64,1	96,8	64,1
3	11,01	11,01	71,8	97,6	71,8
4	10,94	10,94	76,8	98,4	76,8
5	10,67	10,67	81,2	99	81,2
6	10,65	10,65	84,9	99,6	84,9
7	10,61	10,61	88,5	99,6	88,5
8	10,49	10,49	90,7	99,6	90,7
9	10,38	10,38	92,8	99,6	92,8
10	10,27	10,27	94,5	99,6	94,5
11	10,22	10,21	96,8	99,6	96,8
12	10,16	10,16	97,6	99,6	97,6
13	10,16	10,16	98,4	99,6	98,4
14	10,08	10,07	99	99,6	99
15	10,08	10,08	99,6	99,6	99,6
16	10,08	10,07	99,6	99,6	99,6
17	10,06	10,06	100	100	100

Source: Author's own creation.

Moderate positive weights for SDG 12–13 and negative ones for SDG 10–15 indicate a climate–equity balance. It distinguishes economies where environmental improvements accompany or conflict with distributive justice. SDG 8 (0.420) and SDG 16 (0.720) are the strongest positive loadings, linking economic growth, job quality, and institutional integrity. This latent factor embodies the "formalization nexus", where productive employment interacts with governance strength to reduce informal activity.

It suggests that advances in decent-work conditions and effective rule of law move together, a pattern consistent with the ILO (2024) and Williams and Horodnic (2019) evidence that labor-market regularization depends on institutional enforcement.

SDG 8 (0.650) and SDG 9 (0.160) load positively, showing that industrial upgrading and decent-work expansion co-occur. This component captures sectoral transformation: as economies move toward higher productivity, informal labor gradually formalizes echoing Medina and Schneider (2020).

Taken together, the results reported in Table 2 indicate that the loading structure reveals four

latent clusters: social and human capital (C1), governance and cooperation (C2), environmental balance (C3), and decent work and institutional formalization (C4). Among these, the decent work dimension (SDG 8) emerges as a pivotal bridge linking economic growth to institutional formalization. Its recurrent high positive loadings indicate that progress in employment quality, productivity, and labor protection is systematically aligned with reductions in informality. Conversely, high negative loadings for SDG 9 and SDG 15 show that industrial growth without adequate regulation or environmental safeguards may reinforce the shadow economy.

After selecting the optimal 10 components, Table 3 reports the regression coefficients that were back-transformed to the SDG scale.

Table 2. Cross-validated RMSEP and variance explained by principal components

SDG	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
SDG1 No Poverty	0,287	0,113	–	–0.103	–0.176	0,294	–0.213	–0.258	0,168	–0.108
SDG2 Zero Hunger	0,264	–0.159	0,177	–0.353	–	0,116	0,114	–0.616	–0.525	–0.157
SDG3 Good Health	0,305	–	–0.104	–	–	0,149	–	–	–	0,175
SDG4 Quality Education	0,291	0,164	–0.138	–	–	–0.246	0,204	–0.158	–0.454	–0.338
SDG5 Gender Equality	0,247	–0.170	0,222	–	–0.434	–0.159	0,66	0,236	–	–
SDG6 Clean Water	0,285	–0.139	0,135	–0.161	–0.187	–0.253	0,21	–	–	–
SDG8 Decent Work & Growth	0,19	–0.308	–0.152	0,42	–	0,65	–0.216	–0.283	–	–
SDG9 Industry & Innovation	0,281	–0.143	0,173	0,103	–0.111	0,16	0,188	–	0,483	–
SDG10 Reduced Inequalities	0,163	–0.565	–0.216	–	0,147	0,529	0,132	–	0,483	0,111
SDG12 Responsible Consumption	–0.282	–0.126	0,219	0,135	0,17	0,278	0,356	0,192	0,137	0,32
SDG13 Climate Action	–0.224	–0.233	0,269	0,433	–0.427	0,344	–	–	–	–
SDG14 Life Below Water	–0.627	0,309	–0.427	0,344	–	–	–	–	–	–
SDG15 Life on Land	–0.575	–0.266	–0.191	–0.255	–0.122	–0.173	–	0,124	–0.116	–
SDG16 Peace & Institutions	0,27	–0.102	0,134	0,72	–	–0.240	–0.301	0,258	0,243	–
SDG17 Partnerships	0,128	0,537	–0.395	0,437	0,25	–0.243	–	–	–	–

Source: Author's own creation.

Table 3. PCR regression coefficients with interpretation relative to shadow economy

Variable	Coefficient	Interpretation	Evidence
(Intercept)	15,6049	—	
SDG1 (No Poverty)	–1.1413	Poverty reduction reduce reliance on undeclared work and integrating informal workers is central to "leaving no one behind	Berdiev et al. (2020) show that higher poverty levels are linked to a larger shadow economy size. They note that poverty and informality reinforce one another as people in poverty often resort to informal work for survival.
SDG2 (Zero Hunger)	–0.6022	Negative relationship, improved access to basic needs reduces informality	Ameya and Ayal (2024) showed that out of 347 informal workers participants, only 16 % were food-secure, while more than 80 percent faced mild to severe food insecurity. When food security improves, workers are less likely to depend on irregular, off-the-books jobs for survival purposes.
SDG3 (Good Health and Well-Being)	–1.4247	Better health systems reduce shadow activity	Extending health insurance coverage to workers' children leads to an 8% increase in business registered held by owners with children. They concluded that expanding this health coverage encourages labour formalization (Molina-Vera 2021).
SDG4 (Quality Education)	0,8605	An increased level of education, that is not matched by sufficient jobs in the formal sector, can temporarily raise informality. Our positive sign reflects this: a surge in schooling without labor-market absorption leads many educated workers to accept informal roles.	Mosengo and Zamo Akono 2024) found that 33% of individuals operating in Congo labor market are overeducated and specially more among informal workers than formal ones. concluding that more often overeducated individuals end up in low skilled informal jobs
SDG5 (Gender Equality)	1,303	As gender gaps narrow, many women first enter work through informal or self-employment jobs.	ILO (2023) showed that there is an overpresence of women in informal jobs, with 59% worldwide and 80% in sub-Saharan countries.
SDG6 (Clean Water and Sanitation)	–0.6423	Water and sanitation access lowers illness caused by poor hygiene and time spent on water fetching so this helps people engage more in regular work.	UN-Habitat (2022) showed that upgrading services quality and delivery to marginalized populations increases livelihood conditions and improves formal transition and participation.
SDG7 (Affordable and Clean Energy)	–0.1029	Insignificant negative effect: expected that reliable energy would increase productivity and connect workers to formal supply chains.	Expanding digital infrastructure can improve the quality of informal employment (Ding et al 2024)
SDG8 (Decent Work and Economic Growth)	0,419	This positive sign can be explained by the stronger labour standards and enforcement that expose undeclared work and raise reporting. Thus the measured SE can rise in the transition phase.	Do Prado, Santos and Van Doornik (2025) showed in this paper that increasing audit and inspections would lead to an increased detection rate of undeclared work. When violations are detected, firms are fined and required to formally register their unregistered employees.

SDG9 (Industry, Innovation and Infrastructure)	–4.5553	Upgrading and connecting firms to global markets shifts labour into the formal sector.	OECD (2023) OECD (2023) reports that countries expanding export opportunities and industrial connectivity experience a boost in formal employment and enterprise registration.
SDG10 (Reduce Inequalities)	2,0355	Inequality-reducing measures can expand informality when enforcement is weak.	Parente (2024) finds that in Brazil, increases in real wages were associated with a rise in informal employment.
SDG11 (Sustainable Cities and Communities)	–0.7059	Urban sustainability slightly reduces informality by reducing spaces for informal activities.	The UN-Habitat World Cities Report (2022) links stronger urban governance with more inclusive participation in the formal economy and reduced informal settlements.
SDG12 (Responsible Consumption and Production)	3,4854	The new production standards and laws will raise costs in the short run, and increase the size of the shadow economy	Li (2024) showed that responsible production can shift businesses toward less regulated and often informal activities, and especially when enforcement is weak
SDG13 (Climate Action)	2,408	Climate actions linked with tight rules and requirements, which, in a setting with weak enforcement and audit, will lead to increased irregular activities	Zhang et al. (2023)showed that climate policies tightening, not accompanied by appropriate enforcement measures, can increase the measured off-books activities.
SDG14 (Life Below Water)	–0.1421	Minimal negative effect, as the oceans' governance increases, this will limit illegal, unreported and unregulated IUU fishing, thus reducing shadow activities.	Selig et al. (2025) find that stronger enforcement against IUU fishing contributes to a measurable decline in marine-related shadow activities.
SDG15 (Life on Land)	–2.4128	Increased forest and land governance limits illegal logging and land clearing, which is a classic shadow activity.	In a systematic literature review, Polo-Villanueva et al. (2023) found that anti-illegal logging measures strengthen forest governance, shrinking timber shadow activities.
SDG16 (Peace & Institutions)	–0.6119	Rules of law and high-quality institutions increase compliance, thus reducing the shadow economy.	Cross-country evidence showed that higher quality institutions and capable public entities are linked to a low shadow economy size (Ameer et al. 2025).
SDG17 (Partnerships)	–0.6119	Partnerships and international cooperation help ease the formalization process.	OECD (2025) documented that transparency and exchange of information help in building a compliance network that is expected to reduce evasion and informality.

Source: Author's own creation.

The PCR findings show that the shadow economy is shaped by bundles of interrelated SDG dimensions, not by isolated indicators. The first ten components collectively explain nearly all variation in the SDG system, underscoring the interconnectedness of sustainability and informality.

A key insight concerns SDG8. Its positive coefficient and high loadings in Components 4 and 6 highlight that productive employment, fair remuneration, and inclusive growth are central to curbing informality. This resonates with the ILO (2024) World Employment and Social Outlook, which stresses that transitions to formal employment are strongest where decent-work programs coincide with institutional trust and regulatory enforcement. Likewise, Williams and

Horodnic (2019) emphasize that quality employment and social-dialogue mechanisms significantly reduce undeclared work. The sign on SDG8 can be due to enforcement capacity, for example in a setting characterized with strong standards of SDG16, this lead to reveal undeclared work, thus the higher the SDG16 the more it facilitates the transition toward formality.

However, the relationship between SDG8 and the shadow economy is not purely linear. As Schneider and Enste (2000) and Medina and Schneider (2020) argue, rapid output growth can initially enlarge informal production if job creation outpaces formal regulatory capacity. This may explain the moderate magnitude of the SDG 8 coefficient: it reflects both the formalization effects of higher labor demand and the counter-effect of limited oversight in emerging industries. In this case we can propose to explore the interaction between SDG8 and SDG16 expecting that as governance improves the SDG8 effect becomes negative.

The contrasting strong negative coefficient of SDG9 indicates that industrial expansion without parallel improvements in labor standards may increase informal employment, particularly in subcontracting or low-value-added sectors, an outcome also identified by Dell'Anno et al. (2025) in Central-Eastern Europe. In our case the SDG9 negative sign implies that upgrading the connectivity of the economy to other countries is associated with lower informality, but this can backfire if not accompanied by a proper upgrade of labour and work standard along all the value chains.

Furthermore, social and environmental goals, SDG10 and SDG 12-13 display positive links with formalization, showing that equitable and sustainable institutions support transparency in economic reporting. In the short run, SDG 10/12/13 are positively correlated with shadow economy size when institutions are weak and compliance is hard to enforce, but if industry development (SDG9) and governance (SDG16) improves then these unwanted results (shifts to informal work) reduce.

Overall, the results support the hypothesis that progress toward SDG8 and SDG16 jointly drive the formalization of economies. Strengthening labor-inspection systems, promoting collective bargaining, and integrating environmental and gender dimensions into employment policy appear relevant for reducing the shadow economy and achieving inclusive growth.

These findings reinforce the policy recommendations of ILO (2024) and OECD (2023), suggesting that sustainable development cannot advance without simultaneously improving job quality and institutional integrity. The PCR model thus provides an empirical bridge between the Agenda 2030 and the informality, development nexus, confirming that economic growth alone is insufficient; only decent, regulated, and equitable work can shrink the shadow economy.

6. Conclusions

This study's findings provide a comprehensive empirical picture of how multidimensional

progress towards the Sustainable Development Goals (SDGs) interacts with the dynamics that characterise the shadow economy. Using a Principal Component Regression framework, three main results emerge as central to the objectives of the study.

The first result is that the progress of latent dimensions of development through Principal Component Analysis indicates that the cross-country variation in goal performance in SDGs can be expressed in specific domains of sustainability, defined as social equity, governance coherence, environmental coherence and formalization of decent work. These dimensions show that progress in sustainable development is not ambiguous, since the configuration of normative, economic and institutional dimensions differs for different countries. This multidimensional form supports the interpretation of Dell'Anno et al. (2025) that informality is a systemic result of structural disequilibrium between economic growth and institutional capacity.

The second, the result of the regression analysis made to analyse the direction and change of the relationship between the different dimensions of the SDGs and the shadow economy, shows that informality has to do with packages of interrelated goals and not with isolated variables. The improvement in the qualitative aspects of human resources, infrastructure and governance are related to a decline in the degree of informality, while ecological friction and unequal industrial growth have a tendency to cause its augmentation. There are empirical results that confirm this conclusion (e.g. Medina and Schneider 2020), according to which strong institutional and social foundations reduce undeclared economic activity. Similarly, the negative associations identified for SDG 6 (Clean Water and Sanitation) and SDG 16 (Peace, Justice and Strong Institutions) suggest the importance of access to public goods and trust in governance as elements mediating the transition towards formality.

Thirdly, the results confirm the central role of SDG 8 (Decent Work and Economic Growth) as a formalization channel between quality of employment, productivity and functioning institutions. As found in ILO (2024) and Williams and Horodnic (2019), improvements in decent work are highly associated with reductions in informal activity since better job security, social protection and regulations relating to the labour market are incentives to move towards signed employment. Furthermore, the positive interaction between SDG 8 and SDG 16 indicates that decent work and institutional strength are complementary: sustained reductions in informality arise when inclusive growth is paired with a robust rule of law and effective regulatory enforcement (ILO 2025; La Porta and Shleifer 2014; Ulyssea 2018). By contrast, rapid expansion with little progress in labour standards or governance can widen the shadow economy, as shown in Brazil where trade-driven growth increased informality in low-enforcement regions (e.g. Ponczek and Ulyssea 2022). From a policy perspective, the results point strongly to the need for policies that are integrated in nature, combining economic, institutional and social dimensions if a sustainable formalization is to be achieved. Policies aimed at either economic growth or more stringent enforcement in nature are unlikely to be successful unless, at the same time, there are improvements in the quality of jobs, equality of opportunity and access to basic public services. Therefore, governments should concentrate on policies which (i) actively

promote decent work through social protection and collective bargaining systems, (ii) strengthen transparency and compliance in institutional arrangements, and (iii) link to environmental- and gender related initiatives formalised participation in the labour market. Such approaches are in line with the results of ILO (2024) and OECD (2023), both of which suggest that formalization needs several policy instruments in order to achieve coherence over fiscal, labour- and governance dimensions. The integration of indicators relating to informality would furthermore lead to the possibility of monitoring progress more effectively than hitherto possible and be able to tailor interventions to fit the structural characteristics of the economies.

In summary, the results of the present study reinforce the view that the shadow economy reflects both a consequence and a symptom of lagging progress towards sustainable development. Not only are reductions in its frequency which are required but improvements in economic performance will also be required, including advances across the social, environmental and institutional pillars of the 2030 Agenda. Sooner rather than later formalization of labour markets in accordance with the SDG will lead to the emergence of a virtuous circle, with decent jobs, social capital and sustainable growth each reinforcing one another. The opportunity for more inclusive and resilient economies will then be realised.

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THE IMPACT OF LABOR INFORMALITY ON THE NON-MONETARY DEPRIVATIONS OF HOUSEHOLDS: AN ANALYSIS OF MULTIDIMENSIONAL POVERTY IN ARGENTINA (2021–2024)

By Juan Ignacio Bonfiglio and Guillermina Alejandra Comas[8]

Summary

This paper examines how labor informality shapes multidimensional poverty in Argentina between 2021 and 2024, using both cross-sectional and short-panel data from the EDSA survey. A multidimensional poverty index is constructed, and logistic regression models are estimated incorporating income poverty, lack of affiliation to the social security system, and trajectories of informality. Findings show that the absence of social protection functions as a structural mechanism of vulnerability that reinforces the effects of insufficient income, while persistent informal trajectories cumulatively increase the risk of multiple deprivations.

Keywords: multidimensional poverty, income deprivation, social security affiliation

JEL Codes: I32, H55, J46

1. Introduction

The relationship between labor informality and poverty is a central issue in studies of employment and living conditions in Latin America (Beccaria & Groisman, 2008; Salvia, Vera & Poy, 2014). Evidence shows that labor market insertion is decisive in the reproduction of poverty: informal workers earn substantially lower incomes and lack access to contributory benefits, facing heightened vulnerability. Consequently, poverty incidence is systematically higher among those employed in informal jobs. This association reflects the structural heterogeneity of labor markets, in which most informal workers are concentrated in low-productivity activities characterized by instability and limited opportunities for upward mobility. However, focusing solely on income poverty is insufficient. At the household level, the absence of formal employment restricts access to the resources embedded in social security affiliation—such as insurance, contributory protections, or family allowances—limiting households' ability to cope with risks and secure essential goods and services. From this perspective, a multidimensional approach to poverty allows the identification of deprivations that go beyond monetary factors and offers key insights into the persistence of inequality in the region.

Studies addressing labor informality from a life-course perspective highlight the cumulative effects of lacking affiliation to the social security system over time. These dynamics generate persistent economic vulnerability and reinforce inequalities in access to fundamental goods and services. Building on these contributions, this paper argues that, beyond current monetary resource deprivation as captured by poverty-line criteria, labor informality functions as a structural mechanism of vulnerability. Even in contexts marked by income-poverty volatility driven by economic cycles, informality continues to manifest through instability, insecurity, and the persistent inability to access basic protections, with varying impacts across different stages of the life course.

2. Objectives

This study seeks to broaden the traditional understanding of poverty measured exclusively through income by incorporating the lack of social protection associated with precarious labor conditions as an explanatory factor of multidimensional poverty. The main objective is to analyze how informality restricts, beyond current monetary resources, access to social protection networks and contributes to deprivations across multiple dimensions of well-being, from economic security to access to collective services.

The research employs a quantitative design based on cross-sectional and longitudinal data for Argentina between 2021 and 2024, using microdata from the Encuesta de la Deuda Social Argentina (EDSA). Three key independent variables are considered: (i) income deprivation measured through the official poverty line; (ii) lack of household affiliation to the contributory social security system—linked to formal labor insertion; and (iii) trajectories of labor informality, which allow capturing the cumulative effects of precariousness on living conditions. These trajectories correspond to a short panel window designed to assess the relationship between sustained informality and multidimensional poverty.

3. State of the art

In recent years, the debate on poverty measurement has regained prominence in academic and public policy arenas. The emphasis placed by international agencies on the multifactorial nature of poverty has revitalized conceptual and methodological developments (Feres & Villatoro, 2012). This process has generated new opportunities to examine the dynamics of social reproduction under current capitalist regimes, persistent inequalities, and emerging forms of deprivation.

Various approaches argue that deprivation measured solely through income does not necessarily reflect the actual ability of households to meet their needs. Indirect monetary measures infer well-being from current resource flows but overlook effective consumption and households' real capacity to transform resources into valuable functioning (Sen, 2000). This limitation is particularly relevant in contexts with abrupt changes in relative prices, restricted

access to essential goods and services, or institutional mediation—such as social security, subsidies, food programs, or public services—that significantly shape the ability to satisfy basic needs. For this reason, income-based poverty measures may underestimate effective deprivation and overlook key dimensions of well-being that only become visible through direct measurements of living conditions.

Conceptual disagreements also persist regarding the foundations of poverty measures. Townsend's pioneering sociological approach defined poverty as exclusion from socially established patterns of consumption and participation due to a lack of resources (Townsend, 1979). This formulation highlighted two central terms—resources and participation—linked to deprivation in living standards. Later developments introduced notions such as "consistent poverty" (Whelan, Nolan & Maître, 2008), expressed at the intersection of income deprivation and material living conditions. Institutions such as CONEVAL similarly conceptualize multidimensional poverty based on the intersection of well-being deprivations and rights-based deficits (CONEVAL, 2016).

These frameworks typically distinguish between monetary resources—captured through income-based indicators—and direct measures of deprivation in key dimensions. However, as Boltvinik (2024) argues, this perspective remains partial because it overlooks other forms of resources that account for significant dimensions of social disadvantage. Household resources are often reduced to current income, despite the existence of additional factors that shape well-being. In this study, we test the role of social security affiliation as a household resource associated in Argentina primarily with formal labor relations. The contribution of this resource becomes more analytically visible when embedded in a multidimensional poverty framework.

Life-course research on informality shows that persistent informal employment and atypical contracts are associated with higher levels of vulnerability and uncertainty, which directly affect household economic organization (Martínez Salgado & Ferraris, 2016). Longitudinal techniques such as event-history or sequence analysis reveal that many men assume provider roles under conditions of informality, characterized by reduced protection and job security (Martínez & Ferraris, 2015). At the same time, women often experience compounded vulnerability due to the combination of unpaid domestic work and informal or precarious paid employment, which limits access to formal jobs and exposes them to lower protection and earnings (Ferraris & Martínez Salgado, 2023). In Argentina, where most household surveys allow the construction of short panel data only, informality from a longitudinal perspective is often analyzed using mobility and employment-rotation cycles (Beccaria & Maurizio, 2004; Beccaria & Groisman, 2008).

4. Methodology

Data source.

The empirical analysis draws on the Encuesta de la Deuda Social Argentina (EDSA), conducted by the Observatorio de la Deuda Social Argentina of the Universidad Católica Argentina. The

survey is carried out annually with national urban representation, covering localities of over 80,000 inhabitants and major metropolitan areas. The sample size is 5,750 households up to 2023 and 2,894 in 2024. EDSA includes an interannual household panel, which allows the construction of a short longitudinal database for the years 2021–2024.

Definitions of indicators.

Income deprivation/income poverty. Households are classified as poor when their income falls below the monetary threshold required to acquire the market value of a basic basket of goods and services (Total Basic Basket, CBT).

Multidimensional poverty.

A multidimensional poverty measure was developed to capture deprivations in non-monetary dimensions of well-being. The analysis follows the dual-cutoff approach of Alkire and Foster's counting method (2011). The selected dimensions include access to health, education, housing, financial stress, and food security. Below, the dimensions, indicators, deprivation cutoffs, and weights are presented.

Situations of accumulated deprivation are examined through a panel design aimed at systematizing information from households observed between 2021 and 2024. For each household, all survey waves in which it remained outside the contributory social protection system were identified. Cases in which this condition was persistent—defined as having more than 25 per cent of observations in a state of exclusion from social security—were classified as experiencing recurrent deprivation.

Data analysis models.

The choice of logistic regression models responds to the dichotomous nature of the dependent variable and allows estimating the net contribution of each predictor while controlling for the presence of the others. This approach makes it possible to assess whether labor informality functions as an autonomous source of vulnerability beyond income deterioration, and to what extent institutional exclusion amplifies or moderates the effects of monetary insufficiency. The model also incorporates interaction terms to examine whether the effect of informality varies according to the household's monetary condition, enabling the identification of potential multiplicative or non-additive effects between the mechanisms structuring well-being. A sequential modelling strategy was adopted, in which variables were added in successive steps to make changes in model fit and coefficient variation visible as different explanatory factors were introduced.

Table 1. Dimensions, Indicators, Definitions, Variables and Weights

Dimension	Indicator	Definition	Variable	Weight
Food	Food insecurity	Reflects the involuntary reduction of food portions and/or the experience of hunger due to economic constraints during the last 12 months.	Percentage of households reporting involuntary reduction of food portions or having experienced hunger occasionally or frequently.	0.20
Health	Access to medication	Households have not been able to obtain medication due to a lack of financial resources.	Percentage of households unable to access medication for economic reasons.	0.10
Health	Access to medical care	Households have not been able to access medical care due to a lack of financial resources.	Percentage of households unable to access medical care for economic reasons.	0.10
Housing	Overcrowding	The dwelling does not provide sufficient interior space or divisions to ensure privacy and protection for its inhabitants.	Percentage of dwellings where three or more people sleep in the same room.	0.05
Housing	Housing materials	Construction materials do not meet minimum solidity and insulation standards.	Percentage of households living in dwellings with inadequate materials.	0.05
Housing	Energy	Households cannot afford household energy-related expenses.	Percentage of households unable to pay energy-related public service bills due to economic reasons.	0.05
Housing	Sanitation	The dwelling does not have basic sanitation facilities.	Percentage of households living in dwellings without basic sanitation services.	0.05
Education	School attendance	Children and/or adolescents in the household do not attend formal educational institutions.	Percentage of households where children/adolescents do not attend school.	0.10
Education	Educational lag	Individuals have not completed the minimum education level required for their age.	Percentage of households with at least one person who has not completed the required minimum education level.	0.10
Economic stress	Economic stress	Perceived insufficiency of total household income to cover basic monthly expenditures, maintain usual consumption patterns, and save.	Percentage of households reporting economic stress (income insufficient for monthly expenses and no ability to save).	0.20

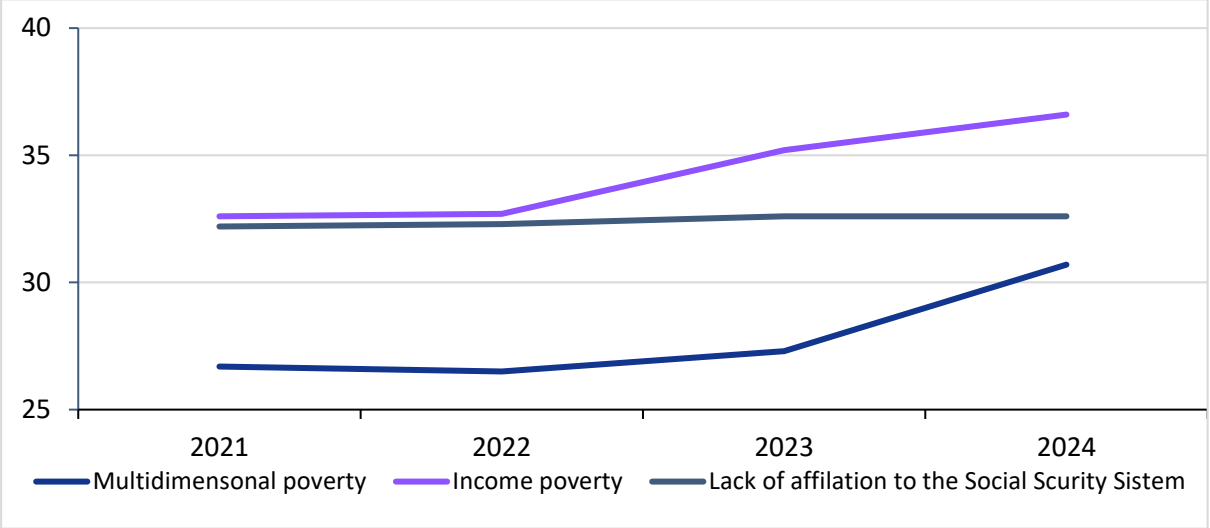
Source: Own elaboration.

5. Results and Comments

Between 2021 and 2024, households experienced a sustained deterioration in purchasing power, reflected in the continuous rise of income poverty, which increased from 32.6 per cent to 36.6 per cent. This monetary decline also manifested in structural conditions of well-being: multidimensional poverty rose from 26.7 per cent to 30.7 per cent. This trend suggests that part of the recent deterioration is mediated by short-term factors linked to current income, with

direct effects on households' non-monetary capabilities (Figure 1).

Figure 1. Trends in Multidimensional Poverty, Income Poverty, and Lack of Affiliation to the Social Security System (%)



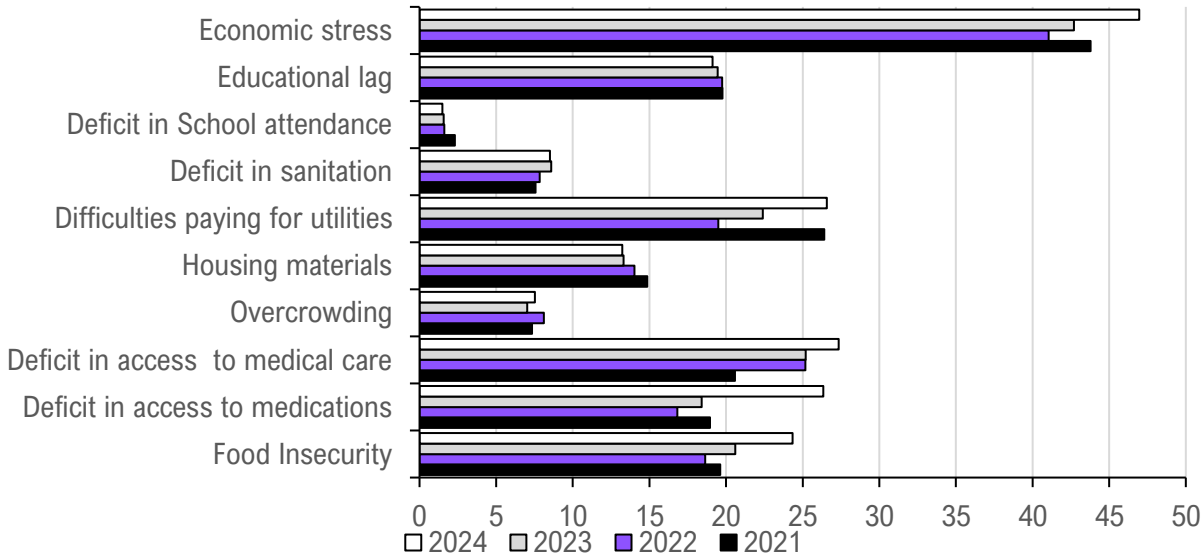
Source: Authors' elaboration based on EDSA, Agenda for Equity 2017–2024.

The proportion of households without affiliation to the contributory social protection system remains practically stable, around 32 per cent, indicating that the worsening of income is not explained by an increase in labor informality or by rising rates of exclusion from social security. On the contrary, what appears is a process of income erosion occurring even within formal employment, which reduces purchasing power across the board. This combination—declining incomes that deteriorate faster than structural conditions, together with a segmented labor market whose composition does not worsen—produces a scenario in which poverty expands through the monetary channel without an equivalent worsening of the social structure. This reveals growing tensions between available resources and effective well-being, a phenomenon also highlighted by recent studies analyzing changes in material living conditions (Salvia et al., 2022).

Between 2021 and 2024, the indicators that compose the multidimensional poverty index show a clear pattern of deterioration in dimensions related to consumption capacity and access to essential goods, while more structural deprivations remain relatively stable or even show slight improvements. Food insecurity rises from 19.6 per cent to 24.3 per cent, lack of access to medication from 18.9 per cent to 26.3 per cent, and difficulties accessing medical care from 20.6 per cent to 27.3 per cent. These increases reflect the direct impact of declining purchasing power on households' ability to sustain basic consumption, particularly in areas that are highly sensitive to inflation and fluctuations in relative prices. Similarly, difficulties paying utility bills grow sharply toward 2024, returning to high levels after a temporary decline in 2022, indicating significant adjustment pressures in essential components of the household budget. Economic stress—a measure of subjective financial strain—also rises markedly, reaching its highest value in the period and signalling the intensifying pressure households face in meeting their daily

needs (Figure 2).

Figure 2. Trends in the Dimensions of Well-being that Compose the Multidimensional Poverty Index



Source: Authors' elaboration based on EDSA, Agenda for Equity 2017–2024.

In contrast, more structural dimensions exhibit greater stability. Overcrowding remains relatively constant, with minor variations, while housing made of inadequate materials even declines slightly over the period, suggesting that there has been no widespread deterioration in structural housing conditions. Sanitation deficits and lack of social assistance show only limited fluctuations and remain at low levels, reinforcing the notion that long-term infrastructural and service-related deprivations did not worsen significantly during these years. Educational indicators—both school attendance and age-appropriate grade completion—remain stable, consistent with the cumulative nature of human capital formation, which does not respond immediately to short-term economic fluctuations.

Taken together, these results reveal an internal reconfiguration of multidimensional poverty, in which recent deterioration is concentrated in dimensions most exposed to the income crisis, while structural deprivations remain relatively contained. This suggests that the worsening of well-being is being driven primarily by monetary vulnerability rather than by a deep erosion of long-term assets or capabilities (Figure 2).

Various approaches argue that measuring deprivation solely through income does not adequately reflect households' actual ability to meet their needs. Monetary lines infer well-being from available resources but do not capture effective consumption or the capacity of households to transform those resources into valuable functioning. In contexts of sharp price fluctuations, restricted access to essential goods, or unequal institutional mediation, such measures may underestimate real deprivations that become visible only through direct indicators of living conditions.

The following analysis focuses on the role that affiliation to the social security system may play in enabling effective access to different satisfiers that define the deprivations included in the multidimensional poverty measure. Social security functions as a key institutional mechanism that protects against risks, structures labor trajectories, enables access to health services, and reinforces income stability. Its presence or absence decisively shapes the capacity of households to sustain essential consumption and cope with unexpected expenses, particularly in contexts of high inflation and economic volatility. Examining its relationship with effective deprivations allows us to explore whether the vulnerabilities faced by certain households stem exclusively from monetary deterioration or whether they also reflect deeper processes of institutional exclusion.

In this line, the analysis is expanded by incorporating correlations between income poverty and multidimensional poverty, on the one hand, and between lack of affiliation to the social security system and multidimensional poverty, on the other. This comparative approach makes it possible to more precisely distinguish the relative contribution of two mechanisms that are distinct yet partially connected: income deprivation and exclusion from the contributory social protection system. The guiding question of this section is addressed through an initial descriptive analysis of how each of these factors affects well-being from a multidimensional perspective. Observing the magnitude of both correlations offers a first approximation to the central question: to what extent multidimensional poverty reflects short-term income insufficiency, and to what extent it expresses the persistence of institutional inequalities that limit households' capacity to convert resources into effective well-being.

Table 2. Correlations (φ) between Multidimensional Poverty, Income Poverty, and Deficit of Affiliation to the Social Security System, 2021–2024

Indicator	2021	2022	2023	2024
Income poverty / Multidimensional poverty	0.429	0.436	0.439	0.372
No social security affiliation / Multidimensional poverty	0.384	0.333	0.397	0.382
Income poverty / No social security affiliation	0.387	0.431	0.489	0.413

Source: Authors' elaboration based on EDSA, Agenda for Equity 2017–2024.

The correlations show that the relationship between income poverty and multidimensional poverty is consistent, although far from complete. This indicates that there are aspects of well-being not captured by income insufficiency as conceptualized through poverty-line thresholds (Table 1). Between 2021 and 2023, coefficients remain around 0.43, signalling a significant association: households with insufficient income tend to accumulate deprivations. However, a substantial share of the variation in living conditions is not explained by current income alone. The decline in the correlation in 2024 (0.372) is particularly noteworthy. At moments when income deterioration becomes more severe, the correspondence between income deprivation and structural deprivations weakens. This suggests that the impact of the crisis does not

automatically translate into a proportional increase in multidimensional poverty, reinforcing the idea that well-being depends not only on income flows but also on assets, capabilities, and household integration into social protection systems.

The correlation between lack of affiliation to the social security system and multidimensional poverty shows a different pattern: it fluctuates between 0.33 and 0.39, systematically below the correlation between income poverty and multidimensional poverty but revealing a stable relationship over time. This implies that exclusion from the social security system—while not determining multidimensional deprivation on its own—constitutes a structural factor associated with persistent deficits. Meanwhile, the correlation between income poverty and lack of affiliation rises over the period, reaching its peak in 2023 (0.489), indicating that the crisis affected labor-precarious households more intensely. Taken together, this network of correlations reveals two distinct mechanisms: a monetary one, more sensitive to short-term shocks, and an institutional-labor one, more stable over time. This evidence supports advancing toward explanatory models capable of estimating the net contribution of each factor to the probability of experiencing multidimensional poverty.

Table 3. Logistic regression models for households, dependent variable: multidimensional poverty. 2021–2024

Indicator	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Income poverty	7.919		5.089	4.243	3.868	5.467
Deficit in social security affiliation		6.047	3.339	6.328	5.303	2.805
Income poverty × Social security deficit				0.615	0.683	0.601
2022 vs 2021					1.020	
2023 vs 2021					1.231	
2024 vs 2021					1.100	
Proportion of years with deficit in social security						1.534
R^2	0.226	0.182	0.284	0.284	0.289	0.279

Source: Authors' elaboration based on EDSA, Agenda for Equity 2017–2024.

The descriptive analysis showed that both income poverty and lack of affiliation to the social security system are significantly associated with multidimensional poverty, though with different magnitudes and without complete overlap. The correlations suggest that income accounts for a significant portion of variations in deprivations—particularly in indicators sensitive to current consumption—while lack of affiliation is linked to more persistent and structural deficits. At the same time, both dimensions are correlated with each other, indicating the coexistence of partially shared mechanisms—such as labor precariousness and economic instability—alongside distinct effects that must be evaluated simultaneously. This leads back to the central

question of the study: identifying the contribution of social security affiliation as a resource that plays a relevant role in household well-being, a contribution that becomes visible when adopting a multidimensional approach to poverty measurement.

To address this question, a set of multivariate logistic regression models is employed, incorporating jointly and sequentially the three variables analyzed: income poverty, lack of affiliation to the social security system, and multidimensional poverty as the dependent variable.

The first model incorporates income poverty as the sole predictor of multidimensional poverty and confirms that current monetary income remains a central determinant of material well-being. Monetarily poor households show an almost eight-fold higher likelihood of experiencing non-monetary deprivations (OR = 7.9), indicating that the contraction of purchasing power explains a significant share of the recent expansion of deprivations. However, its explanatory power is still limited (R^2 = 0.226): nearly three-quarters of the variability in multidimensional poverty remains unexplained. This gap shows that poverty cannot be reduced to the monetary dimension, as it involves capabilities, access, and goods that do not depend exclusively on available income at a given moment. This result aligns with the literature distinguishing indirect from direct measures of well-being and suggests that non-monetary deterioration responds to additional mechanisms beyond income erosion.

The second model introduces lack of affiliation to the social security system as the sole predictor and shows that labor informality operates as an autonomous mechanism of vulnerability. Even without considering income levels, households lacking affiliation to the contributory social security system present at least six times higher odds of being multidimensionally poor (OR = 6.05). This highlights that the institutional precariousness associated with informality—absence of contributory protections, weak connection to the health system, instability, and lack of labor rights—limits households' capacity to sustain essential consumption and cope with contingencies. Although the model's explanatory power is somewhat lower (R^2 = 0.182), the effect remains substantive and confirms that institutional exclusion acts as an independent determinant of well-being.

When both factors are incorporated simultaneously in the third model, explanatory power increases (R^2 = 0.284). Both income poverty (OR = 5.1) and lack of affiliation (OR = 3.34) remain significant, showing that each variable contributes unique information to predicting multidimensional poverty. This demonstrates that well-being is simultaneously conditioned by short-term economic deterioration and by lack of access to the social security system. Substantively, income deterioration can occur among formal workers, but its consequences are not equivalent when households retain access to contributory benefits. Likewise, informality affects well-being even among households not classified as income-poor, confirming its structural nature as a mechanism of rights exclusion.

The fourth model incorporates the interaction between monetary poverty and informality, revealing that these mechanisms not only operate in parallel but also modulate each other. The

interaction shows an OR < 1 (0.615), indicating that the combined effect of both mechanisms increases the probability of multidimensional poverty beyond an additive effect, deepening deprivation when insufficient income and lack of social protection converge. Among income-poor households that are nonetheless affiliated, part of the negative income effect is cushioned by benefits such as medical coverage, family allowances, or contractual stability. In contrast, among income-poor households lacking affiliation, income loss translates into a more pronounced decline in well-being due to the absence of institutional buffers. The model's explanatory power ($R^2 = 0.284$) remains stable relative to model 3, signalling consistency in the underlying mechanism.

The fifth model incorporates time controls and confirms the stability of the estimated relationships. The associations among income poverty, social security exclusion, and multidimensional poverty are not a contingent effect of the economic cycle between 2021 and 2024. Although aggregate levels of deprivation fluctuate, coefficients remain practically unchanged (OR income poverty = 3.87; OR informality = 5.30; interaction = 0.683). Temporal indicators (2022–2024 vs. 2021) show limited variation (ORs between 1.02 and 1.23), suggesting that macroeconomic context influences overall deprivation levels but does not alter the structure of the causal mechanism. Multidimensional poverty thus emerges from a combination of short-term constraints linked to current income and persistent institutional inequalities associated with labor structure and social protection.

Taken together, these findings allow us to affirm that multidimensional poverty in Argentina cannot be explained solely by income deprivation. It also expresses a component tied to access to the social protection system. In this framework, labor formalization emerges as a key determinant of well-being—not only because it improves income but because it guarantees rights, stabilizes essential consumption, and activates institutional mechanisms that buffer households from adverse economic shocks. The convergence of income poverty and labor informality constitutes a point of amplified reproduction of structural inequality.

The final model incorporates the trajectory of exclusion from the social security system over 2021–2024 to identify dynamics of accumulated deprivation over time. Persistent lack of affiliation carries a particularly strong weight (OR = 1.53), indicating that each increase in the proportion of years without affiliation substantially raises socioeconomic vulnerability. This result aligns with life-course perspectives: vulnerability is shaped not only by labor conditions at a single moment but also by the repetition and duration of precarious episodes. Even when controlling for current informality (which retains a direct effect, OR = 2.8), accumulated trajectory remains a structural mechanism. The combination of short-term and cumulative processes provides a more complete account of the intertemporal reproduction of disadvantage.

6. Conclusions

The evidence presented here shows that multidimensional poverty in Argentina between 2021 and 2024 is shaped by factors that go beyond income deprivation. The results reveal an articulation between monetary restrictions and exclusion from the social security system as distinct mechanisms influencing the likelihood of experiencing material deprivation.

The correlation analysis reinforces this interpretation. The association between income poverty and multidimensional poverty is systematic but moderate and weakens in the year of greatest income deterioration (2024), indicating that a substantial share of variation in living conditions cannot be explained by current income alone. Meanwhile, the relationship between lack of affiliation and multidimensional poverty—although slightly lower in magnitude—is more stable over time, suggesting that exclusion from the protection system represents a structural axis of vulnerability that transcends cyclical fluctuations.

Logistic regression models allow for a more precise decomposition of these mechanisms. When considered separately, both income poverty and lack of affiliation significantly increase the probability of multidimensional poverty. In the joint model, both effects remain robust, indicating that each factor contributes independently: current income reflects exposure to short-term shocks, while lack of affiliation reflects a more stable pattern of institutional exclusion tied to rights, coverage, and risk-buffering capacity. The interaction term further shows that these mechanisms are not merely additive: multidimensional poverty intensifies when insufficient income occurs in households lacking institutional protection.

Additionally, incorporating the trajectory of informality deepens this interpretation. Persistent lack of affiliation during 2021–2024 reveals an accumulated process rather than a snapshot of precarious employment, tripling the probability of multidimensional poverty. Even when controlling current income poverty and present exclusion, accumulated informality retains its own effect.

Overall, the results show that labor formalization is a key determinant of well-being not only because it increases income but because it structures access to rights, stabilizes essential consumption, and strengthens households' capacity to cope with contingencies. Where formal labor relations and contributory affiliation prevail, crises tend to have softer impacts; where informality predominates, income shocks translate much more directly into material deprivation.

These conclusions can inform policy design. While strategies aimed at restoring purchasing power are indispensable, they are insufficient to reverse the most persistent cores of multidimensional poverty unless accompanied by transformations in labor structure and the architecture of social protection. Strengthening universal protection floors regardless of employment status, expanding social security coverage to informal workers, and narrowing gaps between formal and informal occupations—in terms of access to health, stable income, and labor rights—would be essential steps.

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SESSION 3. LABOUR MARKETS AND INFORMALITY

UNCOVERING THE INVISIBLE WORKFORCE: LABOUR INPUT METHOD APPLIED TO ROMANIA'S INFORMAL EMPLOYMENT

By Marina-Diana Agafiței, Adriana Ana Maria Davidescu and Tamara Maria Nae[9]

Summary

The issue of informal employment remains a recurrent point of struggle for Romania, resulting in serious consequences for fiscal sustainability, social protection, and inclusive growth. This paper attempts to estimate the size and trends in informal labour employment between the years 2000 and 2024 by applying the Labour Input Method (LIM), an indirect method which estimates the size of hidden labour employment from deviations in the labour force participation rates. The method assumes that no change is likely to be experienced in the labour participation rate in the event of no informal activity. A fall in the labour participation rate, in relation to a baseline, is therefore interpreted to show the existence of informal labour employment. By utilising quarterly Labour Force Survey (LFS) data sources from Eurostat, the baseline period has been established to be the third quarter of 2000 (2000-Q3), in which period the highest recorded activity rate for Romania existed (65.2 per cent). From there onwards, the estimated active population is ascertained, and the discrepancies between this projected active population and the actual population provide estimates in terms of levels of informal employment and its proportions of the total employment figure.

The results reveal three phases. First, between 2002 and 2005, informal employment grew sharply, peaking above 23 per cent in 2003-Q1, largely driven by industrial restructuring and weak absorption of displaced workers. Second, during Romania's EU accession and early integration, partial formalization occurred, yet informality remained entrenched at 15–20 per cent, reflecting structural rigidities. Third, in the post-pandemic period (2021–2024), informal employment reached unprecedented levels, approaching 30 per cent of the labour force and stabilising around 25–27 per cent, indicating that recovery has not reversed the trend but rather reinforced reliance on atypical or undeclared work.

The persistence of such high levels of informality raises concerns about Romania's institutional capacity to regulate its labour market in the face of economic shocks, digitalization, and new forms of work. Beyond eroding the tax base, informality threatens the sustainability of pension and healthcare systems, weakens labour rights, and exacerbates inequality.

Through a longitudinal and data-driven analysis, the paper sheds light on the dynamics of

informal employment in Romania and its implications for fiscal sustainability, social protection, and labour market governance. It highlights the need for a renewed policy agenda centred on institutional strengthening, incentives for formalization, and adaptability to emerging work modalities.

Keywords: informal employment, labour input method, Romania, labour force survey, activity rate

JEL Codes: O17, E26, J46, J21, C83

1. Introduction

Informal employment remains one of the most persistent and complex challenges to modern economies. It has direct repercussions for fiscal sustainability, the systems of social protection, and inclusive economic growth, because it undermines the tax base, weakens labour rights, and reduces contributions to social security (ILO, 2018; Schneider & Enste, 2013; Williams & Horodnic, 2019). The literature suggests that informality is expressed not only as a response to excessive regulation or taxation but also as a structural adaptation to imperfect labour markets and institutional constraints (Tokman, 2007; Portes & Haller, 2005). Despite decades of economic convergence and institutional reform, informal employment continues to represent a significant share of the total employment in a number of member states in the European Union (EU), in particular in Central and Eastern Europe (CEE). These economies have undergone rapid market liberalization but only gradual consolidation of governance and enforcement systems, resulting in persistent institutional fragilities. This is especially evident in the CEE regions, where the convergence toward the European model has been characterised by tensions between swift liberalization and slow consolidation of systems of institutional governance.

Romania exemplifies this pattern. Informal employment structurally remains in place, as it is the result of an interaction of historical remnants, institutional weaknesses and lack of adaptive policies. Similar situations are reported for other post-transition economies, as Poland and Bulgaria, with labour market rigidities and low quality of institutions promoting high levels of informal employment, despite the high levels of economic growth (Williams & Bejakovic, 2020). Since the beginning of the 2000s, the Romanian labour market has passed through successive changes – from industrial restructuring, EU accession, and digitalization of labour to unprecedented disruptions brought about by the pandemic generated by COVID-19, etc. Nevertheless, a very important part of the active population works also through informal forms of labour, to the extent of undeclared wage-labour, informal self-employment, or other forms of „non-standard" arrangements (ILO, 2021).

The persisting nature of the informal sector in Romania has multifaceted implications. On the economic side, this restricts revenue collection and has adverse effects on the sustainability of social insurance systems. From a social perspective, workers will suffer the consequences of

risky occupational conditions, while it will also inhibit their access to benefits and protection systems. From an institutional perspective, it indicates a weak enforcement capacity and a fragmented governance structure, both of which will obstruct the development of a transparent and equitable labour market. Thus, an understanding of the evolution of informal employment is critical to assess the effectiveness of previous reforms and the formulation of future policies. This essential integration of economic, social and institutional aspects calls for longitudinal analyses which will take into account not only the level of informality, but also its internal dynamics and structural composition from the perspective of the economic cycles and institutional change.

While several studies have explored the determinants and characteristics of informality in Romania, less attention has been devoted to its long-term quantitative dynamics. Most available estimates are either cross-sectional or based on indirect modelling approaches, such as the Multiple Indicators Multiple Causes (MIMIC) model or the Currency Demand Approach (CDA). These frameworks, though insightful, rely heavily on assumptions about behavioural relationships and macroeconomic variables. By contrast, the LIM provides a direct, data-driven means of estimating the size and evolution of informal employment using official labour statistics. Originating from the Italian statistical system (ISTAT) and later adopted within the EU's Decision on Exhaustiveness (EC, 1994), the method identifies hidden labour by comparing observed activity rates to a hypothetical benchmark of full formalization. As such, it provides reproducible and internationally comparable estimates that are largely independent of specific behavioural assumptions.

This study employs the methodology of the Labour Input Method for Romania during the period 2000–2024, by using quarterly data provided by the Eurostat LFS. The working hypothesis is that there is a relatively stable activity rate over time in the absence of the informality phenomenon. Deviations from the maximum stated activity rate - interpreted as the benchmark of zero informal activity - provide an empirical basis for estimating hidden employment. Thanks to the use of a long time series, well defined and continually developed, the whole of cyclical and structural movements of informal activity are outlined through the estimates, being able to give a complex explanation of the informal labour phenomenon throughout the period of the fundamental economic transformations and of the institutional changes.

In doing so, the paper contributes to the empirical literature on informality in the European context by offering a longitudinal, methodologically transparent, and replicable estimation of hidden employment. It provides policymakers and researchers with a clearer picture of how informal labour has evolved across critical junctures and highlights the need for renewed institutional strategies centred on formalization incentives, digital monitoring tools, and inclusive labour regulation. Overall, the study delivers both a methodological contribution by extending the application of LIM to a new national context and a substantive one by analysing the long-term evolution of a structural phenomenon central to Romania's economic converge.

2. Objectives

This study aims to estimate and analyse the evolution of informal employment in Romania in the period 2000 to 2024 using the LIM, an indirect method based on the deviations of the activity rates from a reference benchmark of total formalization. This study has two main objectives, namely: to operationalise the LIM for the Romanian phenomenon by considering as the point with zero informal employment of the economy the quarter in which the active rate was 65.2 per cent (2000-Q3) and applying this to the quarterly LFS data of Eurostat in order to arrive at an estimate of informal employment; and measuring the development through time of informal employment in the economy through the main economic phases.

3. State of the art

3.1.General Aspects of Informal Employment

Informal employment is a relevant global issue that has significant implications for fiscal sustainability, social protection and equitable development (OECD, 2023a; ILO, 2024; World Bank, 2023). While there have been many studies on the subject, the conceptual and empirical boundaries of informality remain a subject of debate. The phenomenon has been examined by various researchers from an institutional perspective (North, 1990; La Porta & Shleifer, 2014; Williams & Horodnic, 2019), a fiscal perspective (Schneider & Enste, 2013; Medina & Schneider, 2019) and a socio-cultural perspective (Godfrey, 2011; Webb et al., 2020).

As the ILO (2013) states, informal employment encompasses jobs for which there is neither legal nor social protection, excluding differences between its existence in formal and informal enterprises. This definition highlights the multi-faceted nature of informality by identifying its links simultaneously to governance, labour market institutions and social norms. Informality tends to undermine employment rights, decrease tax revenue, and lessen productivity, affecting investment, particularly in economies where law enforcement is weak (IMF, 2022; UNDP, 2023).

The increasing diversification of informal employment – such as household work, hybrid or platform-based activities — underscores the need for robust and harmonised measurement methods capable of detecting hidden labour contributions (ILO, 2024; Eurofound, 2023).

Despite progress in increasing labour regulations throughout the EU, undeclared work is still widespread. Particularly high rates of informality can be found in CEE due to structural economic conditions, institutional failure, and cultural attitudes towards compliance (Williams et al., 2017; OECD, 2021). Romania consistently ranks as one of the EU countries with the highest rates of informality, with large segments of the labour force involved in undeclared or atypical work arrangements. This persistence is evidence of transition legacies, weak enforcement and tolerance of shadow practices (Horodnic, 2016; Williams & Bejaković, 2020; Schneider & Buehn, 2018).

Empirical evidence from CEE economies portrays informality as a structural as opposed to a cyclical phenomenon, being related to the quality of governance, trust and institutional performance, rather than the level of taxation. Regression analysis (Williams et al., 2017) shows that undeclared work is significantly correlated with GDP per capita, perceived corruption, and the Gini coefficient, illustrating that informality is symptomatic of wider institutional failure. Recent analysis (OECD, 2023b; Eurofound, 2023) has again demonstrated that informal work is mediated by institutional trust and the level of digitalization and social protection.

3.2.The Labour Input Method in Informality Measurement

LIM is an indirect statistical approach widely adopted to estimate the magnitude of informal or non-observed employment. Originally introduced by ISTAT (the Italian National Institute of Statistics) in the 1980s, it was formalised at the European level through the Decision on Exhaustiveness (EC, 1994), which mandates national statistical systems to adjust official accounts for non-observed economic activities (Eurostat, 2024).

The method is based on the premise that deviations from a hypothetical maximum participation benchmark can reveal hidden or informal labour. As a general rule, the estimates are derived from the LFS and supplemented where possible by enterprise data or administrative registers. OECD (2002) have pointed out that in general household surveys are regarded as more reliable than enterprise surveys, for in the enterprise surveys, informal activities often go under-reported, or omitted altogether, by enterprises themselves.

A core feature of the LIM is the reconciliation of employment estimates from different data sources by converting them into comparable units — typically full-time equivalent hours worked. Discrepancies between labour input estimated from household surveys and that inferred from enterprise sources reveal the scale of non-observed economic activities. Once labour input is established, it is often used to estimate unrecorded contributions to Gross Value Added (GVA).

According to this approach, LIM not only provides quantitative estimates but also helps refine national accounts and labour policy frameworks.

Despite these advantages, the method has several important limitations. As observed by Adair (2018) and OECD (2002), the quality of the estimates produced by LIM is greatly influenced by the quality of the survey data used, assumptions about firm sizes and productivities and the completeness of the business registries used. In addition, the labour input may be underestimated as a result of certain activities (for example, platform materialised labour and informal household labour) being poorly captured in both surveys.

3.3.Empirical Applications of the Labour Input Method

One of the most comprehensive comparative studies performed with LIM was conducted by Williams et al. (2017). This research, employing 2013 data from LFS data and enterprise surveys from 27 EU countries, has shown that 9.3 per cent of total labour input in the private sector in the EU is undeclared, while it is stated that this undeclared labour adds 14.3 per cent to the GVA

of the private sector enterprises. According to the recent estimates (ELA, 2023), there has been a small decline in undeclared work since the continued growth of work after 2013. However, there are considerable regional variations. Romania still belongs to the countries that have the greatest share of undeclared work, as in the sectors of agriculture, construction and personal service (World Bank, 2023).

These results underline that informality in CEE economies is driven by long-term institutional and structural factors rather than short-term economic shocks (Kelmanson et al., 2019; IMF, 2022).

Applications of LIM in the Romanian Context

The LIM has been widely applied to examine the scale and structure of informal employment in Romania, a country that consistently ranks among the EU states with the highest levels of undeclared work.

A particularly comprehensive national-level application of LIM is offered by Davidescu (2016), who estimates informal employment at the regional level from 2000 to 2013 using both the labour approach (based on administrative and survey data) and the discrepancy method (comparing Labour Force Survey and Labour Cost Survey data). Her analysis reveals that the regions with the highest levels of informality in 2013 — regardless of method — were South-Muntenia and North-East, which consistently emerge as "poles of informality".

The study highlights that estimates based on administrative data tend to underreport informal employment compared to survey-based estimates. Compared to other economies in CEE, Romania stands out through a series of structural characteristics. These include a large share of the population working in rural areas, low productivity, and a limited degree of compliance with fiscal obligations (World Bank, 2023; OECD, 2023a). These factors suggest an institutional rigidity that continues to favour informality, despite economic development and convergence.

3.4.Conclusion of the Literature Review

The LIM has become a cornerstone in the empirical measurement of informal employment, offering a transparent and harmonised tool for analysing hidden labour dynamics. While limitations persist, especially regarding data quality and coverage, LIM remains a reliable framework for comparative and longitudinal analysis. In Romania, its consistent results reveal a deeply embedded informal sector that persists despite economic convergence and EU integration, underscoring the need for institutional reform, enhanced enforcement, and adaptive labour policies.

Building on this foundation, the present study extends the LIM to a long-term quarterly dataset for Romania (2000–2024), providing new insights into the structural persistence of informality and its institutional determinants.

4. Data and Methodology

4.1. Data Sources

The empirical analysis relies on quarterly LFS data retrieved from Eurostat covering the period 2000–2024. The dataset includes consistent time-series information for the working-age population (aged 15 and above), active population, employed and unemployed persons, and activity rates, harmonised under ILO definitions to ensure comparability across time. Table 1 summarises the main indicators used in the estimation.

Table 1. Data sources description

Indicator	Source	Eurostat Code	Description
Total population (15+)	Eurostat	lfsq_pganws	Total number of individuals aged 15 and above.
Active population (15+)	Eurostat	lfsq_agan	Employed plus unemployed persons as defined by the ILO.
Employed population (15+)	Eurostat	lfsq_egan	Total number of employed persons, including employees and self-employed.
Unemployed population (15+)	Eurostat	lfsq_ugan	Individuals without a job but available and actively seeking work.
Activity rate	Eurostat	lfsq_argan	Ratio of the active population to the total population aged 15+.

Source: authors' own processing

4.2. Methodological Framework

The study applies the LIM — an indirect approach frequently used in informal employment measurement — based on the assumption that, in the absence of informality, the activity rate (the share of the active population in the total working-age population) would remain relatively stable over time. Deviations from a selected reference rate are interpreted as evidence of informal or hidden employment.

Step 1: Reference Period Selection

To establish the "zero-informality" benchmark, the quarter with the highest recorded activity rate was selected. This rate, observed in 2000-Q3 (65.2 per cent), is treated as the hypothetical level under full formalization, representing a baseline period of minimal undeclared labour.

Step 2: Estimation of the Hypothetical Active Population

For each subsequent quarter t, the hypothetical active population (A_t^*) was computed assuming that the activity rate remained constant at its reference value r_0:

$$A_t^* = P_t \times r_0$$

where:

- A_t^* is the hypothetical active population at time t
- P_t is the total working-age population (15+) at time t

- r_0 is th reference activity rate (0.652)

Step 3: Actual Active Population

The actual active population (A_t) is taken directly from LFS data as the sum of employed and unemployed individuals according to ILO standards.

Step 4: Estimation of Informal Labour

The difference between the hypothetical and actual active populations yields the estimated number of informal workers:

$$I_t = A_t^* - A_t$$

If $I_t > 0$, the result is interpreted as hidden or undeclared employment that is not captured in official statistics.

Step 5: Share of Informal Employment in Total Employment

To express informality as a proportion of total employment, the following ratio is used:

$$s_t = \frac{I_t}{E_t} \times 100$$

where E_t represents total employment at time t. This indicator provides a dynamic quarterly measure of the extent of informal labour within the Romanian economy.

In essence, the LIM operationalises informality as the unobserved portion of the potential labour force implied by deviations from the benchmark activity rate. By combining a simple arithmetic framework with consistent, high-frequency Eurostat data, the approach provides an accessible yet powerful tool to trace the evolution of informal labour in Romania over the last two decades.

5. Results and Comments

Applying the LIM to quarterly Eurostat data for Romania over the period 2000–2024 reveals a pronounced and persistent pattern of informality in the labour market. The results indicate that informal employment has undergone significant fluctuations aligned with major economic and institutional transitions — from the pre-accession period to the post-pandemic recovery — with levels rarely falling below 15 per cent of total employment, as seen in Annex 1.

The third quarter of 2000 is the reference quarter with an activity rate of 65.2 per cent, which is the maximum ever observed in the series, establishing the zero-informality rate. From then, the differences between the actual activity rate and this reference figure were used to derive the estimate of the unobserved sector or informal sector of labour. This was followed over the next twenty years by a long-term downward trend in the activity rate itself, with values between 52 and 54 per cent in several quarters since 2010. These declines represent very considerable latent reserves of labour, that is, of those registered as economically active but not included in official employment figures.

Phase I (2000–2005): Expansion of Informal Labour During Structural Transition

The first period, corresponding to the early 2000s, was marked by deep structural transformations, including large-scale industrial restructuring, downsizing of state-owned enterprises, and the gradual liberalization of the labour market.

Between 2002 and 2005, informal employment expanded sharply, peaking at 23.1 per cent in 2003-Q1. This increase coincides with a drop in the activity rate from 65.2 per cent to below 60 per cent, suggesting that many individuals displaced from formal employment were absorbed by informal or subsistence activities rather than exiting the labour force altogether.

This pattern reflects the transitional character of the Romanian labour market, where the dismantling of industrial capacities was not matched by sufficient growth in formal private-sector employment. The high incidence of undeclared work during this phase thus mirrors the adjustment costs of structural reforms and the limited institutional capacity to enforce labour regulations.

Phase II (2006–2019): Partial Formalization Amid EU Integration

The period after Romania's accession to the EU in 2007 brought slow improvements in the formal labour market situation and improved institutional control. The results show a partial formalization of the labour market, with the estimated share of informal employment fluctuating between 15 per cent and 20 per cent. This reduction was associated with better economic growth, and stronger incentives for compliance, as well as the expansion of formal employment in the services sector.

Nevertheless, informality remained structurally entrenched, particularly in agriculture, construction, and small household enterprises, which continued to operate with limited oversight. The persistence of such pockets of informality indicates that while EU accession fostered convergence in legal frameworks and labour standards, it did not eliminate long-standing structural rigidities — notably low labour mobility, limited digitalization of inspection systems, and uneven enforcement across regions.

The 2008–2009 financial crisis temporarily reversed this trend, as layoffs and fiscal consolidation measures increased the incentives for undeclared work. However, the recovery period (2011–2019) saw a return to moderate levels of informality, although never approaching the theoretical zero benchmark.

Phase III (2020–2024): Post-Pandemic Reversal and Entrenchment

The onset of the COVID-19 pandemic and its aftermath marked a turning point. From 2021-Q1 onward, the proportion of informal employment surged to nearly 30 per cent of the active population, the highest level in two decades. This spike reflects a combination of factors:

- Disruptions in formal employment due to lockdowns, reduced business activity, and the temporary suspension of contracts.

- Expansion of atypical and platform-based work, often falling outside traditional regulatory categories.
- Labour force retraction and migration, particularly among young and low-skilled workers, result in mismatches between potential and recorded employment.

Despite the partial recovery of the formal sectors of the economy in the period 2022–2024, the share of employment in informal activities remained constantly high, oscillating between 25 per cent and 27 per cent. This represents not merely a cyclical fluctuation but a profound structural reshaping of labour relations in the post-pandemic economy. Informality seems to have become a stabilising mechanism, absorbing shocks and providing livelihoods when the formal structures proved to be less adaptable.

In sum, the results show that informal employment in Romania remains substantial, dynamic, and structurally embedded. While the early 2000s reflected a transitional surge and the post-accession years brought relative stabilization, the post-pandemic period marks a worrying resurgence.

6. Conclusions

This paper applied the LIM to Romania's quarterly LFS data (2000–2024) to produce a transparent and replicable estimate of informal employment over nearly a quarter-century. Using 2000-Q3 (activity rate 65.2 per cent) as a zero-informality benchmark, we derived quarterly series for the level and share of hidden employment and documented a three-phase trajectory: (i) a sharp rise during the early-2000s structural adjustment (peaking above 23 per cent in 2003-Q1), (ii) partial formalization during EU accession and early integration with informality stabilising around 15–20 per cent, and (iii) a post-pandemic reversal with unprecedented levels, approaching 30 per cent in 2021 and remaining elevated at roughly 25–27 per cent through 2024. The results reveal a three-phase evolution: a steep increase in the early 2000s, partial formalization after EU accession, and a post-pandemic reversal leading to persistently high informality levels. Romania thus follows a distinct path in the European context, where the gains of integration have not translated into lasting formalization.

Substantively, the longitudinal dynamics reflect that the Romanian informal labour market functions as a counter-cyclical buffer: it increases in downturns and reduces in expansions but importantly does not revert to the low levels implied by the 2000 benchmark. Such persistence is compatible with continuing institutional weaknesses in the enforcement of labour law and the limited inclusivity and adaptability of formal employment structures to new work modalities (temporary, platform, multi-jobbing). From the macroeconomic viewpoint, the sustained incidence of informality undermines the tax base and social insurance systems, distorts competition, and inhibits the growth of productivity through underinvestment in skills and innovation.

Methodologically, the study demonstrates the value of LIM as a simple, data-driven tool for monitoring hidden employment using official statistics. Unlike prior cross-sectional or model-based estimates, this study extends the LIM framework to a continuous quarterly dataset over two decades, providing improved temporal granularity and policy relevance. Its transparency—anchored in a clearly defined benchmark and straightforward arithmetic—facilitates communication with policymakers and allows frequent updates as new LFS data arrive. However, the accuracy of LIM depends on benchmark selection and the stability of participation rates over time, requiring ongoing validation against demographic and institutional shifts.

Despite these limitations, the LIM approach provides a useful interface between empirical research and public policy. Its conceptual clarity and reliance on harmonised data make it particularly suitable for integration into national labour market monitoring frameworks and for the periodic evaluations required by Eurostat and the OECD.

From a policy perspective, the evidence points to a dual agenda of institutional strengthening and adaptive regulation. Strengthening enforcement capacity (labour inspection, risk-based targeting, inter-agency data sharing) should raise the probability of detection and reduce informality in high-risk sectors such as construction, agriculture, and personal services. Simplifying formalization pathways for micro-enterprises and the self-employed through proportional contributions and transitional “on-ramp” schemes can lower compliance costs. Digitising compliance (e-invoicing, e-payroll, real-time reporting) and modernising legal frameworks for new forms of work (platform, hybrid, multi-locational) would make formality both feasible and advantageous.

Looking forward, three extensions would strengthen the evidence base. First, robustness and sensitivity analysis by testing break-point diagnostics would bound the plausible range of informality. Second, disaggregation by sector or region would help identify high-risk pockets and tailor interventions. Third, triangulation with complementary approaches (e.g., discrepancy methods) would cross-validate levels while preserving the LIM's clear temporal signal.

Romania's dependence on informality as a structural shock absorber rather than a transitory response suggests the need for a new political and economic equilibrium, one in which formalization becomes simpler than evasion, enforcement smarter than avoidance, and regulation flexible enough to keep pace with the transformations of work in the digital era. Achieving sustainable formalization requires not only institutional enforcement but also a new social contract that redefines the worth of formal work in a rapidly changing economy. Ultimately, the LIM-based results offer not merely a statistical benchmark, but a strategic foundation for rethinking public policy, where compliance is rational, enforcement predictable, and formality genuinely advantageous.

In the coming decade, the digitalization of administrative data, through real-time payroll reporting, interoperable tax-labour databases, and AI-assisted compliance analytics, could substantially enhance the precision of informal employment monitoring. Embedding the LIM

within these digital frameworks would allow for near-real-time detection of labour under-coverage and improve the responsiveness of social protection systems.

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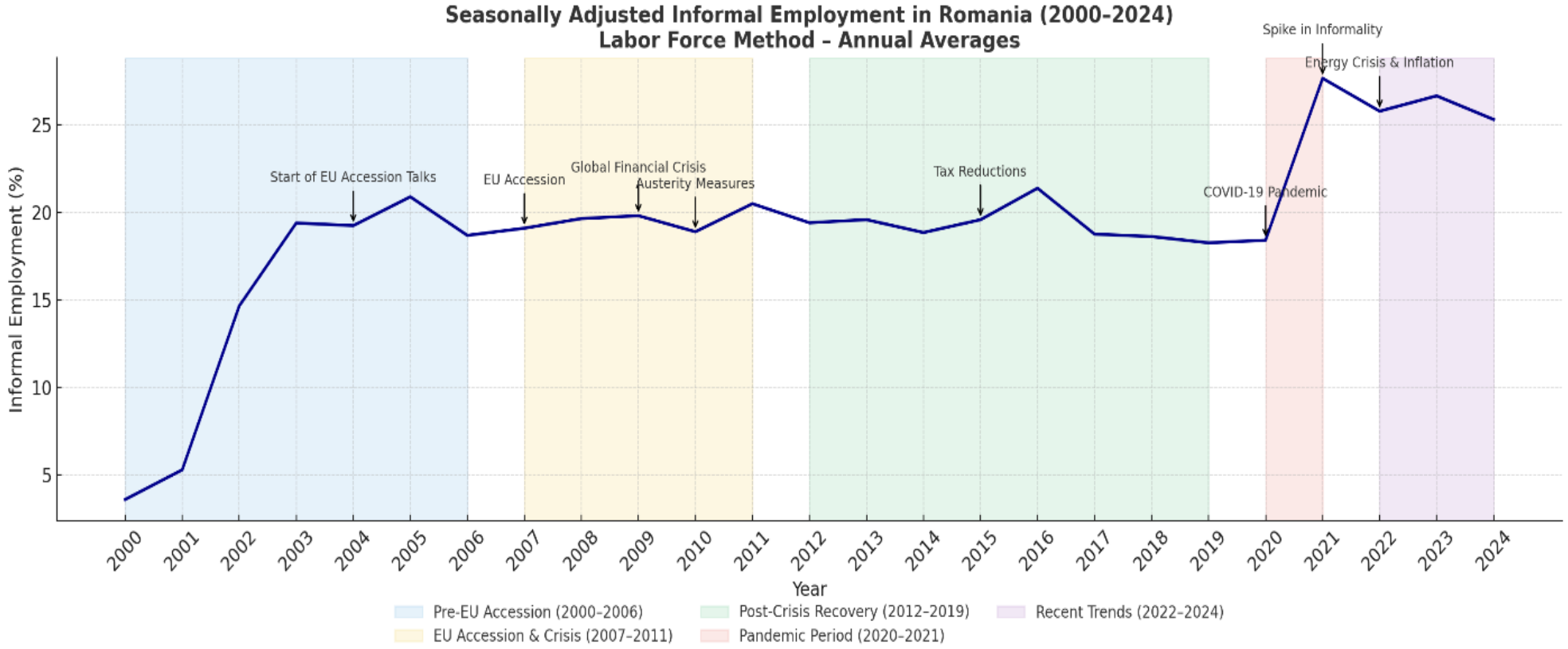
Tamara Maria Nae: Investigation; Resources; Writing – review & editing; Validation.

Annex 1. The evolution of informal employment in Romania (2000-2024)



Source: authors' own processing

DIGITALIZATION AND INFORMALITY: A NEW OCCUPATIONAL FRONTIER IN MIDDLE-INCOME ECONOMIES. A STUDY ON WORKING CONDITIONS AND JOB SATISFACTION

By Silvana Galeano Alfonso, Miranda Correa, Eduardo Donza, Jésica Pla and Agustín Salvia[10]

Summary

This paper analyses the forms of work digitalization in Argentina to characterize the main modalities of digital labour and assess their impacts on job quality and working conditions. From a socio-labour perspective, it is assumed that the expansion of digital technologies and platforms is not a homogeneous phenomenon but rather gives rise to different types of employment integration in the labour market — both salaried and self-employed — that reorganise the ways in which work is produced, intermediated, and valued. Based on a typology of digitalised work, the analysis examines indicators of income, stability, social protection, and job satisfaction.

The results reveal a marked internal segmentation. Digital production and the use of digital tools are associated with higher levels of formalization and, within structured contexts, with better incomes and greater odds of job satisfaction. In contrast, digital commerce and platform work exhibit the lowest levels of registration and significantly lower earnings, functioning as forms of "refuge employment" within the micro-informal sector. Nevertheless, job satisfaction does not mechanically follow these hierarchies: self-employed platform workers and digital merchants display relatively high satisfaction when these activities provide autonomy, flexibility, and alternatives superior to other informal options.

Taken together, the findings show that digitalization reproduces—and in some cases deepens—the structural inequalities of the Argentine labour market. They also reveal that job quality in digital employment combines objective and subjective dimensions, where formalization and income interact with autonomy and work expectations. This scenario poses challenges for regulation, collective representation, and the adaptation of social protection systems to the heterogeneity of digital work.

Keywords: digital labour, labour informality, occupational segmentation.

JEL Codes: J42, J81, O33, J24

1. Introduction

Over the past decades, digitalization, platformization, and digital automation have profoundly transformed the world of work and diverse occupations. Following Zukerfeld et al. (2024), digitalization refers to the incorporation of digital technologies into production processes and into the production of digital goods and services; platformization designates the role of digital platforms as infrastructures that mediate and manage work, connecting two or more economic agents; and digital automation involves the replacement of human labour with digital technologies or with the products generated by such technologies.

In this context, the nature of work is reshaped, prompting debates and disputes over the categories used to define it. One of these is digital labour, understood as an emerging model of work organization capable of radically reconfiguring labour relations on a global scale. By redefining the nature of productive activities, digital labour generates new forms of production, intermediation, and economic valorization (De Stefano, 2016; Huws et al., 2018; Graham & Anwar, 2019).

In this study, digital labour is understood as any labour activity mediated by digital technologies, particularly those carried out through a mobile application or web platform[11], including both direct forms of algorithmic management of work and modalities of production of goods or services, commerce, automation, and data-driven analysis based on platforms and software. Far from constituting a homogeneous phenomenon, digital labour forms a heterogeneous and segmented field, with substantive differences in its conditions and valorization (Charles, Xia & Coutts, 2022).

The ILO (2023) warns that digitalization is a double-edged phenomenon: while it enables opportunities for formalization, inclusion, and productivity, it may also deepen informality in contexts where labour institutions are weak, or the productive structure is marked by heterogeneity. This dual effect is particularly visible in middle- and low-income countries, where the adoption of digital technologies coexists with wide gaps in capabilities, infrastructure, and labour regulation. Accounting for this heterogeneity is essential in Latin America and the Caribbean. The effects of digitalization in the region depend on institutional capacities to adjust social security systems, administrative registries, and labour protection frameworks to this heterogeneity, promoting decent work (ILO, 1999; 2021a; 2021b) and leveraging its inclusive potential (UNDP, 2022). The absence of clear regulatory frameworks on social protection, collective representation, and labour rights exacerbates workers' vulnerability (De Stefano, 2016; ECLAC, 2022; Salvia et al., 2021). Consequently, the region faces the tension between using digitalization to expand formalization mechanisms or consolidating new forms of exclusion (ECLAC/ILO, 2021; Weller, 2020).

Within these contexts, digital labour does not necessarily replace traditional informal employment; instead, it may function as its extension or reconfiguration under new conditions of vulnerability and instability (Stanford, 2020; ILO, 2021). A significant share of these digital occupations may operate as "refuge employment" or subsistence work, taken up by workers

excluded from formal labour segments (Codagnone et al., 2016; Huws, Spencer & Syrdal, 2018; Gutiérrez & Kreiner, 2022).

This study aims to contribute to the production of empirical statistical evidence—still scarce—on the prevalence of work associated with digital resources, tools, or outputs within Argentina's occupational structure. To this end, it analyses the occupational characteristics and working conditions of workers who identify themselves as digitalized in the urban Argentine labour market. Drawing on data from the specific module on platform work included in the Encuesta de la Deuda Social Argentina (EDSA), the study seeks to advance toward a more precise and disaggregated estimation of the penetration of these modalities in the labour market, critically assessing the quality of employment generated, its articulation with the social security system, and levels of job satisfaction.

Accordingly, the research seeks to address a series of descriptive questions that remain underexplored in statistically representative samples: How widespread is digital labour, in its various forms, across Argentina's main labour markets? What are the predominant sociodemographic and socioeconomic profiles within this modality of work? What differences exist in income, formality, access to social protection, and job satisfaction between digital and non-digital workers, as well as among the diverse occupations within digital labour? Building on this descriptive analytical framework, it becomes relevant to examine the extent to which digital labour—particularly those forms linked to platforms—faces greater or lesser risks of labour precarity, and whether it operates as refuge employment rather than as an occupation capable of offering a professional career.

2. Objectives

General Objective

To analyse the occupational characteristics and working conditions of digitalized workers in the urban Argentine labour market, critically assessing the quality of the employment generated, its articulation with the social security system, and levels of job satisfaction, in order to understand how the structural heterogeneity and labour informality of the Argentine labour market also manifest in work associated with digital resources, tools, or outputs.

Specific Objectives

- To estimate the magnitude and characterize the diversity of jobs that use or produce digital means or products in Argentina, identifying the sociodemographic, educational, and socioeconomic profiles associated with their different categories.
- To compare working conditions between digital and non-digital occupations, as well as within digitalized work, analysing differences in income, labour formality, access to social protection, and job satisfaction, with particular attention to segments facing higher risks of precarity.

- To examine the extent to which work associated with digital resources, tools, or outputs operates either as "refuge employment" for subsistence or as a valued option due to autonomy and flexibility, exploring the tensions between formalization and exclusion.

3. State of the art

Recent literature has emphasized that the effects of digitalization on the labour market are mediated by several factors, including institutional structures, countries' positions within the global economy, and the sectoral composition of employment. To address this phenomenon, this study draws on a growing body of research on digital and platform labour that, in recent years, has contributed to characterizing this phenomenon in Argentina and the region. The following sections review the main conceptual and empirical contributions that underpin the analysis.

3.1. Conceptualizing Digital Labour

Recent literature on digital labour has evolved from a focus exclusively on platforms toward a broader understanding of the labour transformations associated with digitalization. Dorschel (2022) critically warns that reducing the notion of digital labour to intermediation platforms (such as delivery or transport) obscures technologically intensive and data-driven service workers, whose working conditions often differ from those of platform workers. These technology workers, although typically employed in formal sectors, face new forms of precarization associated with extreme flexibility and offshoring. This observation is essential for avoiding analytical biases that restrict the study of digital labour to its most visible expressions.

Aligned with this perspective, Zukerfeld et al. (2024) propose a key conceptual distinction between the "information sector," linked to the production of purely digital goods (software, audiovisual content, data), and "informational or digital labour," which exists across multiple sectors that produce, process, or manipulate digital information. This differentiation allows us to understand that digitalization does not generate a single type of employment; rather, it cuts across the occupational structure with differentiated impacts depending on the technological intensity of each activity.

Graham and Anwar (2019) contribute a critical perspective on the geographically uneven effects of digitalization, particularly platform-based digital labour. They show how, in the periphery, workers' insertion into global digital markets tends to reproduce dynamics of inequality and dependency rather than overcome them.

In this paper, we adopt the broader perspective proposed by Charles, Xia & Coutts (2022) in their ILO report *Digitalization and Employment: A Review*, where they argue that any job that uses—or is made possible by—information and communication technologies can be considered "digital employment" or "employment in the digital economy" (p. 9). Based on this conceptualization, it is possible to distinguish among ICT-intensive jobs, characteristic of the

technological core; ICT-dependent jobs, which could not exist without digital mediation (such as platform work or e-commerce); and ICT-enhanced jobs, referring to traditional occupations transformed through the adoption of digital tools. These categories capture the internal heterogeneity of the digital economy and allow for an analysis of its differentiated impacts on labour informality.

3.2. Empirical Evidence on Digital Labour in Argentina

Available empirical evidence on digital labour in Argentina is fragmented and primarily focused on the study of lean or intermediation platform work (Srnicek, 2018). This approach has enabled significant advances in characterizing segments such as delivery couriers or drivers who mediate their work through a platform, but it has tended to leave in the background other forms of digitalized or platformized labour, such as those in which workers use websites, social media, mobile applications, or other types of platforms to commercialize goods, offer services, or manage their professional activity. Similarly, studies on platform work and research on the software and IT services (SIS) sector have rarely been articulated under a unified concept of digital labour, as suggested by Dorschel (2022). Research on the SIS sector constitutes a distinct topic within labour studies (Rabosto & Yansen, 2025; Sören & Girolimo, 2025), though recent work has begun examining platform-mediated modalities in this sector as well (Zukerfeld et al., 2024).

Studies on platform work in Argentina have expanded notably in recent years, though methodological limitations persist given the absence of official records on this population. The pioneering study by Madariaga et al. (2019) was the first systematic effort to address the phenomenon, estimating that around 1 per cent of Argentine workers were engaged in platform labour in 2018. Based on a non-probabilistic survey across different location-based platforms[12] (delivery, ride-hailing, remote work, domestic services), they identified a predominantly young, male workforce, with educational levels higher than the national average and with high participation of recent migrants, particularly Venezuelans. A 2022 survey revealed changes in the profile, including a decrease in average age, lower educational attainment, and a decline in migrant participation (Garavaglia, 2022).

Subsequent studies delved into specific segments of platform labour. Haidar et al. (2023) conducted two incidental (panel-type) measurements of delivery work in Buenos Aires and found that delivery workers are not a homogeneous group: platforms occupy different positions within workers' personal trajectories. For some, they serve as a temporary refuge—particularly among those who entered during the pandemic—while for others they have become professionalized work involving long hours and economic dependence. More broadly, an incidental snowball survey (Viego & Fernández Massi, 2024) shows that in Argentina most platform work corresponds to goods delivery (50 per cent), followed by online sales or rental of spaces (26.9 per cent), while insertion in higher-skilled branches (remote tasks such as text production, software, consulting) is relatively low, contrasting with European evidence.

Regarding subjective representations, studies consistently find a positive evaluation of autonomy and flexible schedules (Garavaglia, 2022; Haidar et al., 2023). Among location-based platform workers, job dissatisfaction is higher than among web-based workers or those engaged in e-commerce (Viego & Fernández Massi, 2024). Occupational trajectories characterized by movement between formality and informality have also been documented, challenging the idea of a unidirectional "mobility towards precarious work" (Haidar et al., 2023; Filipetto et al., 2022).

On the other hand, studies on the Software and IT Services (SIS) sector in Argentina identify it as a strategic component of the national economy, showing sustained growth over recent decades13. Although wages were above the national average in 2021 (Millenaar, 2024), they experienced depreciation between 2023 and 2024 due to economic and financial shifts (OTI, 2025), in a context marked by growing interest in remote work for foreign firms that pay in hard currency (Sören & Girolimo, 2025). The sector remains heavily male-dominated, with significant gender gaps (Millenaar, 2024; Rabosto & Yansen, 2025). Finally, in the context of platform capitalism, Srnicek (2018) distinguishes among advertising, cloud, product, and intermediation platforms. Cloud platforms are central to the software sector, as they provide the digital infrastructure essential for developing software and enabling other digital services.

3.3. Occupational Segmentation and Structural Heterogeneity in Digital Labour

The reviewed studies converge on a key finding: there is no single type of platform or digital worker, but rather differentiated segments that follow distinct occupational logics. This segmentation largely reflects the structural heterogeneity that characterizes Latin American labour markets, where informality and precariousness are not anomalies but constitutive features (ECLAC/ILO, 2020).

In this sense, the contributions of Pla, Galeano and Salvia (2024) are particularly relevant. They analyse the digitalization of informal commerce in marginalized neighbourhoods of the Buenos Aires Metropolitan Area from a structural heterogeneity perspective. This approach highlights that the region's productive structure combines dynamic and peripheral sectors: while some reach productivity and capital levels like those of advanced economies, others remain technologically lagged. The coexistence of both results in an asymmetric relationship between a formal, modern sector and an informal one, with one of the key divides being unequal access to technologies and associated capabilities (Salvia, Vera & Poy, 2015). In the case of digital labour, this perspective helps explain why certain segments—such as those linked to delivery work or small-scale online commerce—function as "refuge employment" (Stanford, 2020; ILO, 2021), offering subsistence alternatives for workers excluded from formal, high-quality jobs.

Within this framework, the present study seeks to contribute to the debate by analysing representative survey data that enable distinctions among different types of digitalized work—beyond delivery and transport platforms—focusing on three key dimensions: income, labour formality, and satisfaction. In doing so, it aims to move beyond fragmented approaches and contribute to a comprehensive understanding of how digitalization reshapes forms of labour

inclusion and exclusion in contemporary Argentina.

4. Methodology

This study draws on information from the 2024 edition of the Encuesta de la Deuda Social Argentina (EDSA), an annual survey conducted by the Observatory of the Argentine Social Debt (ODSA) at the Pontifical Catholic University of Argentina (UCA). The purpose of the survey is to measure the degree of deprivation and the level of access to various resources and opportunities linked to human development in Argentine society.14

The EDSA is based on a probabilistic, multi-stage, and stratified sampling design, with systematic selection of dwellings, households, and individuals within each sampling point. In the first stage, census tracts are clustered and stratified, selected randomly and weighted according to the number of households in each tract. Subsequently, blocks and households within each sampling point are selected using systematic sampling, while individuals within each dwelling are selected using sex and age quotas to ensure demographic representativeness.

The central axis of the study is the variable type of digitalized work, constructed from EDSA information regarding the use of platforms and applications in performing work activities. Specifically, respondents were asked: “Do you perform any of your jobs through a mobile application or web platform?” with the response options: “Yes, as my main occupation,” “Yes, as a secondary occupation,” or “No.”

The variable was then constructed inductively, considering only cases that responded “Yes, as my main occupation” in 2024, and subsequently coding them into groups based on an earlier open-ended question detailing the nature of the occupation. In this way, five groups of workers were identified according to the degree and type of digitalization involved: (1) Non-digitalized workers, who do not report using applications or web platforms in any of their jobs; (2) Digitalized workers producing digital technological goods, belonging to the technological sector of the economy (e.g., software developers, analysts, systems engineers, cybersecurity specialists) whose work is carried out through digital platforms; (3) Digitalized workers using online work tools, who employ platforms or applications as support for their tasks (e.g., teachers giving online classes, professionals using management systems, or technicians who communicate with clients via networks or messaging services); (4) Platform workers, whose occupations are performed through labour platforms that mediate the supply and demand of services (e.g., delivery, transportation, or on-demand services); and (5) Digital merchants, who sell goods or services through platforms or social media (e.g., sales via Mercado Libre, Facebook, or WhatsApp).

In the results section, only cases of digitalized work as the main occupation are presented. First, we examine the relative weight of digitalized jobs within the Argentine labour market and identify the most common subtypes. Additionally, it is essential to understand what kinds of workers enter each subtype.

To this end, labour market insertion was included as an explanatory variable for type of digitalized work. This variable distinguishes among:

- formal private- and public-sector employees (registered company employees, public officials),
- employees in the micro-informal sector (workers in small shops, workshops, or domestic service without registration),
- non-salaried professionals in the formal sector (lawyers, doctors, independent accountants with formal registration), and
- non-salaried non-professionals in the micro-informal sector (street vendors, unregistered self-employed workers).

This analysis is complemented by an examination of the sociodemographic profile of these workers, focusing on potential differences by sex, age group at the time of the survey (18–34, 35–59, or 60 years and over), household headship status, and educational attainment, assessed according to whether respondents had completed secondary education.

In addition, job quality, working conditions, income, and job satisfaction were analysed as dependent variables of the type of digitalized work, to assess disparities across categories and determine the extent to which these jobs function as subsistence-oriented "refuge employment" within informality.

Job quality was measured through the worker's declaration of social security contributions and comprises two categories: "registered" and "unregistered. Working conditions include the analysis of health coverage—whether public, social security–based, or private—and union membership. Likewise, monthly and hourly labour income associated with each type of digitalized work were examined, measured in constant pesos of the third quarter of 2024 and calculated based on the total number of jobs performed in the previous month. Finally, job satisfaction was assessed using a perception scale distinguishing between those who reported being "very satisfied," "satisfied," or "little or not satisfied" with their job.

After identifying differential patterns across types of digitalized work using bivariate descriptive analysis, three multiple regression models were developed to estimate the effect of each type of digitalized work on three key outcome variables: (1) registered versus unregistered employment (logistic regression); (2) the logarithm of monthly income (OLS linear regression); and (3) self-reported job satisfaction versus dissatisfaction (logistic regression).

The analysis of these variables is further broken down by relevant economic–occupational characteristics: on one hand, occupational category (salaried versus non-salaried), and on the other, the structured sector (non-salaried professionals and salaried workers in public or private firms with more than five employees) versus the micro-informal sector (non-professional self-employed workers and employees of microenterprises). All models were adjusted by controlling for a set of sociodemographic characteristics: the worker's sex, educational level, age group,

and household headship status. This was done to neutralize differences associated with the distinct profiles of digital workers compared with the rest of the employed population.

5. Results

5.1. Who are digitalized workers? Socio-occupational and demographic composition

In Argentina, digitalized work is still a minority modality within the labour market, although it is expanding. Currently, only 16.7 per cent of employed persons aged 18 and over report performing their tasks through a mobile application or web platform as their main occupation (Table 1). Within this group, 67 per cent use digital tools (as support) to carry out their activities, while 13.5 per cent engage in the commercialization of goods through applications or web platforms, 12.8 per cent work via transport, delivery, or on-demand service platforms, and 6.7 per cent are employed in producing the digital infrastructure associated with software, applications, or other technological goods. If only intermediation platforms and digital commerce are considered, this proportion falls to 4.3 per cent, in line with other regional measurements of platform work.

Table 1. Share of workers in digitalized jobs over the total employed and distribution by type of digitalized work. Percentages. 2024.

	Total Employed (%)	Total Digital Workers (%)
Digital work	16,7	16,7
Digital production	1,1	6,7
Use of digital tools	11,2	67,0
Digital commerce	2,3	13,5
Platform work	2,1	12,8
Non-digital employment	83,3	(-)
Total	100	100

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

Far from having spread homogeneously, the reported adoption of digital technologies at work is concentrated among independent professionals (27.5 per cent) and formal salaried workers in the private or public sectors (18.9 per cent), followed by informal wage earners (12.8 per cent). Non-salaried non-professionals show the lowest rates of digitalization, at 15 per cent (Table 2).

When examining the internal composition of each category of digitalized employment, we observe that the use of digital tools is mainly concentrated among formal salaried workers and non-salaried non-professionals. Digital production shows a similar profile, with a predominance of formal wage earners. In contrast, platform work and digital commerce present a markedly different structure: 58.4 per cent of platform workers are non-professional wage earners and 32.5 per cent are informal wage earners, reflecting the precarious and deregulated nature of this segment. Digital commerce also shows a high participation of non-salaried non-

professionals (53.8 per cent) and independent professionals (22.5 per cent).

Table 2. Distribution of workers by occupational insertion, according to type of digitalized work. Percentages. 2024.

	Occupational Insertion				
	Formal salaried (private/public)	Informal salaried	Non-salaried professional	Non-salaried non-professional	Total
Digital work	18,9	12,8	27,5	15,0	16,7
Digital production	1,7	0,3	3,8	0,5	1,1
Use of digital tools	16,4	7,5	14,2	7,4	11,2
Digital commerce	0,4	1,8	8,5	3,5	2,3
Platform work	0,4	3,2	0,9	3,6	2,1
Non-digital employment	81,1	87,2	72,5	85,0	83,3
Total	100	100	100	100	100

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

Conversely, the composition of each type of occupational insertion (Table 3) shows that digitalization is more widespread among formal salaried workers and independent professionals—42 per cent and 40.5 per cent, respectively. Informal wage earners and non-salaried non-professionals exhibit lower penetration of these types of jobs.

Table 3. Distribution of workers by type of digitalized work, according to occupational insertion. Percentages. 2024.

	Occupational Insertion				
	Formal salaried (private/public)	Informal salaried	Non-salaried professional	Non-salaried non-professional	Total
Digital work	42,0	17,0	9,8	31,3	100
Digital production	59,0	5,1	20,5	15,4	100
Use of digital tools	54,7	14,6	7,6	23,2	100
Digital commerce	6,3	17,5	22,5	53,8	100
Platform work	6,5	32,5	2,6	58,4	100
Non-digital employment	36,4	22,8	5,2	35,6	100
Total	37,4	21,8	6,0	34,9	100

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

These results suggest a digital segmentation of the labour market, where formal workers and professionals access more stable modalities of digitalized employment (digital tools and production), while informal and non-professional sectors are concentrated in more precarious forms, such as platforms and digital commerce.

When analyzing this group of workers by sociodemographic factors, we observe that women are more present in digital commerce (Table 3), where they represent nearly half of all workers

in digital jobs, whereas men predominate in platform work and digital production.

By age, platform work and digital production are concentrated among young people aged 18 to 34 (Table 4), whereas the use of digital tools and digital commerce presents more diverse age structures, incorporating middle-aged adults who integrate technology into traditional occupations.

Table 4. Share of workers in digitalized jobs and distribution by type, according to sex and age group. Percentages. 2024.

	Sex		Age Group			Total
	Men	Women	18 -34 years	35–59 years	60 years and over	
Digital work	17,7	15,6	17,9	16,1	14,3	16,7
Digital production	11,8	0,0	9,5	4,9	0,0	6,7
Use of digital tools	65,9	68	61,1	69,4	84,6	67
Digital commerce	6,5	22,7	15,9	13,2	3,8	13,5
Platform work	15,9	9,4	13,5	12,5	11,5	12,8
Non-digital employment	82,3	84,4	82,1	83,9	85,7	83,3
Total	100	100	100	100	100	100

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

Regarding household position (Table 5), headship is more frequent among non-digitalized workers and among those who use digital tools, while women in digital commerce and young platform workers are primarily non-heads of household. This suggests that these occupations are often used as strategies to complement household income.

Table 5. Share of workers in digitalized jobs and distribution by type, according to household headship and education level. Percentages. 2024.

	Household Headship		Educational Level		Total
	Head of household	Not head	Less than secondary completed	Secondary completed	
Digital work	15,2	20,3	12,6	19,0	16,7
Digital production	5,7	7,8	0,0	9,4	6,7
Use of digital tools	68,9	64,1	61,4	69,0	67,0
Digital commerce	11,9	16,5	15,7	12,7	13,5
Platform work	13,5	11,7	22,9	8,9	12,8
Non-digital employment	84,8	79,7	87,4	81,0	83,3
Total	100	100	100	100	100

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

These findings are consistent with Pla, Galeano and Salvia (2024), who highlight women's appropriation of digital technologies as a strategy of social reproduction in marginalized neighbourhoods of the Buenos Aires Metropolitan Region.

Finally, education level constitutes one of the clearest lines of segmentation (Table 5). Digital production workers concentrate on the highest levels of education (tertiary or university), followed by those who use digital tools, whereas digital commerce and platform work mainly group individuals with complete secondary education or less.

This pattern confirms that the digitalization of work does not eliminate structural gaps in educational capital; rather, it reproduces them under new technological modalities, reinforcing the internal heterogeneity of these jobs.

Differential access to material resources and employment stability reinforces this segmentation, since formal digitalized jobs require certifications, verifiable trajectories, and high-quality technological infrastructure (equipment, stable connectivity, licensed software), which firms provide to their employees, while informal workers must individually finance such resources, often relying only on basic mobile devices. Income stability allows professionals and formal wage earners to invest in continuous skills updating—a key requirement for complex digital activities—whereas informal workers turn to platforms as survival strategies with low entry costs but also low job quality.

Professional networks and social capital complete this picture. Formal sectors access high-quality digitalized jobs through contacts and structured labour markets, while informal workers find in deregulated platforms spaces that reproduce and deepen pre-existing precarious conditions. Altogether, this suggests that digitalization replicates and amplifies the structural inequalities of the labour market.

5.2. Working conditions, income, and satisfaction

Regarding the quality of labour insertion, measured by the existence of social security contributions (Table 6), the results show a sharp segmentation among different types of digitalized work. Overall, digitalized jobs display a higher proportion of registered employment than non-digitalized ones—53.1 per cent versus 46.7 per cent—but there are wide differences between subtypes of digital work. For instance, 90 per cent of digital production workers and 60.8 per cent of those who use digital tools are registered, compared to only 17.5 per cent of workers in digital commerce and 34.2 per cent of platform workers.

These differences are explained by the sectoral and occupational structure described above. The more stable digitalized modalities are concentrated among formal wage earners and professionals in the public or private sectors, with digitalization functioning as productive or administrative infrastructure. In contrast, commercial activities and platform work expand in informal margins, where technology operates mainly as a subsistence resource rather than as a mechanism of economic valorization.

Table 6. Quality of labour insertion by type of employment. Percentage of workers by type of job. 2024.

		Digital work	Digital production	Use of digital tools	Digital commerce	Platform work	Non-digital employment	Total
Quality of Labour Insertion	Unregistered *(informal)*	46,9	10	39,2	82,5	65,8	53,3	52,2
	Registered *(formal)*	53,1	90	60,8	17,5	34,2	46,7	47,8
	Total	100	100	100	100	100	100	100

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

Only 11.3 per cent of employed persons report being affiliated with a union or guild (Table 7), but the distribution is highly unequal: unionization is practically absent among digital production and platform workers (two sectors where collective union organization faces major obstacles), while it reaches its highest level (21.6 per cent) among those who use digital tools within formal labour structures. Thus, collective protection, historically central in the Argentine labour market, remains concentrated in certain segments of digitalized work, leaving large groups without union representation or mechanisms for defending their rights.

Table 7. Unionization by type of digitalized work. Percentage of workers by type of job. 2024.

		Digital work	Digital production	Use of digital tools	Digital commerce	Platform work	Non-digital employ-ment	Total
Unioni-zation	Yes	15,1	0,0	21,6	2,5	2,6	10,5	11,3
	No - DK	84,9	100,0	78,4	97,5	97,4	89,8	88,7
	Total	100	100	100	100	100	100	100

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

Table 8. Type of health coverage by type of digitalized work. Percentage of workers by type of job. 2024.

		Digital work	Digital produc-tion	Use of digital tools	Digital commerce	Platform work	Non-digital employment	Total
Health Coverage	Private insurance or Social Security	56,2	100,0	63,6	30	25,6	50,3	51,3
	Public coverage or None/Other	43,8	0,0	36,4	70	74,4	49,7	48,7
	Total	100	100	100	100	100	100	100

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

Regarding social protection related to health (Table 8), almost half of all workers (48.7 per cent)

rely exclusively on the public health system; this proportion rises to three out of four among platform workers and workers in digital commerce, while those in digital production and digital tools exhibit greater contributory coverage—derived from their formal insertion—or a greater capacity to pay for private health insurance.

In economic terms, digitalized work in general shows certain advantages: workers in these modalities receive total incomes that are 6 per cent higher than the overall average (ARS 510,024 vs. 482,453), with hourly earnings 1 per cent higher and an average of 6 additional hours worked per month (Table 9).

Digital production is the best-paid modality, with incomes 27 per cent higher than the overall average and 20 per cent above the average for digitalized work, indicating that it requires higher technical skills and specialized knowledge. The use of digital tools also exhibits an advantage, with incomes 22 per cent higher than the overall average. In contrast, digital commerce and platform work show substantially lower earnings. Workers in these modalities receive 43–47 per cent less than the average for digitalized jobs and approximately 45 per cent less than the general average for all workers, without necessarily working fewer hours, as evidenced in the case of platform workers.

However, this situation regarding working conditions, rights, income, and social protection associated with digitalized jobs reveals particularly interesting points when workers' satisfaction with their current job is considered.

Starting from the fact that, on average, 56 per cent of Argentine workers report being satisfied with their job (Table 9), it is striking that this proportion is systematically higher across all forms of digitalized work. Among platform workers, it reaches 71.1 per cent, followed by 68.4 per cent among digital production professionals. This apparent paradox—higher satisfaction in contexts of greater precariousness—reveals the coexistence of objective and subjective dimensions in the evaluation of work.

For digital production workers and users of digital tools, satisfaction is associated with better objective conditions: stability, remuneration, professional recognition, and technical autonomy. In contrast, in digital commerce and platform work, positive evaluations stem from other dimensions, such as flexible schedules, self-management of time, and the perception of independence, which partially offset economic instability.

Symbolic valuation may also play a role, insofar as digitalized workers may perceive themselves as being engaged in more "modern" forms of work or in jobs with greater opportunities for advancement, which positively influences self-perception and satisfaction. An important nuance is that satisfaction does not necessarily imply better objective conditions, but rather a certain alignment between expectations and labour reality. Thus, higher satisfaction among digitalized workers may reflect both concrete benefits (income, autonomy, learning opportunities) and a subjective redefinition of what is valued in work in the context of digital transformation.

Table 9. Mean values of total monthly income, hourly income, and monthly hours worked by type of digitalized work and their gap relative to total employed. 2024.

		Mean monthly income	Mean hourly income	Estimated monthly hours
Total employed		482.453	3.903	155
Digital work Digital production	Value	510.024	3.942	161
	Gap vs. Total employed	1,06	1,01	1,04
Use of digital tools Digital commerce	Value	613.817	4.357	165
	Gap vs. Total employed	1,27	1,12	1,07
Platform work	Value	589.326	4.446	162
	Gap vs. Total employed	1,22	1,14	1,05
Digital work Digital production	Value	263.157	2.507	149
	Gap vs. Total employed	0,55	0,64	0,96
Use of digital tools Digital commerce	Value	289.451	2.665	162
	Gap vs. Total employed	0,60	0,68	1,05
Platform work	Value	477.238	3.894	154
	Gap vs. Total employed	0,99	1,00	0,99

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

Table 10. Job satisfaction by type of digitalized work. Percentage of workers by type of job. 2024.

		Digital work	Digital production	Use of digital tools	Digital comerce	Platform work	Non-digital employment	Total
Job Satisfaction	Satisfied or Very satisfied	81,5	94,7	83,4	72,5	76,3	69,0	71,1
	Little or Not satisfied	18,5	5,3	16,6	27,5	23,7	31,0	28,9
	Total	100	100	100	100	100	100	100

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

5.3. Regression Models

After identifying, through bivariate descriptive analysis, a set of differentiated patterns in the working conditions of the various types of digitalized work, three multiple regression models were estimated with the aim of assessing the extent to which these gaps persist once other relevant worker and occupational characteristics are controlled for. Specifically, the models examine: (1) the probability of having registered employment versus unregistered employment, using logistic regression; (2) the logarithm of monthly labour income, using Ordinary Least

Squares linear regression; and (3) the probability of reporting job satisfaction versus dissatisfaction, again using logistic regression.

As detailed in the methodological section, the analysis is segmented along two key economic–occupational dimensions. First, occupational category (salaried versus non-salaried); and second, the structure of the activity sectors, distinguishing between the structured sector (public- or private-sector employees in firms with more than five workers and professional self-employed workers) and the micro-informal sector (non-professional self-employed workers and workers in microenterprises). This disaggregation makes it possible to identify whether the effects of digitalization are conditioned not only by the type of digitalized job, but also by the worker's position within the productive structure.

All models were also adjusted by incorporating sociodemographic controls—sex, educational level, age group, and household headship—to neutralize differences associated with the distinctive profiles of digital workers compared with the rest of the employed population.

Tables 10, 11, and 12 present the estimation results. To facilitate interpretation, odds ratios and statistical significance levels are reported for the logistic regression models (Tables 10 and 12), while linear regression coefficients—also accompanied by their significance levels—are shown for the income model (Table 11). Taken together, these results allow us to examine which modalities of digitalized work contribute to widening, reproducing, or reducing the gaps in formality, income, and satisfaction previously identified in the descriptive analysis.

A. Registered Employment

The analysis of the probabilities of having registered employment shows clearly differentiated patterns according to the type of digitalized work (Table 11).

Table 11. Odds ratios of registered (formal) employment by type of digitalized work, employment status, and occupational sector.

	Total	Salaried	Non-salaried	Structured sector	Micro-informal sector
Constant	0,173***	0,312***	0,075***	0,944	0,114***
Digital production	6,637***	3,190*	29,171***	6,598**	5,570**
Use of digital tools	1,582***	1,845***	0,981	1,204	1,124
Digital commerce	0,201***	0,027***	0,720	0,030***	0,737
Platform work	0,691*	1,029	0,513*	0,072***	1,819**

Note: Results controlled by a set of sociodemographic characteristics: the worker's sex, educational level, age group, and household headship status.
Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

Across the total employed population, digital production exhibits the highest likelihood of formality: a worker in this segment is 6.6 times more likely to be registered than a non-digital worker. The use of digital tools also significantly increases formalization (OR = 1.58), whereas digital commerce drastically reduces these probabilities (OR = 0.20). Platform work, meanwhile,

shows a 31 per cent lower likelihood of formalization compared to non-digital work (OR = 0.69), although with marginal significance.

When disaggregated by employment status, digital production displays an exceptional pattern among non-salaried workers (OR = 29.17), revealing a core of autonomous technology workers with high levels of formalization even outside salaried structures. Among salaried workers, the advantage persists, though to a lesser extent.

The use of digital tools is positively associated with formalization among salaried workers (OR = 1.85), indicating that the digitalization of tasks in medium and large organizations tends to reinforce formal employment structures. No differences are observed within the non-salaried segment.

Digital commerce represents the most regressive profile: it almost eliminates the likelihood of being registered among salaried workers (OR = 0.027), and similarly within the structured sector (OR = 0.030). No significant effects are detected among non-salaried workers or within the micro-informal sector, confirming that this type of activity operates primarily as a subsistence strategy with low formalization.

Platform work shows no differences by salaried versus non-salaried status; however, when considering productive sectors, a dual pattern emerges. While in the structured sector it sharply reduces registration (OR = 0.072), within the micro-informal sector it increases the probability of formalization (OR = 1.819). This finding suggests that, for workers in informal segments, platforms may offer a limited but tangible pathway toward relative formalization, though still constrained by broader structural conditions.

B. Labour Income

The results of the income model (Table 12) show that digitalization does not imply a wage advantage over non-digital employment. On the contrary, the effects depend strongly on the specific type of digitalized work and the worker's occupational insertion.

Table 12. Regression coefficients for the logarithm of monthly income by type of digitalized work, employment status, and occupational sector.

	Total	Salaried	Non-salaried	Structured sector	Micro-informal sector
Constant	12,178***	12,314***	12,066***	12,522***	12,220***
Digital production	0,050	-0,137	0,511**	-0,231**	0,698***
Use of digital tools	0,117***	0,152***	-0,028	0,126***	-0,135**
Digital commerce	-0,508***	-0,600***	-0,254**	-0,645***	-0,287***
Platform work	-0,309***	-0,645***	-0,056	-0,690***	-0,091

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

Note: Results controlled by a set of sociodemographic characteristics: the worker's sex, educational level, age group, and household headship status.

The analysis of the total employed population reveals a markedly segmented pattern. Only two modalities present significant differences: the use of digital tools, with incomes 12 per cent higher than the average (coef. 0.117), and, conversely, digital commerce and platform work, with penalties of 51 per cent (coef. –0.508) and 31 per cent (coef. –0.309), respectively. Digital production does not exhibit significant differences in the aggregate, confirming that its economic advantages emerge only when analyzing specific occupational insertion. Overall, this pattern shows that digitalization improves income only when embedded in formal and higher–value-added structures, whereas modalities associated with subsistence strategies or low-skilled work reinforce existing wage gaps.

Digital production presents the most heterogeneous profile. In the total sample, it shows no significant differences, but among non-salaried workers in the micro-informal sector, incomes are approximately 70 per cent higher than the average, confirming the presence of highly skilled independent workers who capture added value even outside formal structures. In contrast, among salaried workers in the structured sector, the coefficient is negative and significant, indicating lower income levels, possibly reflecting technical salaried positions with limited wage autonomy.

The use of digital tools shows a moderate positive differential: 12 per cent higher income in the total sample, driven almost exclusively by salaried workers in the structured sector. For these workers, the adoption of digital tools translates into economic returns, likely associated with administrative, technical, or management tasks within medium and large organizations. However, no significant differences are observed among non-salaried workers, and in the micro-informal sector, the effect reverses—showing incomes 13 per cent lower—suggesting that digitalization in low-scale units does not generate additional economic gains.

Digital commerce once again constitutes the most disadvantaged profile. Incomes are systematically below the average in all models: 51 per cent lower in the total population, 60 per cent lower among salaried workers, and 25 per cent lower among non-salaried workers. The penalty is even greater in the structured sector (–64.5 per cent), suggesting that these activities—even within formal firms—operate in very low value-added niches (telemarketing, basic digital customer service). In the micro-informal sector, incomes are also lower (−29 per cent). Taken together, this confirms that digital commerce functions as refuge employment, characterized by low earnings and limited prospects for upward mobility.

Platform work exhibits an intermediate but clearly regressive wage structure compared to non-digital employment. Overall, incomes are 31 per cent lower. Among salaried workers and those in the structured sector, the penalty is substantial (–65 per cent and –69 per cent), indicating that platform jobs do not offer competitive wage conditions in formal environments. Conversely, among non-salaried workers and in the micro-informal sector, no significant differences are observed—suggesting that, for low-skilled autonomous workers, platforms may represent an equivalent or even more stable alternative compared to other informal occupations (personal

services, street vending, or occasional work), although without generating substantial economic improvement.

C. Job Satisfaction

Self-reported job satisfaction shows positive associations with certain forms of digitalized work, although with marked variations depending on the type of insertion, occupational category, and sector (Table 13). The results suggest that satisfaction is mediated by three key dimensions: income, formalization, and autonomy.

Within the overall employed population, the results indicate that digitalized work tends to be associated with higher levels of job satisfaction compared to non-digital work, once sociodemographic and occupational characteristics are controlled for. In particular, digital production triples the odds of reporting being satisfied or very satisfied (OR = 3.29), while the use of digital tools nearly doubles them (OR = 1.95). Platform work also shows a positive association, although weaker and marginally significant (OR = 1.52). In contrast, digital commerce does not exhibit statistically significant differences in the aggregate. This pattern suggests that the subjective dimension of job well-being is particularly strengthened in segments where digitalization combines with higher levels of formality, skills, and autonomy in work organization.

Workers in digital production exhibit a strong likelihood of greater satisfaction: 3.3 times higher in the total sample and more than five times higher among non-salaried workers. This correlates with high levels of formalization, higher incomes among autonomous segments, and an occupational profile associated with creative work, technical autonomy, and intensive use of specialized skills. In the structured sector, higher satisfaction is also observed (OR = 4.96), although with lower statistical precision.

Table 13. Relative odds of reporting satisfaction with the current job situation by type of digitalized work, employment status, and occupational sector.

	Total	Salaried	Non-salaried	Structured sector	Micro-informal sector
Constant	1,244**	1,495***	1,182	2,527***	1,195*
Digital production	3,293*	1,599	5,197***	4,961*	1,885
Use of digital tools	1,951***	2,086***	1,673***	4,099***	1,080
Digital commerce	1,333	0,958	2,261***	0,452*	1,110
Platform work	1,52*	1,686	1,649*	0,132***	2,456***

Source: Own elaboration based on EDSA 2024 (ODSA–UCA).

Note: Results controlled by a set of sociodemographic characteristics: the worker's sex, educational level, age group, and household headship status.

The use of digital tools shows a robust association with satisfaction, with probabilities nearly doubled in the total sample and more than quadrupled in the structured sector. Among salaried workers, the effect is especially strong (OR = 2.08), likely reflecting stable jobs with good earnings and digitalized work processes within formal organizations. In contrast, no significant differences are found in the micro-informal sector, consistent with the lower incomes observed in this group: digitalization, in this context, does not enhance the work experience in the absence of quality structural employment conditions.

Digital commerce exhibits an ambiguous pattern. At the general level, it does not show significant differences; however, among non-salaried workers the odds of satisfaction increase substantially (OR = 2.26). This higher valuation appears to be associated with the autonomy inherent in self-employment, which allows for flexible schedules and compatibility with household and care responsibilities. Conversely, among salaried workers—where informality is high and earnings are low—no positive effects are observed, reflecting a more precarious work experience without the benefits associated with autonomy.

Platform work shows mixed associations. In the total sample, no robust effect emerges, but in the micro-informal sector, satisfaction levels are significantly higher (OR = 2.45). This indicates that for low-skilled autonomous workers, platforms may represent a flexible option with relatively stable earnings and greater time control compared to other informal occupations. In the structured sector, however, satisfaction drops sharply (OR = 0.132): in these contexts, platforms reproduce quasi-salaried working conditions without stability, with low earnings and limited autonomy, resulting in a substantially less valued work experience.

6. Conclusions

This study analysed the internal diversity of digitalised work in Argentina using representative data from EDSA 2024, distinguishing between digital production, the use of digital tools, digital commerce, and platform work. In doing so, it provides novel empirical evidence in a field still largely dominated by fragmented studies, non-probabilistic samples, or research focused exclusively on service platform work. Its main contribution lies in integrating, under a single typology and analytical strategy, heterogeneous digital segments —technological, administrative/service, commercial, and intermediation-related— and comparatively assessing their working conditions using regression models adjusted by occupational insertion and productive sector. In this way, the study fills a key gap: understanding digitalization as a phenomenon that cuts across the Argentine labour market rather than one limited to specific activities.

The results confirm several findings highlighted in international and regional literature. First, digitalization reproduces the structural heterogeneity of the labour market: knowledge-intensive segments display higher probabilities of formalization and, within formal structures, better income levels and satisfaction. Second, low-scale modalities—digital commerce and platform

work—function as “refuge employment,” characterized by lower earnings and very limited formalization, validating the hypothesis that digitalization does not replace informality but reorganizes it under new technological arrangements (Charles, Xia & Coutts, 2022; Madariaga et al. 2019; Pla, Galeano & Salvia, 2024: Weller, 2020).

At the same time, the results introduce nuances to widespread assumptions. Platform work, although precarious relative to structured employment, can offer higher levels of satisfaction and relative formalization within the micro-informal sector (Filipetto et al., 2023; Madariaga et al. 2019), challenging the notion of homogeneous precariousness (Garavaglia, P.; 2022). Similarly, digital production does not show generalized wage advantages (OTI, 2025): its higher returns are concentrated among highly skilled autonomous workers, whereas among salaried workers these returns may even be lower. Moreover, job satisfaction does not follow income and formalization in a linear fashion: some low-quality digitalized segments exhibit high satisfaction levels associated with autonomy, flexibility, and subjective expectations (Viego & Fernández Massi, 2024).

Taken together, the evidence demonstrates that the quality of digital work depends less on its technological nature than on its articulation with pre-existing occupational structures, prevailing patterns of informality, and workers’ subjective valuations. Digitalization, far from constituting an automatic vector of labour modernization, is embedded in—and reshapes—persistent inequalities (Charles, Xia & Coutts, 2022).

Finally, these findings carry relevant policy and institutional implications. Progress is needed toward regulatory frameworks adapted to hybrid modalities, including portable social protection schemes, more inclusive registration mechanisms, and training policies that reduce digital skills gaps. The results also underscore the importance of developing comparative national studies—across both developed and emerging countries—to understand how different institutional models, welfare systems, and degrees of productive heterogeneity shape the effects of digitalization on informality, income, and job satisfaction. Advancing this comparative agenda is essential for designing public policies capable of fostering inclusion, improving job quality, and reducing the structural gaps that characterize digital work in Argentina and the region.

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[11] We define the platform taking into account Srnicek's definition (2018, p.45): "digital infrastructures that enable two or more groups to interact. They therefore position themselves as intermediaries that bring together different users: customers, advertisers, service providers, producers, suppliers, and even physical objects."

[12] Platform work is typically divided into two broad categories: web-based (online) work and location-based work, which is carried out in a specific physical place, such as delivery, transportation, or domestic service occupations. ILO, 2021.

[13] In 2024, the sector employed more than 158,000 salaried workers and around 35,000 self-employed workers who also work from home (freelancers). Among those engaged in programming and IT consulting activities, 82% contribute to the pension system, and 71% of the sector identifies as a worker or employee (OTI, 2025).

[14] Regarding its coverage, the EDSA is administered in urban areas of the country and includes a total of 3,000 households across 20 urban agglomerations, classified by size into large (more than 200,000 inhabitants) and medium-sized (more than 80,000 inhabitants). In 2024, the survey maintained the same territorial coverage but reduced its sample size by 50%, surveying 2,880 households in the same agglomerations.

The aglomerations surveyed are Ciudad Autónoma de Buenos Aires, Conurbano Bonaerense, Gran Rosario, Gran Córdoba, San Miguel de Tucumán y Tafí Viejo, Gran Mendoza, Mar del Plata, Gran Salta, Gran Paraná, Gran Resistencia, Gran San Juan, Neuquén-Plottier-Cipolletti, Zárate, La Rioja, Goya, San Rafael, Comodoro Rivadavia y Ushuaia-Río Grande.

LABOUR TRANSITIONS AND INEQUALITY: OCCUPATIONAL MOBILITY, LABOUR INFORMALITY, AND WAGES IN GERMANY, SPAIN, ITALY, POLAND, AND ARGENTINA (2022–2023)

By Agustín Salvia, Ramiro Robles, Fernando Gallegos, Julieta Vera and Alejo Giannecchini[15]

Summary

This article comparatively analyses recent patterns of occupational mobility, labour informality, and hourly wages across five labour markets representing distinct productive and institutional models: a developed and coordinated economy (Germany), two Mediterranean economies with high segmentation (Spain and Italy), a transitioning Eastern European market (Poland), and an emerging economy with structural informality (Argentina). The study focuses on the 2022–2023 period, a critical post-pandemic phase characterised by heterogeneous recovery and accelerated transformations in work organization.

Using longitudinal microdata from EU-SILC and EPH-INDEC, the short-term dynamics of workers are examined in terms of occupational changes, wage variations, formality, and contract type. Although the panel comprises only two consecutive observations, this common window allows for the identification of differences attributable to both contextual shocks and structural mechanisms inherent to each labour regime.

The analysis assumes that trajectories of formality, occupational mobility, and wages depend on the interaction between the macroeconomic cycle, productive structure, and institutional capacities. Labour market fluidity, the degree of segmentation, and social protection decisively influence how countries process labour mobility in recovery contexts. The aim is to describe mobility patterns across occupational segments, estimate wage and formality changes among those experiencing changes in their employment, and explain the factors conditioning these transitions. It is posited that the level of productive development, institutional density, and labour market structure shape the trajectories associated with mobility.

The results reveal heterogeneous responses to a common global shock: stability and low informality in Germany; persistent segmentation in Spain and Italy; formalization linked to the growth of modern sectors in Poland; and high turnover with structural informality in Argentina. These differences demonstrate that labour mobility assumes different meanings depending on the occupational and productive regime and highlight the need for differentiated policies aimed

at strengthening institutions, reducing segmentation, and improving productivity and social protection.

Keywords: Labour market segmentation; Short-term occupational mobility; informal employment; income mobility; comparative employment regimes

JEL Codes: J62, J31, J46, J21, O52/O54

1. Introduction[16] [17]

In the period following the COVID-19 pandemic, rising geopolitical instability, persistent financial market volatility, and an uneven economic recovery have impacted employment dynamics and labour well-being in most countries (ILO, 2023, 2025; IMF, 2023). Although employment growth was relatively rapid, real wages remained stagnant or deteriorated in the context of high inflation, while social protection continued to exhibit significant gaps, particularly in low- and middle-income countries (CEPAL, 2025; OECD, 2023). These processes cannot be understood solely through aggregate trends in the global economy; they also respond to the specific configuration of productive structures and the institutional architecture of each labour market (Gallie, 2007; Stockhammer, 2023).

While the pandemic constituted a common shock, its effects on job quality, informality, and earnings were expressed differently across regions, depending on pre-existing structural conditions (ILO, 2025; IMF, 2023). In many countries, large sectors of the workforce remained exposed to low-quality employment, characterised by limited stability, weak social protection, and precarious employment relationships (Shin et al., 2023; Siegmann & Schiphorst, 2016). Within this framework, informal employment is a characteristic of jobs and economic units—rather than individual workers—and refers to employment operating outside current labour regulation and contributory social protection (ILO, 2018). Consequently, it represents a durable feature of the labour market, strongly associated with internal segmentation and limits to state monitoring capacity (Williams & Lansky, 2013; Abramo, 2021).

The study of short-term occupational mobility constitutes facilitates understanding processes of formalization, informalization, and changes in labour income. Mobility reflects both contextual characteristics derived from the macroeconomic cycle and structural factors linked to productive organization, institutional structure, and the degree of labour market segmentation (Bisello et al., 2022; Fields, 2021; Kalleberg & Sorensen, 1979). Therefore, analogous occupational changes do not produce equivalent effects across different countries: depending on the productive model and prevailing institutional arrangements, mobility may result indifferent to the general economic context, bring about increased opportunities for advancement for individual workers or risk degrading their employment conditions (Grimshaw et al., 2017).

Consequently, a comparative analysis of movements between occupational positions allows the identification of the extent to which trajectories of formalization respond to short-term factors

or to more persistent structural mechanisms. According to this approach, the association between mobility and labour outcomes is not uniform: it depends on the productive structure, labour market segmentation, state regulatory capacity, and the degree of institutional consolidation (Abramo, 2021; Williams & Lansky, 2013).

On this basis, the study is structured around a central question: to what extent do short-term occupational mobility patterns—and their effects on labour informality and wage variations—reflect cyclical dynamics or structural mechanisms inherent to the productive models and institutional regimes of the countries analysed? Furthermore, the study examines how mobility is associated with transitions between formal and informal employment, variations in hourly earnings, and transitions between temporary and permanent contracts among waged workers.

The overarching thesis posits that the labour mobility regime—expressed through trajectories combining occupational changes, movement between formal and informal segments, and wage variations—is the result of the interaction between:

(1) short-term macroeconomic conditions, associated with the pace of post-pandemic recovery and the evolution of the economic cycle; and

(2) the structural and institutional characteristics of each labour market, defined by productive structure, level of development, degree of segmentation, and state regulatory capacity.

From this perspective, the same intensity of mobility can have very different effects on job quality depending on whether the context is a developed and coordinated economy, a segmented Mediterranean market, a transitioning economy, or an emerging market with structural informality.

To address these questions, the article compares five cases representing contrasting growth models and labour regimes: Germany (developed and coordinated economy), Spain and Italy (Mediterranean models with high segmentation), Poland (transitioning economy with increasing formalization), and Argentina (emerging economy with persistent informality). The 2022–2023 analysis window—common to all five countries—constitutes a natural laboratory allowing for the identification of structural mechanisms and differential effects of a single global shock.

The article is organised as follows. First, specific objectives related to occupational mobility, informality, and wage variations are presented. Second, the macroeconomic and labour contexts of the analysed countries are reviewed, along with European and Latin American literature on mobility, segmentation, and informality. Third, methodological decisions, microdata sources, and analysis strategies based on individual panels are detailed. Subsequently, occupational mobility patterns are identified and their effects on formality, contract temporariness, and hourly wages are examined. Finally, the findings are discussed and their implications for understanding labour regimes and for policy design aimed at reducing segmentation and strengthening job quality.

2. Objectives

The literature on occupational mobility has emphasised the importance of analysing how the specific effects of cyclical events, particularly economic crises or periods of expansion, interact with long-term structural trends to shape labour force mobility patterns (Fields, 2021; Hout & DiPrete, 2006). It has also been documented that the speed and direction with which workers, with varying sociodemographic and occupational characteristics, relocate between sectors, jobs, and employment types constitute central indicators of labour markets' capacity to adjust to changes in the macroeconomic environment (Beccaria et al., 2024; Bisello et al., 2022). A third dimension highlighted by the literature relates to the extent to which the presence of more rigid or fluid structures around certain labour market positions entails higher risks of unemployment, precariousness, or income loss (Beccaria et al., 2024; Maurizio et al., 2023).

On this basis, the present study aims to contribute to comparative knowledge on job quality and labour segmentation mechanisms in national contexts characterised by highly divergent labour institutions, productive structures, and state capacities. Given that the empirical analysis relies on a panel with two consecutive observations (2022–2023), corresponding to a shared post-pandemic recovery phase, the objectives are aligned with what this limited temporal window permits: to identify, evaluate, and compare short-term movements in the labour markets of Germany, Spain, Italy, Poland, and Argentina, as well as their immediate effects on employment formality, hourly wages, and contract type—temporary or permanent—for both waged and non-waged workers.

Within this framework, the primary objective of the article is to analyse how short-term shifts within the occupational structure influence changes in employment formality or informality, variations in hourly earnings, and transitions between temporary and permanent employment for waged workers. This approach allows the scale of segmentation between formal and informal labour market strata to be assessed and its implications for worker well-being in each national context to be evaluated.

Furthermore, the study seeks to characterise the magnitude and direction of occupational transitions experienced by workers during the analysed period, as well as their association with movements between formal and informal segments and their joint impact on wage mobility. It also aims to determine the extent to which the relationship between mobility, informality, wages, and contract temporariness is mediated by the structural and relatively stable features of each labour market: he level of productive development, degree of segmentation, and regulatory capacity of institutions—within a common cyclical context of economic recovery.

Taken together, the article comparatively analyses the magnitude, direction, and interrelation of four short-term labour dynamics: occupational mobility, changes in employment formality status, variations in hourly earnings, and transitions between temporary and permanent employment. This approach enables an understanding of how different national models of

employment organization shape processes of formalization, informalization, and wage inequality in the post-pandemic period.

3. State of the art

Patterns of occupational mobility and the long-term dynamics of labour markets are shaped by the interaction between micro- and macro-social factors (Kalleberg & Sorensen, 1979; Grimshaw et al., 2017). In this regard, occupational changes—understood as discrete shifts in a worker's position within the occupational structure—may have varying implications for regulation and remuneration, depending on the productive and institutional context, as well as on individual motivations and constraints (Fields, 2021; Piraino, 2021). Similar mobility processes may lead to improvements or deteriorations in job quality depending on the country, its productive structure, and institutional regime.

Within this framework, the debate surrounding labour informality, its drivers, and its wage-related effects takes on central importance, with its meaning varying according to the productive structure and institutional frameworks (Williams, 2015). In core countries, part of the literature has interpreted transitions between formal and informal employment as the result of mismatches between labour institutions—originally designed for standard employment—and heterogeneous individual preferences, which create tensions and lead to exits towards flexible or unregulated forms of work (Berniell et al., 2021; Maloney, 1999; Williams, 2015)[18].

The global financial crisis and the subsequent Great Recession deepened these trends in Europe: technological adoption reinforced processes of occupational polarization (Torrejón Pérez et al., 2025), while numerous reforms aimed at avoiding mass unemployment contributed to the expansion of atypical contractual arrangements within the formal sector (Eichhorst et al., 2017; Fernández-Macías & Arranz-Muñoz, 2020; Green & Livanos, 2017)[19].

This configuration is closely linked to the debate on labour market dualization, which highlights the fragmentation between insiders protected by strict regulations and outsiders exposed to greater turnover, lower wages, and reduced job stability (Rueda, 2005; Palier & Thelen, 2010; OECD, 2014). Cross-country differences in the intensity of employment protection legislation (EPL)[20] and institutional incentives account for the divergent patterns of mobility and contract temporariness observed across European countries.

From this perspective, mobility in and around (in)formality is primarily linked to the interaction between institutional design and individual preferences. In some cases, it represents a strategy aimed at avoiding burdens associated with excessive regulation or taxation (Berens, 2020; Caruso Bloeck et al., 2019; Williams, 2015). In others, informal work reflects individual preferences tied to a greater desire for autonomy and flexibility—preferences that are incompatible with full-time employment or not accommodated by existing institutional arrangements (Berniell et al., 2021; Green & Livanos, 2017; Semenza & Sarti, 2019).

In contrast, Latin American economies have historically exhibited important levels of informal employment, and regulated wage relations have had only partial reach (Portes et al., 1989; Pérez Sáinz, 2023). Far from being a residual phenomenon, informality is deeply embedded in Latin American productive structures (Tokman, 2001), and even countries with more institutionalized labour markets consolidated this feature following the structural reforms of the 1990s (Pérez Sáinz, 2023; Weller, 2025). The expansionary cycle of the 2000s failed to reverse these trends, and in the context of a recent economic slowdown, labour markets remain characterised by low unemployment, limited protection against job loss, and a high proportion of low-quality and unregulated jobs (CEPAL, 2023; Weller, 2025).

In this context, recent literature has reinforced the distinction between transitional informality—linked to the economic cycle and fluctuations in formal employment—and structural informality, which stems from the persistence of low-productivity production units, weak state capacity, and high barriers to accessing protected jobs (Portes & Haller, 2004; Maloney, 2004; Levy, 2018). While transitional informality allows for occasional returns to formal employment, structural informality tends to generate lock-in trajectories in low-quality occupations, particularly in countries with fragmented productive structures and limited social protection (Maurizio et al., 2023; Beccaria et al., 2024).

From this perspective, the proliferation of informal jobs constitutes a manifestation of broader exclusionary processes (Weller, 2025), linked to barriers to accessing medium- or high-productivity sectors, the risks associated with occupational mobility, and the limited capacity of the state to enforce regulations and guarantee protection mechanisms in the face of negative shocks (Weller et al., 2019; Abramo, 2021). As a result, informal employment tends to be concentrated in small production units, marginal occupational segments, and economic spaces with low regulatory compliance, leading to labour trajectories characterised by high turnover and short-term mobility (Chen & Carré, 2020; Portes et al., 1989)[21].

Taken together, two dimensions structure the dynamics of informality and remuneration: the economic cycle and the long-term configuration of the productive system (Weller, 2025; Williams, 2015; Williams & Lansky, 2013), and the state's capacity to coordinate actors, define incentives, and uphold labour regulations (Abramo, 2021; Williams & Öz-Yalaman, 2021). The interaction between these dimensions is key to understanding why occupational changes may—or may not—result in mismatches with regards to employment formality and variations in wages (Beccaria et al., 2024; Berens, 2020; Fernández & Meza, 2015).

Building on these discussions, and to adequately contextualize the structural differences that shape the patterns of occupational mobility analyzed in this study, it is necessary to provide a comparative overview of the main productive and institutional features of the countries under consideration. To this end, Table 1 presents a synthesis of six analytically relevant dimensions for the study of short-term labour mobility: (1) the productive model and sectoral composition; (2) the degree of institutional coordination and the intensity of employment protection legislation

(EPL); (3) the predominant form of labour market flexibility—internal or external; (4) the structure of collective bargaining and its effective coverage; (5) the levels and types of labour informality; and (6) the prevalence of different contractual arrangements, particularly the incidence of temporary employment.

These dimensions provide a common comparative framework for analysing the productive and labour-specific features of the countries under study, and for understanding how these contexts influence the observed post-pandemic patterns of mobility, formality, wages, and contract temporariness[22]. Based on this comparative framework, the following section examines the main productive and labour market characteristics of each country.

Germany represents the paradigmatic case of a coordinated social market economy, characteristic of the Bismarckian welfare regime and varieties of coordinated capitalism. Its productive structure is based on high-productivity industrial sectors: automotive, machinery, chemicals, electronics integrated into global value chains. Institutional coordination is expressed through widely covered sectoral collective bargaining, strong union institutionalization, and co-management practices that grant workers representation on corporate boards. These features sustain a distinctive balance between high productivity, job stability, and internal flexibility, facilitated by functional mobility, polyvalence derived from the dual vocational training system, and adjustment mechanisms without layoffs (Kurzarbeit). Although the Hartz reforms expanded a segment of low-wage employment, the introduction of a minimum wage in 2015 partially constrained this dualization. At the macroeconomic level, Germany maintained low unemployment and persistent external surpluses; post-pandemic, employment retention mitigated labour disruptions, and although the energy crisis reduced real wages, it did not alter the institutional architecture of its coordinated model.

In Spain, the productive structure combines medium-productivity manufacturing with a central weight of low-productivity activities—tourism, hospitality, commerce, and personal services—that have generated persistent segmentation between a stable core and a highly rotational periphery. Its labour institutions are hybrid: strong state intervention, extended sectoral collective bargaining, and episodic coordination through social pacts. Flexibility has historically been channelled externally through the intensive use of temporary contracts. The 2021–2022 reforms restricted temporariness and expanded indefinite contracts—particularly fixed discontinuous contracts—historically reducing contractual precariousness, albeit partially reconfiguring its composition. Post-pandemic recovery was dynamic, with strong job creation, but inflation in 2022–2023 eroded real wages.

Italy exhibits a dual productive system, where competitive, export-oriented industrial sectors—concentrated in the North—coexist with a broad network of small and medium-sized low-productivity firms, widespread informality, and deep territorial gaps, particularly in the Mezzogiorno. Its labour institutions integrate national and sectoral collective agreements but with limited coordination due to productive heterogeneity. External flexibility predominates

through extensive temporary employment, agency work, and atypical contracts. The Jobs Act (2015) sought to simplify contracts and reduce dismissal costs, reinforcing dualism between highly protected permanent workers and temporary workers with reduced protection. Although social security coverage is broad in the formal sector, it is uneven by firm size and region. After more than a decade of stagnation, post-pandemic recovery relied on subsidies and European funds; however, the inflation and economic slowdown of 2022–2023 constrained improvements in job stability and quality.

Table 1. Characterization of the national cases analyzed by analytical dimensions.

Institutional Coordination and EPL	Productive Model		
	High Productivity + Integrated	Intermediate Productivity / Sectoral Divergence	Low Productivity + Persistent Structural Heterogeneity
High coordination and EPL	**Germany**. High Internal Mobility and functional mobility. High Coverage of Collective Bargaining. Marginal Informal Employment. Limited use of temporary contracts.	///	///
Intermediate coordination and EPL	///	**Spain** and **Italy**. High External Flexibility. Broad but regionalized/sectoral collective bargaining. Low or moderate informal employment. Significant use of temporary contracts.	///
Low coordination and EPL	///	**Poland**. Significant external flexibility. Limited coverage of Collective Bargaining. Moderate levels of informal employment. Significant use of temporary contracts.	///
High but Fragmentary EPL reach / Polarized	///	///	**Argentina**. Significant external flexibility and large-scale informal employment. Collective bargaining is limited by sector. Significant levels of temporary or discontinuous employment using extra-legal contracts.

Source: Own elaboration based on ILO, OCDE, Eurostat, INDEC and specialized literature.

Poland represents a transitioning economy characterised by a combination of modern, export-oriented sectors—manufacturing, automotive, electronics, business services—and traditional low-productivity activities. Its labour institutions are intermediate: low coverage of collective bargaining, limited coordination, and coexistence of high protection for permanent contracts with extensive use of civil and temporary contracts (umowy zlecenie), generating a significant regime of external flexibility. Nevertheless, the country has progressed in gradual formalization processes driven by contributory incentives, increased enforcement, and regulations associated with European integration. Social security coverage has expanded progressively. Macroeconomically, Poland maintained sustained growth and low unemployment over the past decade, with rapid post-pandemic recovery; however, record inflation in 2022–2023 eroded real wages and placed pressure on workers in more precarious segments.

Argentina constitutes an extra-European case characterised by structural informality, productive heterogeneity, and strong macroeconomic instability. Its labour market combines a protected formal sector—with extended collective bargaining and relatively robust labour regulations—with a vast informal and self-employed segment that operates as a social buffer against macroeconomic shocks. Successive recessions between 2015 and 2021 and the pandemic exacerbated real wage decline and labour precarization. Internal flexibility is limited, while external flexibility manifests in rotation between formality, informality, and self-employment. The social security system exhibits structural coverage gaps, partially mitigated through hybrid mechanisms—Monotributo, pension moratoria, and assistance programmes such as AUH or Potenciar Trabajo—that combine contributory and non-contributory logics. The persistence of low productivity, together with macroeconomic instability and chronic inflation, reduces the effectiveness of inclusion policies and intensifies labour trajectories characterised by high turnover and low wage returns.

The five countries analysed exhibit distinct configurations in the articulation between productive structure, labour institutions, flexibility, and protection. Germany consolidates a coordinated model based on high productivity, internal flexibility, and strong social protection; Spain is progressing towards a regulated flexibility framework with persistent segmentation, partially mitigated by recent reforms; Italy reproduces a structural dualism marked by territorial gaps and predominantly external flexibility; Poland combines flexibility with gradual formalization typical of transitioning economies; and Argentina maintains defensive flexibility associated with structural informality and macroeconomic instability.

Beyond their historical and institutional differences, the cases show that the balance between flexibility and protection depends on the state's capacity to coordinate labour, productive, and social policies, as well as on the productive structure over which these policies are implemented. While in Western Europe flexibility is used as a tool to sustain formal employment, in Poland and Argentina it functions as an adaptive strategy in response to structural tensions.

In relation to the objectives of the present study, these differences explain the expected

variations in occupational mobility, transitions between formal and informal employment, changes in hourly wages, and contract temporariness, allowing an understanding of how national contexts shape the magnitude and direction of short-term mobility in the post-pandemic period.

4. Methods

To address the objectives outlined, a comparative descriptive analysis is employed, based on harmonised microdata from longitudinal sociodemographic surveys. In European countries, the EU-SILC programme is used, which annually collects detailed information on income, living conditions, labour characteristics, education, and sociodemographic attributes of individuals residing in private households (Wirth & Pforr, 2022). EU-SILC combines an annual cross-sectional component with a longitudinal component, allowing the same individuals to be followed for up to four years through a rotating sample design (Engel & Schaffner, 2013). To ensure comparability between countries and with the Argentine data source, this study relies exclusively on panels with two consecutive observations (2022 and 2023).

For Argentina, the Permanent Household Survey (EPH) is used, a continuous survey that collects sociodemographic and labour characteristics of the urban population. Its rotating panel design allows the same households and individuals to be followed over one year, generating comparable observation pairs to evaluate interannual changes (INDEC, 2003; 2019). The harmonization of both sources facilitates the identification of modifications between 2022 and 2023 in occupational position, formality status, contract type for waged workers, and labour income.

The analytical strategy focuses on the description of interannual trajectories across four dimensions: (1) occupational mobility; (2) changes in employment informality (waged and non-waged); (3) variations in hourly earnings; and (4) contractual transitions between temporary and permanent employment for waged workers.

Total mobility is defined as the proportion of individuals whose status changes between the two periods, while directional mobility distinguishes upward or downward movements when the dimension allows. For occupation, the ordinal nature of the EGP class scheme (Erikson–Goldthorpe–Portocarero) is assumed. For formality and informality—conceptualised according to the ILO legal criterion—transitions capture entries into and exits from protected employment. For contract temporariness, changes between permanent employment and temporary or agency work are identified.

Regarding labour income, hourly earnings are calculated as the ratio of monthly labour income to the usual hours worked in the reference month. Income mobility is measured using two indicators: the m index of Fields & Ok (1998) and the intra-individual average coefficient of variation. To distinguish substantive changes from minor fluctuations, only interannual variations exceeding 10 per cent are considered as changes. Measures of mobility for formality, contract

temporariness, and income are further decomposed according to whether the occupational trajectory was upward, downward, or stable.

Occupational classifications constitute central tools for identifying structural positions within labour markets and analysing mobility between them (Kalleberg & Sorensen, 1979; Connelly et al., 2016). Occupations involve different combinations of tasks, responsibilities, technical requirements, and supervision methods, which determine differentiated mechanisms of compenzation, stability, and control, as well as unequal employment opportunities (Goldthorpe, 2010; ILO, 2012). The EGP class scheme (Erikson–Goldthorpe–Portocarero) has been consolidated as a robust comparative tool for the study of inter-temporal labour trajectories and occupational-based mobility (McGovern et al., 2007).

Regarding informal employment, contemporary literature emphasises the heterogeneity of its forms and determinants, as well as its implications for labour market segmentation and mobility (Abramo, 2021; Chen & Carré, 2020; Perry et al., 2007). Since the early twenty-first century, however, the ILO has promoted a unified conceptual framework based on the distinction between formal and informal jobs and production units, defined according to their adherence—or lack thereof—to labour, tax, and social security regulations (Hussmanns, 2005; ILO, 2013; Williams & Lansky, 2013). In this study, and to ensure comparability between countries, the legal definition of informality is adopted. For waged workers, those without access to mandatory social security contributions or whose employment is not registered under national regulations are considered informal; for non-waged workers, those conducting economic activities outside the tax registry or contributory coverage are considered informal.

Table 2: Operationalization of informal employment

<table>
<tr><th colspan="2" rowspan="2">Employment condition</th><th rowspan="2">Subgroups</th><th colspan="2">Identification</th></tr>
<tr><th>EU-SILC</th><th>EPH-C</th></tr>
<tr><td rowspan="2">Formal employment</td><td rowspan="2">Jobs performed in wage-earning or self-employment arrangements in compliance with the relevant tax and social security regulations.</td><td>Formal waged workers</td><td colspan="2">A) Waged workers with social security contributions made through payroll deductions by their employing unit.</td></tr>
<tr><td>Formal non-waged workers</td><td>B.1) Self-employed workers, with or without employees, who report social security contributions or equivalent private insurance coverage</td><td>B.2) Self-employed workers, with or without employees, who have health insurance coverage.</td></tr>
<tr><td rowspan="3">Informal employment</td><td rowspan="3">Jobs performed under wage-earning or self-employment arrangements outside the relevant tax and social security regulations. It includes unpaid family workers.</td><td rowspan="2">Informal waged workers</td><td colspan="2">C) Wage employees without social security contributions made through payroll deductions by their employment unit.</td></tr>
<tr><td colspan="2">D) Unpaid family workers.</td></tr>
<tr><td>Informal non-waged workers</td><td>E.1) Self-employed workers, with or without employees, without social security contributions or equivalent private insurance coverage.</td><td>E.2) Self-employed workers, with or without employees, without health insurance coverage.</td></tr>
</table>

Source: Own elaboration based on ILO and EU-SILC and EPH-INDEC methodological documents.

This criterion, aligned with the statistical recommendations of the ILO, allows for the consistent identification of entries into and exits from formal employment, as well as the evaluation of the

relationship between occupational mobility, informality, and contractual changes among waged and non-waged workers. Table 2 summarises the operational definitions.

5. Results

This section presents the main results concerning the structure and mobility of employment in the five countries analysed during 2022–2023. First, the structural characteristics of each labour market—unemployment, earnings, and informality—are described; second, the levels of occupational mobility and employment segment transitions are examined; and finally, transitions between formal and informal employment and wage changes are compared according to their direction.

Table 3. Main economic indicators by country. 2022-2023

Indicators	Selected countries				
	DE	SP	IT	PL	AR
GDP growth rate (2022/23) (%)	0,5	3,8	2,7	2,8	3,4
Labour force participation (%)	77,4	81,3	70,8	65,4	76,4
Unemployment rate (%)	5,0	15,8	9,3	4,6	5,3

Source: Own elaboration based on EU-SILC and EPH-C microdata and World Bank information (https://data-explorer.oecd.org/).

First, according to Table 3, in terms of the macroeconomic context, all five countries recorded positive average GDP growth rates during the period analysed, albeit with differences. Germany exhibits the lowest GDP growth (0.5 per cent), consistent with its recent stagnation in exports. Spain, Italy, and Poland show moderate growth rates (2.7 per cent–3.8 per cent), driven by tourism, public investment, and export expansion. Argentina records growth (3.4 per cent) within a context of high macroeconomic volatility.

Regarding labour supply, Spain achieves the highest activity rate (81.3 per cent), influenced by a service-intensive employment sector and high unemployment (15.8 per cent). Italy records a lower participation rate (70.8 per cent), associated with population ageing and lower female labour market participation. Poland combines low activity (65.4 per cent) with the lowest unemployment (4.6 per cent), typical of a transitioning economy with strong labour absorption. Germany and Argentina display similar participation rates (77–76 per cent), but under opposite institutional regimes: coordinated stability in Germany versus segmentation and widespread informality in Argentina.

According to Table 4, disparities in labour informality are pronounced across the analysed markets. Germany exhibits the lowest level (4.6 per cent), consistent with a robust institutional system and extensive social protection. Argentina records the highest level (42.7 per cent), reflecting a dual labour market with strong dependence on unregistered employment. Poland (25.7 per cent) and Italy (22.9 per cent) show intermediate but relatively high levels for European economies, associated with heterogeneous productive structures. Spain (11.9 per cent)

occupies an intermediate position, still affected by low-productivity segments.

Hourly earnings follow the productive patterns of each country: Germany reaches the highest value (29.6 USD PPP), followed by Spain (21.3), Italy (18.9), and Poland (15.3). Argentina records the lowest figure (8.6), reflecting its lower productivity and high informality. Wage inequality—approximated by the logarithmic variance—is highest in Spain (0.74) and lower in Italy and Poland (0.54–0.50), while Argentina exhibits an elevated but not extreme level, consistent with its polarised occupational structure.

In contractual terms, Germany stands out for the highest stability (90.9 per cent of waged workers on permanent contracts). Spain (82 per cent) and Italy (85 per cent) show high levels of temporariness, although recent trends indicate reductions in Spain. Poland (72.1 per cent) and Argentina (72.6 per cent) have the highest proportion of temporary contracts, reflecting labour regimes based on external flexibility and limited institutional retention capacity.

Table 4. Main labour market indicators by country. 2022-2023

Indicator	Selected countries				
	DE	SP	IT	PL	AR
Labour informality					
Total (%)	4,6	11,9	22,9	25,7	42,7
Hourly income (USD - PPP)					
Mean	29,59	21,33	18,93	15,26	8,61
Variance (log)	0,56	0,74	0,54	0,50	0,52
Temporary and permanent contracts					
Permanent (%)	90,9	82,0	85,0	72,1	72,6
Temporary (%)	9,1	18,0	15,0	27,9	27,4

Source: Own elaboration based on EU-SILC and EPH-C microdata.

Integrating the indicators examined, it becomes evident that Germany stands out as the most stable and highest-quality labour market, with low informality, high wages, and a predominance of permanent contracts. Spain and Italy combine moderate wage levels with structural segmentation and high temporality. Poland presents a dynamic and expanding market but with significant informality and high turnover, suggesting an incomplete transition towards higher-quality employment. Argentina exhibits the greatest structural fragility: low earnings, widespread informality, high temporality, and pronounced productive heterogeneity. These differences create contrasting labour regimes that anticipate divergent effects of occupational mobility on formality, wages, and employment stability in the following sections.

Differences between development models and labour regimes are clearly reflected in the occupational structure. Table 5 summarises the main dimensions relevant for characterising employment configuration in the five countries—labour category, occupational classes (EGP), qualification, and establishment size—during 2022–2023. These dimensions allow for an assessment of how productive models shape employment opportunities, the relative weight of non-waged work, and the degree of formality in labour markets.

The proportion of non-waged workers varies widely. Germany records the lowest level (8.4 per cent), typical of a highly institutionalised labour market with a strong predominance of formal waged employment. At the other extreme, Argentina (28.1 per cent) exhibits an occupational structure marked by self-employment and informal micro-enterprises as strategies for labour market insertion. Poland (20.3 per cent) and Italy (19.4 per cent) also display a high presence of non-waged workers, reflecting fragmented productive structures and the strong weight of small economic units. Spain (14.8 per cent) occupies an intermediate position, where self-employment coexists with high levels of temporary waged employment, particularly in tourism and service activities.

The distribution by occupational class reveals patterns consistent with productive regimes. Germany has the largest proportion of workers in high-/medium-level services (44.7 per cent), aligned with its specialization in knowledge-intensive sectors. Spain and Italy are around 38 per cent, with differing configurations: a tourism orientation in Spain and manufacturing in Italy. Poland combines a significant weight of medium-level services (37.2 per cent) with a substantial component of supervisors and skilled workers, associated with the expansion of industrial and export sectors. Argentina displays the lowest value (21.9 per cent), reflecting a truncated productive structure and the predominance of low-productivity jobs.

Table 5. Main labour market indicators by country. 2022-2023

Indicators	Selected countries				
	DE	SP	IT	PL	AR
Status in employment (%)					
Non-waged (%)	8,4	14,8	19,4	20,3	28,1
Waged (%)	91,6	85,2	80,6	79,7	71,9
Occupational class (EGP-5)					
Service class (%)	44,7	37,8	38,0	37,2	21,9
Routine non-manual (%)	23,2	20,6	17,0	16,4	24,1
Small employers and self-employed (%)	2,1	7,1	9,2	12,5	21,8
Supervisors and skilled manual (%)	24,1	24,5	27,6	26,4	16,8
Unskilled manual (%)	5,9	10,0	8,3	7,5	15,5
Skill level					
Professionals (%)	27,1	24,7	22,0	25,5	13,4
Technicians (%)	21,6	14,9	21,2	13,0	11,1
Operators (%)	45,6	49,9	46,3	55,2	59,8
Elementary (%)	5,7	10,5	10,6	6,3	15,7
Economic unit size					
Up to 5 workers (%)	6,5	14,7	15,0	7,9	31,2
6 to 9 workers (%)	5,8	9,9	9,9	5,5	14,9
10 to 49 workers (%)	28,3	31,3	53,8	42,6	18,6
50 or more workers (%)	59,4	44,0	21,3	44,0	35,2

Source: Own elaboration based on EU-SILC y EPH-C microdata.

The weight of routine non-manual classes is high in Spain and Argentina, characteristic of markets based on personal services and low-productivity activities. The independent/small employer class (IV) exhibits the most marked gap: Germany (2.1 per cent) versus Argentina (21.8 per cent) and Poland (12.5 per cent), consistent with productive segmentation and informality.

The distribution by occupational qualification continues this differentiation. Germany, Spain, and Italy concentrate a higher proportion of professionals and technicians, reflecting diversified productive structures and greater demand for formal qualifications. Poland exhibits the largest concentration of operative occupations (55.2 per cent), indicative of its transition from a traditional industrial core towards more modern activities. Argentina is characterised by the highest combined presence of operative and elementary occupations (75 per cent), reflecting persistent structural heterogeneity and limited access to skilled jobs.

Firm size constitutes another dimension that strongly distinguishes the countries. Germany presents the highest concentration of employment in large establishments (59.4 per cent), typical of an articulated industrial model with high institutional coordination. Italy (53.8 per cent) and Poland (42.6 per cent) exhibit structures based on small and medium-sized enterprises—industrial districts in Italy and export expansion in Poland. Spain shows an intermediate structure. Argentina stands out for its high proportion of employment in micro-establishments (31.2 per cent), consistent with widespread informality, business fragmentation, and the coexistence of a small formal core with a large informal sector.

Once the general productive and labour attributes of each case have been examined, it is necessary to evaluate the dynamism of the labour markets in terms of job entries and exits, as well as occupational mobility within the employed population at both points of observation. In this regard, Table 6 presents the employment entry, exit, and turnover rates for the five countries analysed. Gross turnover allows observation of short-term employment dynamics. Argentina exhibits the highest rate (21.1 per cent), consistent with a highly volatile labour market characterised by widespread informality, frequent turnover, and a fragmented productive structure. Germany also shows a high turnover rate (20.3 per cent), but within a coordinated regime where mobility functions as an institutionalised internal adjustment mechanism rather than reflecting structural instability.

Spain (16.0 per cent), Italy (13.5 per cent), and Poland (17.1 per cent) form an intermediate group with relatively more stable markets, albeit with significant internal mobility dynamics, especially in Spain—associated with high temporariness—and in Poland—linked to changes in its productive structure. Net turnover confirms moderate job creation: Poland (1.3 per cent), Argentina (1.5 per cent), Spain (1.0 per cent), and Italy (0.9 per cent) show positive balances, while Germany presents a slight contraction (-0.7 per cent), consistent with its recent economic slowdown.

Table 6. Employment entry and exit rates. Economically active population in the selected countries. 2022-2023.

Indicators	Selected countries				
	DE	ES	IT	PL (estim.)	AR
Employment mobility					
Entry rate (%)	9,8	8,5	7,2	9,2	11,3
Exit rate (%)	10,5	7,5	6,3	7,9	9,8
Gross turnover rate (%)	20,3	16,0	13,5	17,1	21,1
Net turnover rate (%)	-0,7	1,0	0,9	1,3	1,5
Entry-exit ratio (%)	93,3	113,3	114,3	116,5	115,3

Source: Own elaboration based on EU-SILC and EPH-C longitudinal data.

The replacement rate, measuring the extent to which entries compensate exits, is very high in Argentina (115.3 per cent) and Poland (116.5 per cent), reflecting intense occupational recomposition processes. In Argentina, this is associated with volatile labour circuits and the need for constant replacement in informal and low-productivity sectors. In Poland, the high replacement rate is linked to the movement of workers into modern sectors, although not necessarily into higher-quality employment. Spain and Italy display replacement rates above 110 per cent, consistent with markets characterised by frequent alternation between temporary and permanent employment. Germany, with a replacement rate of 93.3 per cent, confirms a pattern of relatively greater stability.

Using Table 7, the analysis is specified towards occupational mobility, which occurs among individuals who remain employed at both points of the panel and follow trajectories of change or stability according to the defined occupational classes. Patterns of gross mobility, upward mobility, and downward mobility can be identified. It should be noted that this behaviour will serve as the key variable for establishing how, within each labour market structure, individual changes in relation to employment informality, earnings, and/or contract types are channelled.

Germany exhibits high occupational mobility (22.6 per cent), with balanced proportions of upward (11.2 per cent) and downward (11.4 per cent) movements, reflecting its internal flexibility and a strongly regulated labour market that allows horizontal and vertical reallocations without widespread deterioration of employment. Spain shows the lowest class mobility (8.0 per cent), a pattern consistent with more rigid occupational structures and segmentation that limits opportunities for advancement. Upward (3.9 per cent) and downward (4.2 per cent) mobility is limited, suggesting that recent employment growth has not translated into significant occupational improvements.

Italy displays the second-highest gross mobility after Argentina (28.0 per cent), within a context of productive heterogeneity and high fragmentation. Its replacement rate (88.0 per cent) indicates that for every 100 downward moves, only 88 upward moves are generated, suggesting difficulties in replacing lower-complexity positions with higher-skilled occupations.

Table 7. Changes in occupational class (EGP) of the employed population between 2022 and 2023.

Indicators	Selected countries				
	DE	SP	IT	PL	AR
Occupational mobility (EGP)					
Gross mobility rate (%)	22,6	8,0	28,0	7,1	35,4
Upwards trajectories (%)	11,2	3,9	13,1	3,6	18,7
Downwards trajectories (%)	11,4	4,2	14,9	3,4	16,7
Upwards-downwards trajectory ratio(%)	98,0	93,0	88,0	106,0	112,0

Source: Own elaboration based on EU-SILC and EPH-C longitudinal data.

Poland shows one of the lowest mobility rates (7.1 per cent), indicative of strong short-term stability. However, its replacement rate (106.0 per cent) indicates that among those who change positions, upward moves slightly exceed downward ones, reflecting the modernization of its sectoral structure. This dynamic coexists with a marked duality between traditional sectors—with low-quality jobs—and more dynamic emerging sectors, which limits the positive effects of observed mobility.

Argentina records the highest gross occupational mobility of all countries (35.4 per cent), a feature consistent with high turnover, structural informality, and productive heterogeneity. Although the replacement rate (112.0 per cent) indicates a predominance of upward over downward movements, these upward moves do not necessarily represent sustainable improvements in job quality, given the weight of precarious occupations and frequent rotations between formal and informal segments.

In summary, occupational mobility trajectories diverge markedly across countries. Germany exhibits high mobility associated with institutionalised adjustment mechanisms; Italy combines dynamism with structural fragility; Spain and Poland display more stable trajectories, albeit for opposite reasons—segmentation and temporary employment in Spain, partial modernization in Poland; and Argentina shows a pattern of high functional mobility driven more by subsistence strategies than by structural upgrading processes. These differences indicate that the impact of mobility on informality, earnings, and employment contracts will be highly dependent on the productive and institutional regime of each country.

Following the proposed analytical approach, it is necessary, before assessing the impact of occupational mobility on employment formality, hourly earnings, and contract temporariness, to examine the changes observed in these dimensions during 2022–2023. Table 8 summarises transitions between formal and informal employment, between permanent and temporary contracts, and across wage bands, allowing the magnitude and directionality of these movements to be characterised in each labour market.

Movements around employment formality exhibit highly differentiated patterns. Poland (13.8 per cent) and Argentina (14.8 per cent) display the highest rates of legal mobility, consistent

with labour markets in which structural informality coexists with frequent external adjustment mechanisms. In these countries, transitions to and from informal employment are part of the ordinary functioning of the labour market and reflect both macroeconomic instability and productive heterogeneity. In contrast, Germany (4.4 per cent) and Spain (3.5 per cent) show the lowest levels of formal/informal mobility, consistent with highly institutionalised labour regimes, low informality, and strong adherence to regulated contract types. Italy (6.0 per cent) occupies an intermediate position.

Table 8. Informality, occupational and income mobility indicators by country. 2022-2023

Indicators	Selected countries				
	DE	SP	IT	PL	AR
Change in (in)formality) (per cent)	4,4	3,5	6,0	13,8	14,8
Formalization (%)	2,9	2,2	3,7	6,2	7,8
Informalization (%)	1,5	1,3	2,3	7,6	7,1
Formalization-Informalization ratio (%)	1,89	1,70	1,61	0,82	1,10
Change in temporariness (waged workers) (%)	6,5	6,0	5,6	22,1	15,4
Towards permanent contract (%)	4,2	4,9	3,6	15,9	8,9
Towards temporary contract (%)	2,3	1,1	2,0	6,2	6,5
Permanent-Temporary ratio (%)	1,80	4,42	1,76	2,56	1,36
Change in hourly income					
m (%)	0,39	0,38	0,29	0,30	0,48
CV (%)	0,17	0,17	0,14	0,15	0,23
Upwards (%)	37,6	38,4	37,8	39,9	37,2
Static (+/- 10%) (%)	37,3	40,9	40,5	42,4	16,8
Downwards (%)	25,0	20,7	21,6	17,7	45,9
Upwards-Downwards ratio	1,50	1,85	1,75	2,25	0,81

Source: Own elaboration based on EU-SILC and EPH-C longitudinal data.

Replacement ratios between formalization and informalization reveal relevant structural patterns: Germany (1.89), Spain (1.70), and Italy (1.61) exhibit a clear predominance of net formalization; Argentina (1.10) shows an unstable balance, whereas Poland (0.82) is the only case with dominant informalization, reflecting persistent tensions between the expansion of modern sectors and the persistence of precarious labour segments.

Contractual mobility among waged workers again exposes differences between labour models. Germany (6.5 per cent), Spain (6.0 per cent), and Italy (5.6 per cent) show low levels of transitions between temporary and permanent contracts, consistent with relatively stable markets and an occupational structure less exposed to short-term volatility. In contrast, Poland (22.1 per cent) and Argentina (15.4 per cent) register much higher rates, indicative of greater external flexibility and high turnover in waged employment. The replacement ratio confirms these patterns: Spain records the highest ratio of moves towards permanence relative to temporary contracts (4.42), in line with the effects of recent labour reforms, while Argentina

(1.36) and Poland (2.56) show weaker contractual formalization, more sensitive to cyclical shocks.

Wage mobility is evaluated through the mobility index (m), the coefficient of variation, and the directionality of changes. Argentina presents the highest level of real wage mobility (0.48) and the highest CV (0.23), reflecting intense fluctuations in real earnings associated with high inflation, wage erosion, and the absence of effective wage coordination mechanisms. Germany (0.39) and Spain (0.38) record intermediate levels of wage mobility, in line with more stable labour markets and institutional rules that moderate earnings dispersion. Poland (0.30) and Italy (0.29) exhibit the lowest wage mobility, suggesting more rigid wage structures or greater containment of interannual variations.

The directionality of changes reinforces this interpretation: Poland (2.25), Spain (1.85), and Italy (1.75) show a marked predominance of upward trajectories. Germany (1.50) maintains a favourable pattern, albeit more moderate. In Argentina, the rise/fall ratio is below 1 (0.81), indicating that downward wage trajectories predominate, consistent with the regressive macroeconomic cycle and widespread informality.

Finally, the analysis of mobility implications is completed by relating occupational changes to movements around employment type—formal or informal—and trajectories of upward or downward hourly earnings. Using simple decomposition exercises of the incidence of specific change trajectories around (in)formality or earnings, mobility in each case can be characterised according to the chosen criteria.

Table 9 allows for the assessment of the extent to which changes in employment quality, particularly employment formality, depend on movements between occupational positions, or, conversely, when individuals remain within the same occupational class. In all countries, most transitions of formalization and informalization occur among workers who remain static in terms of occupational class. Table 9. Decomposition of formality transitions among the employed by country, according to their occupational-class trajectory. 2022 – 2023

Table 9. Decomposition of formality transitions among the employed by country, according to their occupational-class trajectory. 2022 - 2023

Occupational class trajectory	Selected countries									
	DE		SP		IT		PL		AR	
	Inform.	Form.	Inform.	Form.	Inform.	Form.	Inform.	Form.	Inform.	Form.
Static (%)	1,2	2,3	1,1	1,9	1,7	2,4	6,9	5,2	3,3	4,2
Mobile (%)	0,3	0,5	0,2	0,3	0,6	1,3	0,6	1,1	3,8	3,6
Upwardly mobile (%)	0,2	0,3	0,1	0,1	0,4	0,6	0,3	0,4	2,0	1,6
Downwardly mobile (%)	0,1	0,2	0,1	0,1	0,3	0,7	0,3	0,6	1,8	2,0
Total (%)	1,5	2,9	1,3	2,2	2,3	3,7	7,6	6,2	7,1	7,8

Source: Own elaboration based on EU-SILC and EPH-C longitudinal data.

Tables 10 and 11 extend this analysis to wage trajectories. Table 10 decomposes upward and downward changes in hourly earnings according to mobility or stability within occupational class, while Table 11 replicates the decomposition according to changes between formal and informal employment. In both cases, a robust pattern emerges: most increases and decreases in earnings occur among workers who remain in the same occupational position or the same type of employment. This indicates that short-term wage variations are more closely associated with sectoral shocks, wage negotiations, or changes in the productivity of specific segments than with mobility across occupational hierarchies.

Table 10 Decomposition of the upwards and downwards hourly income trajectories among the employed by country according to their occupational-class trajectory. 2022 - 2023

Occupational class trajectory	Selected countries									
	DE		SP		IT		PL		AR	
	Asc.	Desc.	Asc.	Desc.	Asc.	Desc.	Asc.	Desc.	Asc.	Desc.
Static	28,9	19,0	35,2	18,8	27,7	15,5	36,9	16,0	23,6	29,5
Mobile	8,8	6,1	3,2	1,9	10,1	6,2	2,9	1,8	13,6	16,4
Upwardly mobile	4,3	3,0	1,6	1,0	4,9	2,6	1,3	1,0	7,7	8,2
Downwardly mobile	4,5	3,0	1,6	0,9	5,2	3,5	1,6	0,8	5,9	8,2
Total	37,6	25,0	38,4	20,8	37,8	21,6	39,9	17,8	37,2	45,9

Source: Own elaboration based on EU-SILC and EPH-C longitudinal data.

Table 11. Decomposition of the upwards and downwards hourly income trajectories among the employed by country according to their formality trajectory type (formalization-informalization). 2022 - 2023

Formality trajectory	Selected countries									
	DE		SP		IT		PL		AR	
	Asc.	Desc.	Asc.	Desc.	Asc.	Desc.	Asc.	Desc.	Asc.	Desc.
Static	36,5	23,5	37,3	20,0	35,8	19,9	34,1	15,2	31,5	39,0
Mobile	1,1	1,5	1,1	0,8	2,0	1,7	5,8	2,6	5,8	6,9
Formalization	0,7	0,6	0,7	0,3	1,2	0,7	2,3	1,2	3,2	3,1
Informalization	0,4	0,9	0,4	0,4	0,9	1,0	3,5	1,5	2,6	3,8
Total	37,6	25,0	38,4	20,8	37,8	21,6	39,9	17,8	37,2	45,9

Source: Own elaboration based on EU-SILC and EPH-C longitudinal data.

In all European cases, upward wage changes prevail over downward ones. For both stationary and mobile occupational class trajectories, this suggests a relatively favourable wage context, or one less exposed to real losses during the period. A similar pattern is observed in relation to informality, where changes along this dimension appear to have little effect on wage mobility, except in Poland (5.8 per cent). In contrast, in Argentina (45.9 per cent), wage trajectories are markedly regressive, particularly when workers remain in the same occupational class (29.5 per cent). Similarly, a transition to informal employment is associated with more downward movements (3.8 per cent) than upward movements (2.6 per cent) in individual hourly earnings. This circumstance must be contextualized within both the fragilities and vulnerabilities linked to the prevalence of structural informality and the markedly regressive wage cycle.

The link between income changes and informal employment is also notable in Poland, but in the opposite direction: informalization generates more upward trajectories (3.5 per cent) than downward (1.5 per cent), and downward occupational class mobility also contributes more to income gains (1.6 per cent) than to individual wage declines.

The emerging pattern from these descriptive findings is that higher short-term occupational mobility does not necessarily translate into greater dynamism in wage trajectories or changes in the process of (in)formalization. This relationship is strongly influenced by the prevalence of informal employment and the simultaneous frequency of transitions around it. Therefore, in contexts of high labour formality and few transitions related to informality—as in the German case—there is no clear link between greater mobility and the risk of income loss. At the opposite end, in Argentina, with its high occupational dynamism within a dualistic, regressive and fragmented context, workers changing jobs or occupations are more exposed to the risk of wage loss, especially when simultaneously changing their employment status to informal arrangements. Spain, Poland and Italy present intermediate cases. Wage adjustments respond to sectoral transitions, contract regimes and the relative weight of lagging or leading productive segments.

6. Conclusions

This article undertook a comparative analysis of recent patterns of class-based occupational mobility, labour informality, wage variation, and contractual temporariness in five countries with clearly differentiated productive models and labour regimes—Germany, Spain, Italy, Poland, and Argentina—during the 2022–2023 period. This is a short yet particularly revealing temporal window. The study is situated within the context of the post-pandemic recovery, a scenario characterised by uneven economic growth, institutional adjustments, and accelerated transformations in the organization of work. Within this framework, the article addressed a central problem in labour economics: how different labour markets process short-term movements of the workforce in terms of (in)formality and remuneration, and the extent to which these trajectories reflect the effect of contextual shocks or consequence of underlying structural mechanisms.

The cross-national comparison made it possible to situate these processes in broader perspective, contrasting advanced economies with coordinated labour markets (Germany), Mediterranean systems characterised by persistent segmentation (Spain and Italy), a case of productive transition with increasing formalization (Poland), and an emerging labour market marked by structural informality (Argentina). This comparative design provides a form of added value rarely present in studies of labour mobility, which typically concentrate on national dynamics or on extended historical periods. By examining different labour markets under a common global shock and at the same point in the economic cycle, the analysis helps to disentangle which dimensions of occupational mobility depend on long-term structural factors

and which are influenced by conjunctural circumstances.

Methodologically, the study draws upon longitudinal microdata from the EU-SILC and the EPH-INDEC, applying the EGP class schema alongside indicators of formality, contractual temporariness, and hourly earnings. The originality of this strategy lies in its capacity to observe actual transitions experienced by workers between two consecutive points in time, rather than relying on intersectional inferences derived from cross-sectional data. This approach yields significant analytical advantages: it captures more accurately the real effects of occupational changes, distinguishes instances of formalization from informalization, identifies wage penalties and premiums associated with different trajectories, and offers a clear depiction of labour market behaviour in contexts of rapid adjustment.

The findings indicate that, despite the common shock, labour markets process occupational mobility in markedly divergent ways. Germany combines low levels of informality, moderate mobility, and strong institutional absorption capacity, such that occupational changes result in limited wage variation and comparatively few transitions into precarious employment. Spain and Italy exhibit low or moderate mobility but with persistent tensions linked to segmentation between permanent and temporary workers, as well as an elevated risk of depressed real wages. Poland displays low mobility alongside relatively strong patterns of formalization, consistent with its growth model centred on the expansion of modern sectors and the absorption of previously informal labour. Argentina, in contrast, exhibits the highest levels of occupational turnover, elevated informality, and limited capacity to convert mobility into upward trajectories—confirming the persistence of a structurally dual labour market.

The analysis challenges several established assumptions within the literature. First, the notion that short-term occupational mobility is necessarily associated with improvements in wages: the study demonstrates that this relationship depends strongly on the institutional regime and the degree of labour market segmentation. Second, the expectation that post-pandemic recovery would reduce informality in a homogeneous manner: the results show that formalization was pronounced in Poland yet relatively weak or unstable in Spain, Italy, and Argentina. Third, the idea that contractual temporariness is solely a Mediterranean phenomenon: the data reveal that it is also marked in Poland and Argentina, albeit for distinct structural reasons and in the absence of a regulatory framework governing its use.

In terms of its contribution to the field, the study provides empirical evidence enabling a deeper examination of the roles played by productive structures, labour market institutions, and state capacity in shaping processes of labour mobility. Moreover, the article contributes to the consolidation of a comparative research agenda capable of integrating European and Latin American studies within a unified analytical framework—something still relatively uncommon in the literature on occupational mobility.

However, the findings also highlight the limitations of traditional approaches to the study of labour mobility and its relationship with informality and income. The pronounced disparities

observed across coordinated, Mediterranean, transitional, and emerging regimes suggest that analyses relying exclusively on aggregate indicators or national frameworks struggle to capture the intermediate mechanisms that link individual trajectories to broader structural configurations. In this regard, a more robust analytical agenda should combine longitudinal panels of greater temporal scope, harmonised measures of productivity and job quality, and approaches that integrate institutional and sectoral dimensions currently treated in a fragmented manner. Advancing in this direction would make it possible to identify more precisely which forms of mobility function as mechanisms of integration and which reproduce inequalities, thereby offering more fine-grained diagnoses capable of informing labour policy in contexts of recurrent shocks and rapid reconfigurations of labour markets.

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Annex

Figure A.1 Detailed characterization of the national cases analyzed by analytical dimensions.

Dimension	Germany	Spain	Italy	Poland	Argentina
Productive model	High-productivity industrial economy; strong integration into global value chains; specialization in complex manufacturing	Intermediate productivity; service-oriented structure with a significant presence of tourism, hospitality, and personal services; medium-sized industrial sector.	Dual productive system: competitive manufacturing in the North and low-productivity SMEs in the South.	Economy in transition; modern export-oriented sectors coexist with traditional activities.	Heterogeneous and fragmented structure; a small, medium-productivity formal sector coexisting with a large informal and self-employed sector.
Institutional coordination and EPL	High degree of coordination; co-determination; sectoral bargaining; strong EPL for permanent workers; predominance of internal flexibility.	Hybrid coordination; strong state intervention; dual EPL (high protection for permanent workers, low for temporary workers).	Partial coordination weakened by structural heterogeneity; dual EPL; uneven territorial enforcement (weaker in the South).	Intermediate institutional framework; low coordination; weak collective bargaining; high EPL for permanent workers and weak protection for civil-law contracts.	Fragmented institutional setting; weak enforcement; high de facto turnover; substantial gap between formal regulation and actual labour practices.
Dominant flexibility type	Internal flexibility: functional mobility and adjustment mechanisms without dismissals (Kurzarbeit).	Historically external flexibility (temporary employment), recently mitigated by reforms promoting open-ended and fixed-discontinuous contracts.	Predominance of external flexibility: temporary contracts, agencies, and atypical arrangements; limited internal mechanisms.	External flexibility based on civil-law and temporary contracts; gradual recent formalization.	Defensive flexibility: rotation between formality, informality, and self-employment in response to macroeconomic shocks.
Collective bargaining	Broad coverage; highly institutionalized; sectoral and firm-level bargaining with strong union presence.	Broad coverage; sectoral bargaining; episodic coordination through social pacts.	National and sectoral coverage, but uneven implementation across regions and firm sizes.	Very low coverage; decentralized or residual bargaining.	High formal coverage through collective agreements but constrained by the large share of informal employment.

Informality type and magnitude	Very low informality; concentrated in mini jobs and regulated marginal employment.	Low-to-moderate informality, mainly in services and small establishments.	Moderate informality; higher in the South and in microenterprises.	Moderate informality; declining, though persistent in traditional sectors.	High and structural informality; encompassing unregistered employees and precarious self-employment.
Contract temporariness and quality	Predominance of permanent jobs; limited use of temporary contracts; reinforced employment-stability mechanisms.	Historically high temporary employment; recent reforms reduce its incidence but increase the prevalence of fixed-discontinuous contracts.	High share of temporary and agency contracts; pronounced segmentation between protected permanent workers and vulnerable temporary workers.	Extensive use of temporary and civil-law contracts; contributory formalization on the rise.	Protected formal contracts at the core; high turnover and precariousness in the informal and self-employed periphery.

Source: Own elaboration based on ILO, OECD, Eurostat, INDEC and specialized literature.

Figure A.2. Operationalization of the EGP class scheme. Five categories (EGP-5) and nine categories (EGP-9) variants.

EGP-5	EGP-9	Description	Operationalization
I+II	I	Service class	ISCO major groups 1 and 2: Managers and professionals
		Service class (employers)	Workers in major groups other than 1 and 2 that are employers
	II	Service class (lower grade)	ISCO major group 3: Technicians and associate professionals
IIIa+IIIb	IIIa	Routine non manual	ISCO major group 4: Clerical support workers
	IIIb	Routine non manual (lower grade)	ISCO major group 5: Service and sales workers
IVa + IVb	IVab	Small employers and self-employed workers	Workers in major groups other than 1 that are self-employed
V+VI	V	Supervisors of manual workers, technicians (lower grade)	Workers in major groups other than 1 that have a supervisory role
	VI	Skilled manual workers	ISCO major groups 7 and 8: Crafts and related trades workers, plant and machine operators, and assemblers
VIIa+IVc +VIIIb	VIIa	Semi and unskilled manual workers	ISCO major group 9, except crop farm labourers: Elementary occupations
	IVc/VIIb	Farm workers	ISCO major group 6, and crop farm labourers: Skilled agricultural, forestry and fishery workers

Source: Own elaboration based on Goldthorpe (2010), Erikson & Goldthorpe (1992), McGovern et al. (2007) and Connelly et al. (2016).

[15] Agustín Salvia and Ramiro Robles (National Council for Scientific and Technical Research (CONICET); Argentine Social Debt Observatory, Catholic University of Argentina (ODSA-UCA); Faculty of Social Sciences, University of Buenos Aires (FCS-UBATEC); and INSEAI Network). Fernando Gallegos, Julieta Vera and Alejo Giannecchini (Argentine Social Debt Observatory, Catholic University of Argentina (ODSA-UCA); and INSEAI Network).

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[18] This is consistent with contributions that assign a similar role to part-time arrangements and other forms of atypical employment, where labour market regulation seeks to adapt to such "voluntary" forms to prevent their informalization (Green & Livanos, 2017; Lewchuk, 2017).

[19] Developed economies have witnessed an increase in precarious employment as a corollary of the decline of Fordism and related social structures of accumulation. These dynamics are not new: studies since the mid-1990s have already noted an increase in employers' discretionary power, which shifted labour market risks onto workers (Breen, 1997; Kalleberg, 2018; Portes & Haller, 2004). With varying intensity across national contexts, the financial crisis tended to accelerate the erosion of coordination institutions in favour of liberalization, deregulation, and tertiarization processes. These macroeconomic trends further intensified the fragmentation of labour relations and the proliferation of employment arrangements in advanced economies. Moreover, the pace of automation technology adoption affected the occupational and sectoral distribution of the workforce, increasing the relevance of jobs characterised by analytical and non-routine tasks and, in some cases, impacting the size of medium-skilled strata within the labour market structure (Fernández-Macías, 2012; Torrejón Pérez et al., 2025).

[20] Employment Protection Legislation (EPL) is a comparative index, particularly used by the OECD, which measures the degree of strictness or flexibility of regulations governing: (a) hiring, (b) individual dismissal, and (c) collective dismissal.

[21] Evidence for Latin America indicates that short-term transitions between occupations and economic units are significant, with low retention rates for self-employed and unregistered workers (Beccaria et al., 2024). Furthermore, comparative studies of these transitions reveal that the concentration of exits and entries around informality is associated with income penalties and other factors affecting workers' well-being (Maurizio et al., 2023).

[22] These six dimensions are selected for their methodological relevance in comparing countries with differing productive and institutional structures. Each dimension captures mechanisms recognised in the literature as determinants of labour mobility: the productive structure shapes labour demand; institutional coordination and EPL affect stability and turnover; types of flexibility and collective bargaining influence job quality and wages; and informality and contractual arrangements determine differential exposure to precariousness and income changes.

CONSTITUTIONAL MINIMUM WAGE, LIVING WAGE, AND INFORMALITY IN COLOMBIA AND MEXICO

By Esteban Nina Baltazar and Miguel Reyes Hernández[23]

Summary

The comparative analysis between Colombia and Mexico highlights the persistent labor precariousness resulting from the decoupling of the Legal Minimum Wage and informal sector earnings. In Mexico, the gap is intensified by accelerated minimum wage increases that low informal productivity fails to replicate. In Colombia, although the percentage disparity is greater, the core issue lies in the insufficiency of income to cover the family cost of living. In both countries, more than one-third of the population is unable to afford the basic food basket; specifically in Colombia, the average informal income represents less than half of the family poverty threshold. Furthermore, this study demonstrates that traditional poverty lines are insufficient to guarantee dignified living conditions. Consequently, this paper proposes the Normative Basket of Vital Satisfiers (Canasta Normativa de Satisfactores Vitales - CNSV), equivalent to the Constitutional Decent Minimum Wage, as a methodology that links living wage with human rights and constitutional mandates.

Keywords: Minimum Wage, Vital Minimum Income, Living Wage, Labor Rights, Informality

JEL Codes: J3, J6, J8, I32, D63

1. Introduction

The present study regarding a minimum vital income that guarantees dignified living conditions in Colombia and Mexico is structured into two sections. The first section examines the traditional approach to the minimum income currently in force in both nations, which is predicated on the estimation of the poverty line and the extreme poverty line. Since the 1980s, statistical agencies in Latin America have undertaken the estimation of these lines as a core task, calculating the monetary value of the basic food basket—referred to as the indigence or extreme poverty line—and the combined value of the food and non-food baskets, which constitutes the poverty line. Nevertheless, these monetary benchmarks have been subject to criticism, insofar as they do not fully reflect access to a dignified life for individuals and families in Colombia and Mexico. Furthermore, controversy persists regarding whether such parameters are sufficient to ensure dignified living conditions for both formal and informal workers and their households.

In this context, a central question arises: what is the minimum income that guarantees a dignified life in Colombia and Mexico? This question has been recurrently posed by researchers, government agencies, and the general public, as it points to the necessity of investigating the actual cost of a dignified life within each society. Primarily, this reflection is linked to the monetary value of minimum existential conditions for an individual or family, traditionally established based on two benchmarks: the extreme poverty line—or basic food basket—and the poverty line—the non-food basket. Both concepts constitute poverty threshold criteria or welfare minimums that are consistently used as normative references for minimum income in Colombia and Mexico. However, there is a recognized need to advance toward a broader approximation of a living wage that incorporates two complementary considerations: the minimum vital income derived from constitutional mandates and labor-related human rights. Therefore, the general objective of this analysis is to estimate the monetary value of a living wage and the constitutional minimum wage in Colombia and Mexico, with the purpose of guaranteeing a dignified life and materializing the constitutional mandate regarding a minimum vital income. The specific objectives are as follows: To examine the evolution of the average informal income, minimum wage, and labor informality rates in Colombia and Mexico; To determine the monetary value of the living wage and the constitutional minimum wage based on data derived from household and labor market surveys; To identify and quantify the existing wage gap between the living and constitutional wages relative to the legal minimum wage and the income perceived by informal workers.

2. Analysis of Labor Informality and Income in Colombia and Mexico (2016-2024)

To analyze the relationship between the labor informality rate, the average income of informal workers, and the legal minimum wage in Colombia and Mexico during the 2016-2024 period, it is essential to examine how recent statistical data and wage-increase policies have impacted the income gap in both nations.

The Scenario in Colombia

In Colombia, the informality rate has remained persistently above 50 per cent of the employed population, fluctuating between 61.8 per cent and 55.4 per cent throughout the study period (Table 1). According to data from DANE (the National Administrative Department of Statistics), the average income of an informal worker is approximately 10 per cent to 20 per cent lower than the monthly legal minimum wage. As of 2024, this places the average informal income at approximately $1,169,701 COP, compared to a minimum wage of $1,300,000 COP (Table 1).

The gap between the formal and informal sectors has not only persisted but has slightly deepened due to nominal increases in the minimum wage. In practice, the minimum wage acts as a barrier to entry into formality; as the legal threshold rises, a significant proportion of newly created jobs are displaced toward informality, where earnings do not reach the legally mandated minimum.

Table 1. Labor Informality and Income in Colombia and Mexico (Colombian pesos and Mexican pesos) (2016-2024).

Colombia	2016	2017	2018	2019	2020	2021	2022	2023	2024
National Rate of Informality (1)(2)	61,80	61,40	61,20	60,70		58,00	57,50	56,10	0,55
Mean Income of the Informal Labor Force (2)	621.695	643.335	674.446	697.805	627.366	772.538	919.151	1.054.223	1.169.770
Poverty Line (2)	1.199.456	1.235.556	1.267.260	1.310.696	1.326.752	1.416.124	1.587.456	1.741.500	1.840.792
Legal Minimum Wage (3)	689.455	737.717	781.242	828.116	877.803	908.526	1.000.000	1.160.000	1.300.000
México									
National Rate of Informality (4)(5) (%)	57,2	56,9	56,7	56,2	54,8	55,8	55,3	54,8	54,6
Mean Income of the Informal Labor Force (4)	4.300	4.500	4.800	5.100	5.000	5.600	6.200	6.400	6.925
Poverty Line (7)	2.893	3.099	3.264	3.400	3.504	3.740	4.105	4.277	4.554
Legal Minimum Wage (6)	2.191	2.401	2.651	3.080	3.696	4.251	5.186	6.223	7.467

Sources:
(1) ANIF (2025) con base a Encuestas GEIN del Dane 2015-2024. Disponible en www.anif.com.co/
(2) DANE (2025) (6) Pobreza monetaria y pobreza monetaria extrema. 2024. Available at www.dane.gov.co
(3) Ministerio de Trabajo (2024). Comisión Nacional del Salario Mínimo. Available at ww.mintrabajo.gov.co
(4) INEGI (2024). Encuesta Nacional de Ocupación y Empleo (ENOE), Indicadores de Ocupación y Empleo. Boletines de prensa 2015-2024. Available at www.inegi.org.mx.
(5) México, ¿cómo vamos? (2024). Observatorio del mercado laboral: ¿cómo vamos al 3T2024?. Análisis sobre pobreza laboral e informalidad.
(6) Comisión Nacional de los Salarios Mínimos (CONASAMI). Available at www.gob.mx/conasami
(7) CONEVAL (2024). Índice de la Tendencia Laboral de la Pobreza. Reportes trimestrales sobre ingresos laborales reales. Available at ww.coneval.org.mx

The Scenario in Mexico

Informality rates reported by the ENOE (INEGI) in Mexico show a trend similar to Colombia's, consistently remaining above 50 per cent (ranging from 57.2 per cent in 2016 to 54.6 per cent in 2024). However, Mexico has implemented an aggressive policy to recover the purchasing power of the minimum wage, which has resulted in a more pronounced statistical gap relative to informal workers' earnings (Table 1).

Data from INEGI and the "México, ¿cómo vamos?" observatory indicate that average labor income in the informal sector remained below the minimum wage for several years. By 2024, the average informal income of approximately $6,925 MXN was surpassed by the monthly minimum wage of $7,467 MXN. Furthermore, a critical structural gap exists: an informal worker earns, on average, 35 per cent less than a formal worker, whose average earnings exceed $10,800 MXN.

Comparative Synthesis. The disparity between the minimum wage and informal income is wider in Colombia than in Mexico. This difference is partially explained by the fact that Mexico has increased its minimum wage at double-digit rates for several consecutive years, while the productivity of micro-businesses and the informal sector has not grown at the same pace. In both nations, the informal population—representing over 50 per cent of the workforce—remains in a state of extreme vulnerability. Their incomes are insufficient to cover the basic food basket, placing them below the poverty line. Nevertheless, the data suggests that precariousness is more acute in Colombia, given the marked insufficiency of income required to guarantee a dignified standard of living relative to the cost of living and legal standards.

3. Constitutional Minimum Wage and Two Principles of the Political Constitution: Human Dignity, Living Wage, and Minimum Vital Income

The proposal for a constitutional minimum wage is grounded in the principles enshrined in the Political Constitutions of Latin American countries. It entails incorporating the conceptual framework of the human rights system, individual rights pertaining to the minimum wage, and labor rights. The primary objective is to emphasize the essential nexus between the minimum wage and a dignified life, ensuring that such standards and elements are integrated into actions aimed at the progressive strengthening of the minimum wage—particularly for low-income individuals, families, and the most vulnerable sectors of society. This proposal stems from a review of the regulatory framework concerning human rights standards, constitutional prescriptions, and the significance of the minimum wage for workers. In this regard, constitutional norms grant special protection to labor through the State. Consequently, the State is the entity mandated to guarantee the efficacy of the rights of all workers. Labor is thus a right of every citizen, reflecting the various international agreements on Social Rights to which Latin American nations are signatories.

Regulatory Framework of the Minimum Vital Income and Minimum Wage

The Universal Declaration of Human Rights (UN), the Protocol of San Salvador, the International Covenant on Economic, Social and Cultural Rights (ICESCR), and various agreements—such as those of the International Labour Organization (ILO)—constitute fundamental paradigms for the guarantee of rights and human dignity. Article 23 of the Universal Declaration of Human Rights states:

"1. Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment. 2. Everyone, without any discrimination, has the right to equal pay for equal work. 3. Everyone who works has the right to just and favourable remuneration, ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection. 4. Everyone has the right to form and to join trade unions for the protection of their interests."

Furthermore, it is posited that labor is both a right and a social obligation, enjoying special State protection in all its forms. Every individual has the right to work under dignified and fair conditions.

It is essential to consider the relationship between a sufficient minimum wage and the enjoyment of human rights. In the case of Colombia, Article 1 of the Political Constitution establishes that Colombia is a Social State under the Rule of Law (Estado Social de Derecho), founded on respect for human dignity, labor, the solidarity of its members, and the prevalence of the general interest. Consequently, the minimum wage—as a figure reflecting the irreducible economic amount that any individual performing personal and subordinate work must receive daily—together with social protection measures, constitutes the fundamental means to ensure a dignified life. Access to services and satisfiers that contribute to the enjoyment of human rights inherent to human well-being—such as food, adequate housing with essential services, health, water, and sanitation—depends upon it.

The jurisprudence of the Constitutional Court of Colombia has consolidated the fundamental right to a minimum vital income (*mínimo vital*) as the portion of income that allows a worker or pensioner to cover basic needs—food, housing, clothing, public services, recreation, and health—which are indispensable conditions for guaranteeing human dignity, a founding principle of the constitutional order. In various rulings, the Court has indicated that the State is obligated to set a minimum wage that corresponds to price levels and socioeconomic conditions, warning that the payment of lower remuneration compromises the worker's existence and dignity and constitutes a form of exploitation.

In Mexico, the primary legal basis for a minimum wage linked to a dignified life is found in the Political Constitution of the United Mexican States (CPEUM), specifically in Article 123. This article not only defines wages as retribution for labor but also assigns them an essential social and human function. As a normative pillar, Article 123, Section A, Fraction VI, explicitly states:

"General minimum wages must be sufficient to satisfy the normal needs of a head of household—in material, social, and cultural terms—and to provide for the compulsory education of children."

This provision directly links income to a standard of living that transcends mere survival, encompassing access to culture, leisure, and education—concepts known in legal and human rights terms as a dignified life.

The Federal Labor Law of 1970 is the supreme labor law in Mexico, superseded only by the Constitution. As an extension of the Constitution, Article 90 of the Federal Labor Law reinforces this concept, defining the minimum wage as the lowest amount in cash that a worker must receive and reiterating that it must be sufficient for the family's material, social, and cultural needs.

Although Article 123 specifically addresses labor, the Supreme Court of Justice of the Nation

(SCJN) has interpreted in its rulings that the right to a dignified life and the concept of a minimum vital income emanate from a joint reading of Articles 1, 3, and 4: “Article 1: Recognizes that all individuals shall enjoy the human rights acknowledged in the Constitution and international treaties (such as the ICESCR), including the right to just and favorable remuneration”… Articles 3 and 4 “By establishing rights to education, health, housing, and nutritious food, the State implicitly recognizes that the wage must be the economic means through which the worker accesses these rights.”

In summary, constitutional norms have reiterated that the minimum vital income should not be conflated with the legal minimum wage, as its recognition depends on the analysis of specific cases and the individual's state of vulnerability. This minimum vital income, or living wage, must ensure the satisfaction of essential needs and, consequently, the effectiveness of the right to human dignity within the framework of Social Rights.

4. Proposal for a Constitutional Minimum Wage and Normative Basic Basket for Colombia and Mexico: Methodology and Estimation

Normative baskets and their design are fundamental within the academic literature on poverty. Despite the lack of consensus regarding minimum nutritional requirements, the products to be incorporated, or the procedure for estimating the cost of the baskets (Cortes, et al.; 2007), normative baskets are closely related to the determination of poverty thresholds (Altimir, 1979; CMTP, 2003; CONEVAL, 2009).

One approach considers the construction of baskets or the cost of living based on the wage that individuals should receive when entering the market to sell their labor power. The establishment of minimums is based on the cost of living for a worker and their family, ensuring not only an adequate standard of living for the worker but also for the family that accompanies them and will be part of the future social labor force. In the literature, there is limited coverage of basket construction linked to wages, as focus has primarily remained on the analysis of thresholds or minimum welfare levels for poverty lines. Conversely, recent literature explores normative baskets linked to the establishment of ideal minimum wages—guarantors of welfare minimums associated with an adequate and dignified standard of living. This work has been conducted by the Wage Observatory of the Universidad Iberoamericana in Mexico, aiming to allow both the worker and their dependents to reproduce their living conditions under a welfare minimum (Observatorio de Salarios, 2014; Reyes and López, 2016)6. Although this second vision does not contradict the link to poverty, it is important to note that its conceptual foundation is different (Reyes and López, 2016).

Two distinct approaches for defining satisfiers and consumption minimums are recognized:

- Absolute Parameters Approach: This considers parameters based on human biological survival for the construction of consumption baskets. For the food basket, this vision

considers a nutritional level that allows for minimal physical activities that do not change over time (Feres and Mancero, 2001). Under this approach, Cortés et al. (2007) propose three methodologies for estimating food baskets for poverty measurement: linear programming, observed consumption with a reference stratum, and regression methods. The first two methods construct a food basket, while the regression method mathematically estimates parameters for the monetary poverty line. For most methodologies in this approach, the non-food basket is built by establishing an expansion factor to multiply the value of the food basket. This multiple can be set arbitrarily (INEGI-CEPAL, 1992) or constructed through the inverse of the Engel Coefficient or Orshansky Coefficient (Altimir, 1979; CMTP, 2003; CONEVAL, 2010), the latter being the first to develop this method in Latin America in 1965. A problem with the inverse Engel coefficient is its lack of a single application method. While the concept's intuition is indisputable, consensus is lacking in its execution, which ranges from constructing a mobile decile (CMTP, 2003) to applying the coefficient from a reference stratum considering energetic-nutritional criteria (CONEVAL, 2009). Variability occurs in the use of expenditure or income and in application criteria, such as using households where the Normative Food Basket (CNA) equals per capita income (YPC), average household income, or values above the food expenditure (GA) of the reference stratum.

- Social Norms Approach: This considers that satisfiers—without neglecting minimum nutritional requirements—are defined by existing norms determining welfare minimums, components, and thresholds (Calderón, M. 2016; Boltvinik, 2003, 2014). Needs and their adequate satisfaction levels in a specific society are defined according to social norms, which are products of social and historical interaction. These are expressed in conditions where deprivation is negatively sanctioned by society (Observatorio de Salarios, 2014; Reyes and López, 2016). To identify these norms and establish satisfiers, commodities, activities, amounts, and thresholds, several aspects must be considered: observed consumption, social perceptions of necessity, technical or scientific norms, and legal norms (Observatorio de Salarios, 2014; Calderón, 2013, 2016):
    - Observed consumption reflects what is actually used in a society, verifying indispensable commodities and activities.
    - Social perceptions of necessity represent what the population considers adequate, approaching "social morality". However, like observed consumption, these are often expressions of the dominant interpretation of reality, reinforced by media, advertising, and beliefs.
    - Technical or scientific norms serve as a central element to control observed and perceived norms, allowing for corrections based on scientific knowledge. They are key to maintaining welfare, health, and survival.
    - National and international legislation on human rights constitutes a fundamental element

in identifying social norms and thresholds.

These norms are the historical product of a specific society. Most methodologies assuming this approach opt for complete normative baskets of satisfiers—constructing both food and non-food baskets (only conducted for Mexico by Coplamar, 1982 and Observatorio de Salarios, 2014). However, this vision does not contradict using partial baskets and expanding them via the Orshansky coefficient, provided the principle is population welfare expressed through social rights and needs. This methodological approach is taken for the estimation of normative baskets in this study. This decision is based on the importance of an innovative and comparable welfare measurement method that conjugates a rights and needs approach.

The construction of the Normative Basket of Vital Satisfiers (Canasta Normativa de Satisfactores Vitales - CNSV) was based on the conceptual-methodological framework developed by the Observatorio de Salario (2014) for Mexico. The value of the CNSV is equivalent to the ideal minimum wage and identifies the minimum income threshold, which can establish a new monetary poverty line. National Constitutions and international treaties on labor rights, framed within Economic, Social, Cultural, and Environmental Rights (ESCER), guarantee the right of a head of household and their family to adequate and dignified remuneration. However, although guaranteed in the Constitution, the problem lies in their enforceability and justiciability (Reyes et al, 2015). Laws in Mexico and Colombia generally lack procedures to directly guarantee these rights or provide necessary benefits.

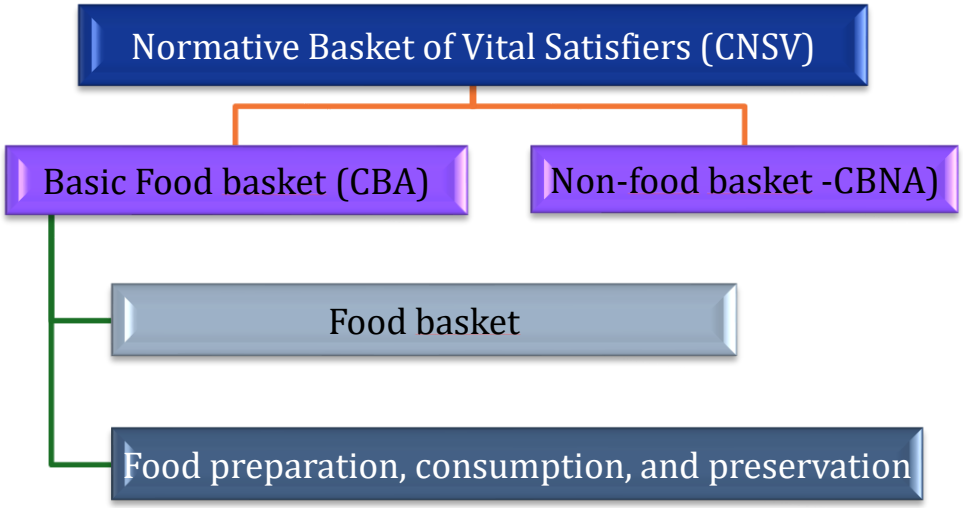
A fundamental contribution of this study is that it analyzes dignified and adequate living standards linked to minimum wages that should be guaranteed under a rights approach, proposing their demandability from the State. It links a welfare threshold with poverty and minimum wages by overlapping the needs approach (Boltvinik, 2007) with the rights approach regarding enforceability. In this sense, the Constitutional Dignified Minimum Wage (Salario Mínimo Constitutional - SMC) should be useful for establishing dignified wages and adequate living levels. The difference from traditional income-based poverty lines is that the directionality is opposite: this proposal builds from wages toward poverty. In literature, only Fishlow (1972) has linked the poverty line with the minimum wage. This study proposes using the ideal Constitutional Minimum Wage as the poverty line—the wage the market should pay if labor rights were fulfilled. This considers levels of remuneration that allow for the reproduction of the working class and the worker's offspring under minimum welfare levels.

Construction of the Normative Basket of Vital Satisfiers (Canasta Normativa de Satisfactores Vitales - CNSV)

The CNSV, equivalent to the SMC and the new poverty line, consists of a Basic Food Basket (Canasta Basica de Alimentos - CBA) and a Non-Food Basic Basket (Canasta Basica de No Alimentos - CBNA). The construction for Colombia and Mexico involves three aspects: observed consumption, social perceptions, technical-scientific norms, and legal norms (see Figure 1). The research project by the Universidad Iberoamericana (Mexico) and Pontificia Universidad

Javeriana (Colombia), as part of the AUSJAL and ODSAL networks, estimated the CBA for both countries, which served to calculate the CBNA via the Engel coefficient. The construction considered an average household size of 4 people.

Figure 1. Normative Basket of Vital Satisfiers (CNSV)



Source: Observatorio de Salarios (2014), Reyes y López (2016) and AUSJAL, 2017

Construction of the Basic Food Basket (CBA)

The CBA in this research have two components: the Food Basket and the Cost of Preparation, Consumption, and Conservation (PCCA) of perishable goods. This innovative composition assumes that food is not eaten raw; a broad conception of rights and welfare must include all elements involved in adequate intake, including additives for preparation and conservation. The CBA started from three aspects: biological, psycho-emotional, and sociological:

- Biological aspect: Covers the satisfaction of nutrients in adequate quantities; i.e., a complete, sufficient, measured, balanced, and safe diet. Following Casanueva (2008) and Mataix (2010), the composition aims for 60 per cent carbohydrates, 15 per cent protein, and 25 per cent lipids. Specialized nutrition software (SACIE) was used to standardize quantities in equivalents and grams.
- Psycho-emotional component: Indicates that food aligns with tastes and customs, obtained from observed consumption. For Colombia, baskets from DANE and CEPAL were used as a base. Observed consumption is identified based on the DANE Income and Expenditure Survey.
- Sociological component: Locates social and cultural components in consumption. Historical and cultural contexts influence what and how commodities are consumed. This is captured through surveys on perceptions of necessity. While Colombia lacks such a source, Mexico uses the Survey of Perception and Access to Basic Satisfiers.

For the first time in Latin America, these baskets incorporate research from the Observatorio

de Salarios (2014) implying that preparation, consumption, and conservation components assume food is consumed as it is socially practiced (cooked, with adequate utensils) (Calderón, 2013).

Table 2. Cost of the Basic Food Basket in Colombia and Mexico (PPP-adjusted prices, 2016 International $)

Food	Components for Mexico	$US PPP	Components for Colombia	$US PPP
Fruits and vegetables	Orange	37,06	Green plantain	18,7
	Apple	37,06	Ripe plantain	7
	Papaya	37,06	Tomato	17,21
	Banana	37,06	Onion	3,26
	Melons	37,06	Potatoes	11,14
	Tomatillo	16,54	White cassava	3,38
	Tomato	16,54	Rice	1,96
	Green and dried chilies	16,54	Raw or pre-cooked arepas	28,05
	Onion	16,54		
	Green beans	16,54		
	Carrot	16,54		
	Zucchini	16,54		
	Rice	9,88		
	Avocado	32,42		
Legumes	Beans	30,88	Beans	4,96
			Dried peas	0,76
Animal-source foods	Egg	28,74	Egg	5
	Chicken meat	135,55	Chicken meat	88,32
			Mortadella or similar	16
Dairy products	Powdered milk	92,64	Powdered milk	26,26
			Country cheese	66,77
			Fresh cheese	39,25
Oils and fats	Vegetable oil	32,42	Regular oil	9,85
			Margarine	3,98
			Roasted and ground coffee	16,98
Sugars	Sugar	4,63	Sugar	20,44
Complementary foods	Salt	1,2	Salt	0,97
	Water	29,84	Water	0,38
	Bread (food)	9,88	Bread (food)	20,94
	Sweet bread	46,32		
	Pasta	9,88		
	Corn tortilla	9,88		
	Total $US PPA	775,24	Total $US PPA	411,56

Source: Own elaboration based on Household Surveys from Mexico and Colombia. Purchasing Power Parity (PPP) conversion factors from IMF.

The monetary value of the basic food basket for Colombia—including items such as fruits, vegetables, cereals, animal protein, oils, sugar, and complementary foods—amounts to $411.466, while for Mexico, it totals $775.24, based on standardized PPP-adjusted prices (2016 International Dollars).

The total value of the food basket is obtained by summing the cost of necessary food (CA) and the cost of preparation, consumption, and conservation (PCCA).

Table 3. Cost of the food basket, preparation, consumption, conservation, and total food basket. Mexico and Colombia (PPP, 2016 $ y % total)

Country	Food basket (CA)	Food preparation, consumption, and preservation (PCCA)	Basic Food Basket (CA+PCCA)
Mexico ($)	775.24	76.00	851.24
Colombia (&)	411.57	63.25	474.82
Mexico (%)	91.10	8.90	100.00
Colombia (%)	86.70	13.20	100.00

Source: Own elaboration based on Household Surveys from Mexico and Colombia.

Non-Food Basic Basket (Canasta Basica No Alimentaria - CBNA)

The CBNA includes commodities necessary to satisfy non-food needs. Ideally, this is built through a complete list of satisfiers with details on cost, quantity, and depreciation. When not possible, it can be estimated using the inverse Engel or Orshansky coefficient (1965). For Colombia, it was estimated using food expenditure as a proportion of total expenditure and the Engel coefficient. Unlike Mexico, where a complete normative basket was built, Colombia used a variant of the Engel coefficient. This refers to a consumption pattern where 40 per cent of expenditure is food and 60 per cent is non-food. In Colombia, a mobile decile variant was applied, using the first household where food expenditure (GA) equalled the normative food basket (CBA) value. This coincides with the proportions obtained in Mexico. Using either the mobile decile or the stratum with the necessary minimum wage yields the same value. This value also aligns with the methodology, considering observed consumption, legal/technical norms, and social perceptions.

Table 4. Cost of complete normative baskets or living wage for Mexico and Colombia (PPP, 2016 International $)

Country	Basic Food basket (CA+PCCA = CBA)	Non-food basket (CBNA)	Normative Basket of Vital Satisfiers (CNSV) = Living Wage
México	851.24	1,281.64	2,132.88
Colombia	474.82	648.44	1,123.27
México (%)	39,90	60,10	100
Colombia (%)	42,30	57,70	100

Source: Own elaboration based on Household Surveys from Mexico and Colombia

The table 4 presents the estimated costs for the food basket, food preparation, consumption,

and preservation, and the overall food basket. For Colombia (2016), the estimates are as follows: the Normative Basket of Vital Satisfiers (CNSV) equals $1,123.27 PPP, which is disaggregated into the Food Basket (CA+PCCA) at $474.82 USD and the Non-Food Basket at $648.44 USD. For Mexico, the total value is $2,132.88, representing the aggregate of the Basic Food Basket (CBA) at $851.24 and the Basic Non-Food Basket (CBNA) at $1,281.64.

The composition of the Normative Basket of Vital Satisfactors (CNSV) and its values in PPP dollars for Mexico and Colombia are presented in Table 3 and Table 4. On average, as previously noted, 60 per cent of total expenditure is non-food related, while approximately 40 per cent corresponds to food. Within this, the Cost of Preparation, Consumption, and Preservation of Food (CPPA) ranges from 8.9 per cent in Mexico to 13.2 per cent of the basket's value (Table 3), whereas the food basket itself accounts for 39.9 per cent in Mexico and 42.3 per cent in Colombia (Table 4).

On average (Table 4), 60 per cent of expenditure is non-food and 40 per cent is food. The CNSV, equivalent to the required SMC, is also the new value of the constitutional monetary poverty line. It guarantees not falling into poverty and ensures access to minimum living standards. The gap between the CNSV and the official poverty line (PL) for 2016 was 1.58 for Mexico and 1.65 for Colombia (Table 5).

Table 5. Comparison between complete normative baskets and official normative baskets (LP) (PPP, 2016 International Dollars)

País	Constitutional Minimum Wage	Official Normative Baskets (Poverty line LP) $ PPP	CNSV/Official Normative Baskets (LP)
México	2,132.88	1,349.91	1.58
Colombia	1,123.27	680.31	1.65

Source: Own elaboration based on Household Surveys from Mexico and Colombia

At 2016 current prices (Table 6), the value of the Normative Basket of Vital Satisfactors (CNSV), or Constitutional Minimum Wage, amounts to 1,123.27 PPP dollars, equivalent to 1,419,723.3 Colombian pesos.

Table 6. Values conversion: From standard PPP to nominal values in Colombia

Criteria	Monetary values
2016 PPP-adjusted GDP per capita ($US)	14.091,40
Nominal GDP per capita ($US)	5.800,00
Constitutional minimum wage adjusted to 2016 PPP ($US)	1.123,30
Constitutional minimum wage Nominal ($US)	462,30
Exchange rate in 2016 (Colombian pesos per dollar)	3.071,00
Constitutional Minimum Wage (2016 Current Prices) COP	1.419.723,30

Source: Own elaboration based on Household Surveys from Mexico and Colombia

Table 7 presents the transformation of wage values from 2016 to 2024, based on the annual nominal increase of the minimum wage. It can be observed that, at current prices in Colombia,

the 2016 value of the Normative Basket of Vital Satisfiers (CNSV)—or Constitutional Minimum Wage—was $1,123.27 PPP, equivalent to $1,419,723.3 COP. This indicates that the living wage is 2.1 times, or double, the current legal minimum wage, which stood at $689,455. This trend persists into 2024: the constitutional minimum wage (or living wage) is $2,668,529, which remains double the legal minimum wage of $1,300,000.

Table 7. Transformation of wage values from 2016 to 2024 based on the annual nominal minimum wage increase (% growth and Colombian Pesos)

Year	Annual Nominal Minimum Wage Growth (%)	Legal Minimum Wage Colombian Pesos)	Constitutional Value Minimum Wage (Colombian Pesos)
2016	7.0	689.455	1.429.123
2017	7.0	737.717	1.519.104
2018	5.9	781.242	1.608.731
2019	6.0	828.116	1.705.254
2020	6.0	877.803	1.807.269
2021	3.5	908.526	1.867.253
2022	10.0	1.000.000	2,053.978
2023	16.0	1.160.000	2,382,615
2024	12.0	1.300.000	2,668,529

Source: Own elaboration based on Household Surveys from Mexico and Colombia

5. Conclusions

Poverty measurement and minimum wage definition must transcend traditional monetary criteria and move toward a constitutionally dignified wage grounded in human rights and normative baskets that reflect the real needs of families in Colombia and Mexico. This study proposes an innovative estimation approach using an empirical, inductive methodology. It evidences the wage gap between the SMC and informal incomes. Overcoming poverty requires a paradigm shift, where measurement no longer depends exclusively on insufficient traditional criteria (Poverty Lines and SMLV). The traditional approach omits the full integration of social rights and human dignity. Therefore, a Constitutional Minimum Wage (SMC) linked to the satisfaction of essential needs is necessary. This tool redefines the income threshold by integrating observed consumption and technical/legal norms. By equating the SMC to the CNSV, the study inverts the traditional logic: instead of defining poverty from a threshold of lack, it starts from the definition of a dignified wage (a right) to determine the floor of welfare. Evidence confirms that the market minimum wage is below this dignified wage in both countries. Finally, it is pertinent that the State assumes the enforceability of the right to a dignified wage as an active tool for human rights.

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THE RISE OF INFORMAL EMPLOYMENT IN LATIN AMERICA AND NEW FORMS OF INFORMALITY

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Summary

The presence of labour informality in capitalism is perennial. Capital has always sought and found ways to evade social norms protecting employment through substantive and procedural regulation, once such norms have been established. Although this is a global trend, its magnitude, timing and intensity vary between countries and regions. In much of the Global South—especially in Africa and Asia—informal employment predominates and formal employment is the exception. Most of humanity is engaged in self-subsistence work, informal jobs and employment.

Our analysis focuses on the dynamics of informal work in some Latin American countries where the phenomenon has an uneven incidence. There are countries with majority informality, such as Bolivia; others where it covers about half of the labour force, such as Colombia, Mexico or Argentina; and cases with a lower incidence, such as Uruguay or Chile, which are closer to European standards.

Throughout the text, we examine the evolution of informality in Latin America during the 21st century, analyse the impact of labour formalization policies based on ILO statistics, and propose a critical reflection on the new forms of informality emerging in the current context.

Keywords: Incidence of informality by countries and gender, estimated informality in Latin America and the Caribbean, formalization policies, FORLAC 2.0 & ILO strategies on formalization

JEL Code: J46, O17, J08, J38

1. State of the art and methodology: The problematic conceptualization of labour informality and progress in its measurement.

Labour informality is a complex, structural, multidimensional, heterogeneous and dynamic phenomenon in which long-standing forms of informality coexist with forms of informality that have emerged from recent transformations in capitalism. In recent years, significant efforts have been made to advance its conceptual clarification and measurement, notably the initiatives carried out by the ILO[25], as well as the conceptual development of strategies and labour policies

aimed at labour formalization: FORLAC and FORLAC 2.0; and the attention given by academia and the resources devoted to its study and research. The European Union has also promoted research and knowledge transfer projects focused on Latin America, such as LATWORK, NETeJOB and INSEAI, within the framework of ERASMUS+ and HORIZON, in which we have been participating in recent years. This interest is not new. Almost 30 years ago, in 1995, in his magnificent study on the informal economy in Mexico, François Roubaud dedicated a section of his work to "The new enthusiasm for the informal sector: a global phenomenon" (Roubaud 1995: 45).

The concept of informal employment is linked to two interrelated areas. On the one hand, it refers to all those employment situations that take place in areas that are not fully or partially registered with the authorities (tax, health and safety administrations, etc.). These situations are not generally recorded and are not taxed or regulated in the same way as the formal economy, remaining partially or totally outside formal regulation. On the other hand, informality refers to those workers who lack social security, and more generally, security against job loss or security in the labour market, job security, income security, security in working conditions and security in the workplace (Standing, 1988). In the case of social security, for example, they lack it because neither they nor their employers contribute to contributory social security systems due to the fact that they are not registered, basically because of the employers' interest in not paying social security contributions. The lack of registration is usually due to the employers' interest in avoiding social security contributions, which connects both areas, although it is advisable to differentiate between them for analytical and statistical purposes.

Various studies have contributed to the conceptualization and measurement of informality (Portes and Benton, 1987; Klein and Tokman, 1988; Portes, Benton and Castells, 1989; Roubaud, 1995; Cartaya, 1987; Guerguil, 1988) addressing key issues for discussion such as the "autonomy" of the informal sector, its articulation with the formal sector, links with the underground or submerged economy, the differences and heterogeneities it raises in developed and developing countries, the simplifications derived from the transfer of Eurocentric views and the analysis of the realities of the Global South, etc. The links and points of convergence between formality and informality are extensive, and the two are not two separate worlds in the labour reality of each country. There are formal activities that are partially informalized, phases of the production process and circulation of goods that combine formalised and informal stages, etc.

According to Roubaud (1995), the characteristic of the "informal sector" is that it maintains a link with violations of current legislation, especially in relation to administrative and/or tax records and social security regimes, which are usually mandatory for all establishments with employees. At the same time, this sector refers to "specific forms of production of an 'artisanal' nature outside public regulations. These are the key points that fuel the debate on the informal sector within a field of research in which 'schools' and currents clash. [...] Thus, the informal sector has often been equated with all units governed by non-capitalist or pre-capitalist modes of production. On the other hand, the coexistence of this sector with a typically capitalist sector

would be one of the structural components of the economies of developing countries (PED)" (Roubaud 1995: 24). Hence, the perspective on informality is usually different in Europe and Latin America. While in Europe, for many years, a punitive and sanctioning approach to combating the underground economy and the black market, with which informality is associated, has prevailed, in Latin America we find a more tolerant and understanding perspective on this reality, on which the livelihoods of large sections of the population, the most vulnerable, depend, and in which the option of maintaining productive activity prevails. This is because, to a large extent, they are talking about different realities.

Roubaud specifies the following methodological proposal: "We will advocate for a standardised analytical framework that will allow us to reduce methodological conflicts and, consequently, differences in interpretation (...). Our choice, which we will describe as macro-accounting, is based on the national accounting analytical framework. The complete integration of the informal sector as an institutional sector in the national accounts will ensure the overall consistency of economic flows at the national level, while preserving its irreducible specificity. It will then be possible to define its contours on a homogeneous basis and understand its dynamics, without erasing the undeniable diversity of its functions within each country. In our view, this solution is an essential prerequisite for a true macroeconomic analysis of the informal sector and, given its weight in the economies concerned, of the economies of developing countries as a whole. (Roubaud 1995: 35).

Roubaud raised the complexity of conceptualising and operationalising labour informality in different contexts, and the variety of theoretical perspectives and schools of thought. To carry out this analysis, we have opted for the conceptualization and operationalization offered by the ILO, as we consider it to be the most comprehensive and developed, and one that allows for comparative analysis. At its 17th International Conference of Labour Statisticians (ICLS) in November 2003, the ILO established that informal employment consisted of the following analytical categories: a) informal employment in formal sector enterprises (informal family workers and informal wage earners, either full-time or part-time); b) informal workers in informal sector enterprises (informal self-employed or self-employed workers, informal employers, family workers, wage earners, members of informal producer cooperatives); and c) workers in households[26] (informal self-employed workers and informal wage earners). The ILO incorporates the informal sector of the economy, referred to by Roubaud, and adds two additional subgroups: informal workers in the formal sector and informal workers in households.

The ILO recognises the presence of informal employment in all countries, regardless of their level of income and development or the measurements of national statistical institutes; informal employment is present in economic units in the informal sector, in the formal sector, and in households. These categories provide operational definitions of the formal sector, the informal sector, and the household own-account and community use sector, based on the formal status of the economic unit and the intended use of the output.

Additionally, in ILO Recommendation 204 (R204) on the transition from the informal to the formal economy, adopted at the International Labour Conference (2015), the informal economy encompasses all economic activities carried out by workers and economic units that, in law or in practice, are not covered or are insufficiently covered by formal systems, recognising that productive activities may be "partially" informal, and explicitly excludes illicit activities (specifying the exclusion of narcotics, human trafficking and money laundering).

The ILO has made progress in measuring informality. In 2023, the 21st International Conference of Labour Statisticians (ICLS) adopted a new resolution to revise and update the standards for measuring the informal economy[27] to align them with recent standards on the measurement of all forms of work (not just employment) and labour relations previously adopted by the 19th and 20th ICLS, and to incorporate new forms of work that are emerging in the labour landscape. This resolution incorporates a comprehensive framework of indicators for the informal economy (ICLS/21/2023/Room document 5)[28] which breaks down the structure of the framework of indicators, people, employment and activities, the economic units that make up the informal sector, the contribution of the informal economy to GDP, public policies and interventions in this regard, as well as gaps or deficits with respect to the ILO decent work framework. This ILO informal economy indicator framework includes SDG indicator 8.3.1: "Proportion of informal employment in total employment (per cent)" and a set of econometric models that provide estimates of the incidence of informal employment by region and country, as well as the compilation of statistics from the various national statistical institutes that allow for comparisons concerning informality, as the criteria used to conceptualise and operationalise it are harmonised.

Reducing informal employment remains a key concern on the ILO's Decent Work Agenda and the UN's 2030 Agenda for Sustainable Development. The informality rate (proportion of informal employment in total employment) is one of the indicators selected to measure progress towards the Sustainable Development Goals (indicator 8.3.1); it is also linked to the goals of gender equality and women's economic independence. The analysis presented below is based on information provided by the ILO's statistical office; we show the evolution of the informality rate in different Latin American countries over the last 20 years.

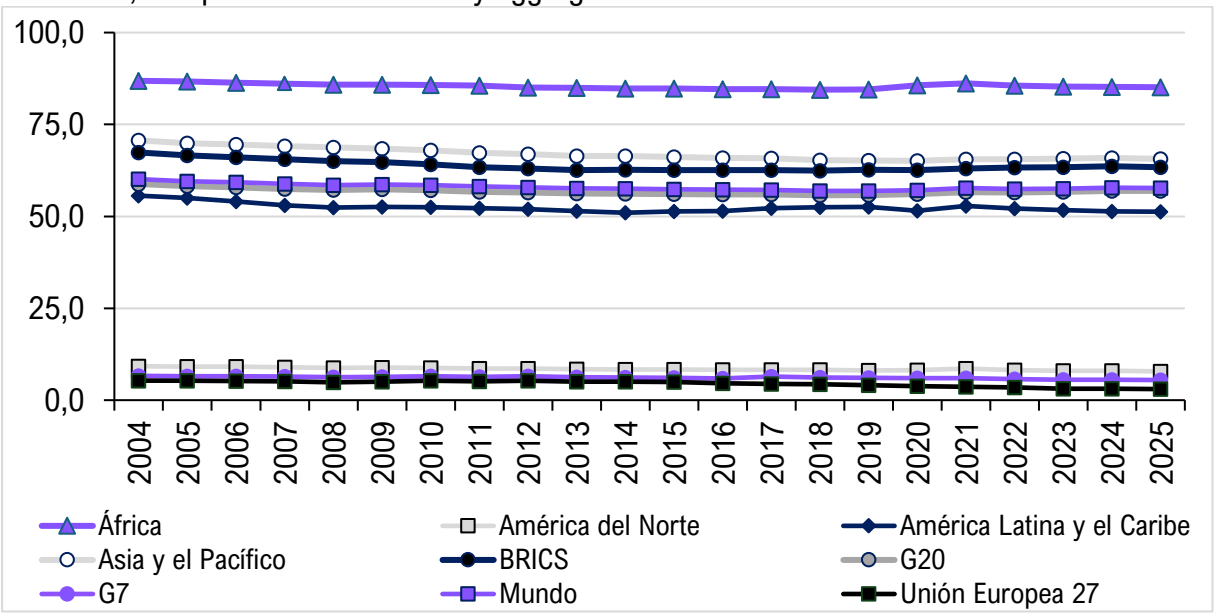
2. Results: Evolution of informality in Latin America in the first two decades of the 21st century.

The incidence of informality in Latin America is extremely uneven and heterogeneous, to the extent that it is challenging to characterise such diverse situations in the region. In Bolivia, 83. labour informality accounts for 7 per cent of the employed population (EFT - Continuous Employment Survey - BO, 2024), while in Uruguay this proportion stands at 28 .5 per cent. (EFT-Continuous Household Survey-UR 2024). At the same time, the aggregate hides opposing internal movements which, when offset, give an appearance of stability to dynamic and

contradictory realities. For example, between 2009 and 2023, the number of informal workers in the three largest countries in the region (Brazil, Mexico and Argentina) fell slightly from 77.2 million to 76.6 million. However, this aggregate figure hides the fact that while Mexico has increased the number of informal workers during this period by approximately 6 million, Brazil has reduced it by 8 million.

Based on the econometric models produced by the ILO and the resulting estimates[29], we can see that Latin America and the Caribbean show slightly lower figures than the world as a whole and are very close to the aggregate of upper-middle-income countries, with informal employment accounting for 51.7 per cent of total employment in 2024 (figure 1). Another noteworthy aspect is the stability of this proportion in the aggregate of countries over the last twenty years, where the curves show great stability; although in the case of Latin America and the Caribbean, it started at 58.5 per cent in 2004, representing a decrease of almost 7 percentage points in 20 years. This reduction in the informality rate is the second largest among the different aggregates, behind only countries with high median income. figure 1 shows a comparison of Latin America and the Caribbean with other regions of the world: African countries, with the highest incidence of informality in total employment (83.1 per cent for 2024); Asia and the Pacific (65.5 per cent); BRICS emerging countries (65.5 per cent), and far behind the G7 (10.1 per cent), North America, except for Mexico (with 8.7 per cent) and the EU-27 countries, with an incidence of informality below 7 per cent. In addition to the large differences in proportions, it is also important to note their stability over the period.

Figure 1. Proportion of informal employment in total employment, Latin America and the Caribbean, compared to other country aggregates. 2004-2025



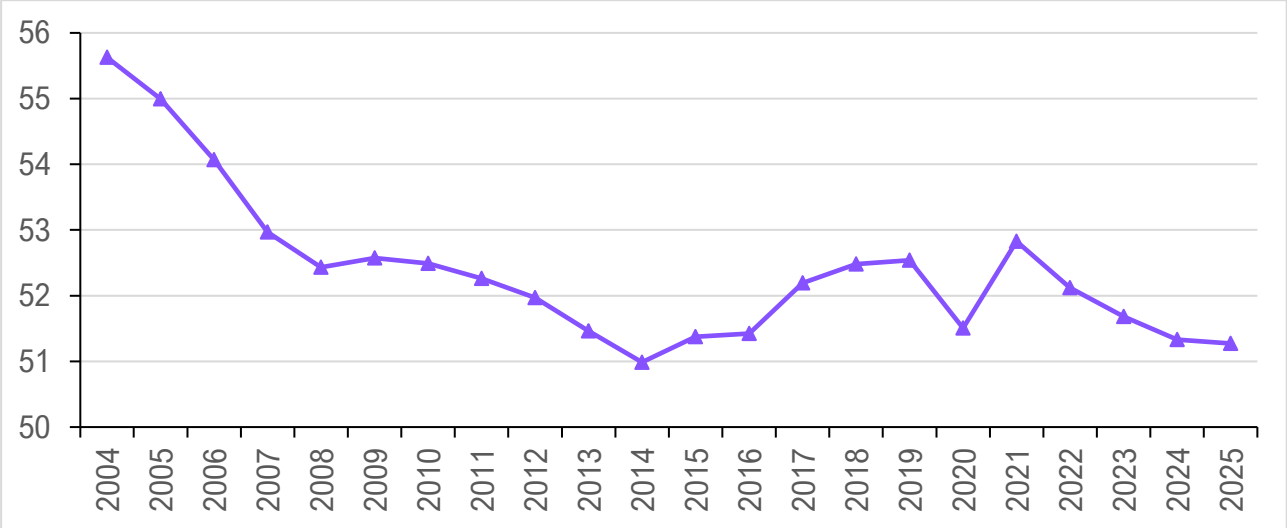
Source: ILO - Modelled estimates. SDG indicator 8.3. 1. Proportion of informal employment in total employment (%). Own elaboration.

This contextualization allows us to see the place occupied by Latin America and the Caribbean in the world in terms of the incidence of informality, which we can summarise as an incidence

that is average or close to the global aggregate, specifically 6 percentage points lower: 51.7 per cent in Latin America and the Caribbean, compared to 57.8 per cent globally (2024). The informal economy represents a very significant part of the labour market in most countries and plays a fundamental role in production, job creation and income generation, especially for the most vulnerable groups. Hence the importance of approaching the phenomenon with caution, given the sensitivity and complexity of the issue, as we are dealing with the sources of income for large segments of the population. In these contexts, the alternative to informality is often hunger. The challenge is to break this dilemma. These approaches, which we call restrictive and repressive, are characteristic of a Western ethnocentric perspective that seeks to extrapolate its minority reality (G7, North America, EU) and its perspective on combating the underground economy to the entire planet. Efforts to reduce informality rates and develop labour formalization policies, in line with those proposed by the ILO (FORLAC and FORLAC 2.0), are therefore relevant, as labour informality exposes workers to greater vulnerability and precariousness, has a strong negative impact on income adequacy, occupational safety and health, and working conditions in general, and is opposed to the decent work paradigm by depriving workers of social and labour rights.

In Latin America and the Caribbean, there has been a reduction in informal employment over the last two decades. Between 2004 and 2014, the proportion of informal employment in total employment fell from 55. 6 per cent to 50.9 per cent, remaining at around that level for the following ten years. The last decade could be described as a "lost decade in terms of labour formalization" for the region (figure 2).

Figure 2. Proportion of informal employment in total employment, Latin America and the Caribbean, 2004-2025

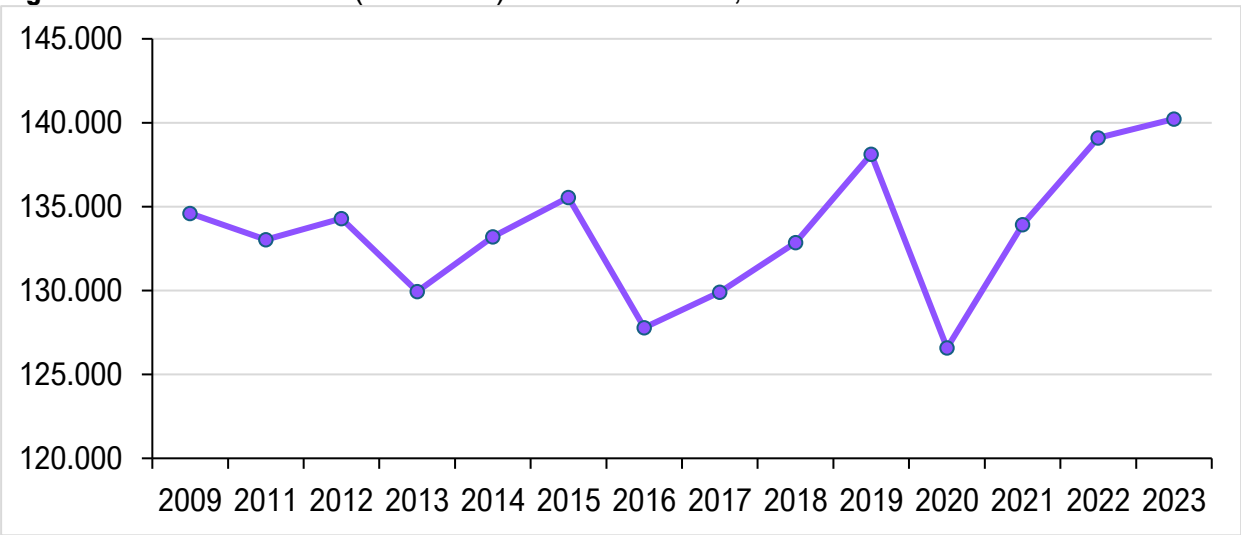


Source: ILO - Modelled estimates. SDG indicator 8.3.1 - Proportion of informal employment in total employment (per cent). Own elaboration.

In the decade from 2014 to 2024, there was an upturn in informal employment, with the exception of 2020, when the impact of COVID-19 on informality resulted in a slight decline of 1.1 per cent. However, by 2024, it had already reached pre-pandemic levels. Therefore, the

incidence of informal employment in relative terms has stagnated in the region over the last decade at around 52 per cent, becoming entrenched and one of the biggest labour problems in Latin America. Below, we will show how this stagnation in relative terms represents an increase in informal employment in absolute terms, given that overall employment in the region has also increased during this period.

Figure 3. Informal workers (thousands) in Latin America*, 2009-2023.



Source; ILO. Own elaboration.

Note: *América Latina: AR (urbano), BR, MX, COL, PE, VNZ, BO, EC, HO; CL, PA; SAL: Serie reconstruida: Cuando en un año no hay dato del país se toma el más próximo (al sumatorio habría que agregar los países con menos o. un millón de trabajadores/as informales: Uruguay 0.5 M en 2023, Costa Rica 0.8 M., Panamá 1.1 M: En total 2.4 M).

Annex 1 and Figure 3 show that, between 2009 and 2023, informal employment in the region increased by approximately 6 million workers, rising from 134.6 million to 140.2 million. If we add the data for Panama (1.1 million), Costa Rica (0.8 million) and Uruguay (0.5 million), the total number of informal workers rises to 142.6 million, which is a huge volume of informal employment.

Our calculations for the AM. LAT*. aggregates are consistent with those of the ILO, which, a decade ago when launching the FORLAC strategy for Latin America, highlighted that there were 127 million workers in informal employment and emphasised that informality constitutes a persistent problem and a significant obstacle to the region's social and economic progress. Table 1 show the aggregate calculation for 2013 estimate for the AM. LAT*. give us a very similar result (129.9 million).

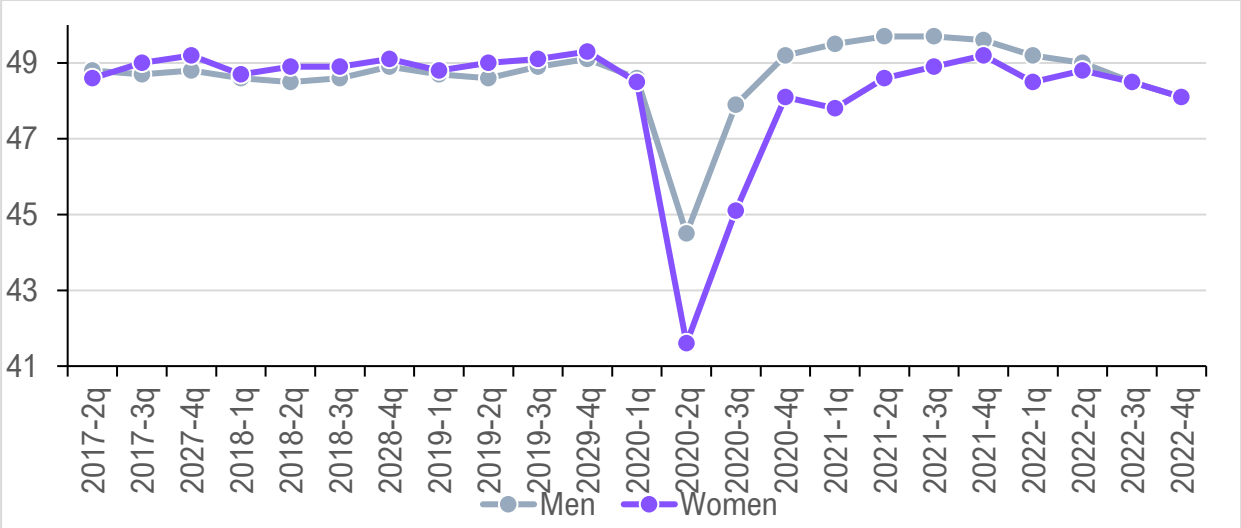
If we analyse the evolution of informality in Latin America (figure 3), two periods stand out. The first, between 2009 and 2016, oscillates around 133 million workers, reaching a minimum of 127.7 million in 2016; the second period, setting aside the effect of the 2020 pandemic, shows a positive trend, with an increase in the number of informal workers in the region of approximately 12.5 million by 2023, exceeding 140 million informal workers in Latin America.

Before delving into the country-level dynamics of each country, we will highlight characteristics

that have a greater incidence among informal workers in the region. The ILO reports in several publications that informality in Latin America continues to affect certain groups more severely, such as women and young people, and specific population segments, including those with lower educational attainment, workers in particular activities such as agriculture and construction, employees of smaller firms, and workers in rural areas compared with those in urban and semi-urban areas (ILO 2024).

According to the ILO's own data, the first of these assertions does not appear to be true. In relative terms, the incidence of informality among men and women in Latin America is similar; around 48–49 per cent of total employment is informal in both cases, and the curves intersect several times (figure 4). Since the pandemic, a gap has also opened up, as female informality declined more than male informality, and parity is only restored around the third quarter of 2022.

Figure 4. Informal employment rate, by sex, Latin America and the Caribbean, quarters 2017-I to 2022-IV



Source: SIALC, prepared by ILO

The incidence of informality in the region is similar between men and women[30]. This relative equality nonetheless translates into substantially larger absolute numbers of informal male workers, owing to the higher overall male employment; for example, Brazil has 21.8 million informal male workers compared with 14.9 million informal female workers, and Mexico has 19.7 million informal male workers compared with 13.5 million informal female workers (graphs 5 and 6).

The incidence of informality in the region is heterogeneous (table 1, figure 4), with rates stabilising over the past decade at around 80 per cent and 75 per cent of total employment in Bolivia and Peru respectively, while at the opposite extreme Chile and Uruguay register labour informality rates of approximately 25 per cent. The cases of Brazil and Mexico are particularly interesting, in addition to being the two giants of the region, and likewise in terms of informal employment with 37 million and 34 million informal workers respectively in 2024, they have exhibited divergent trends. Thus, whereas Brazil has substantially reduced the volume of informal employment, Mexico has seen an increase over the last two decades.

Figure 5. Informal Employment by sex. Brazil

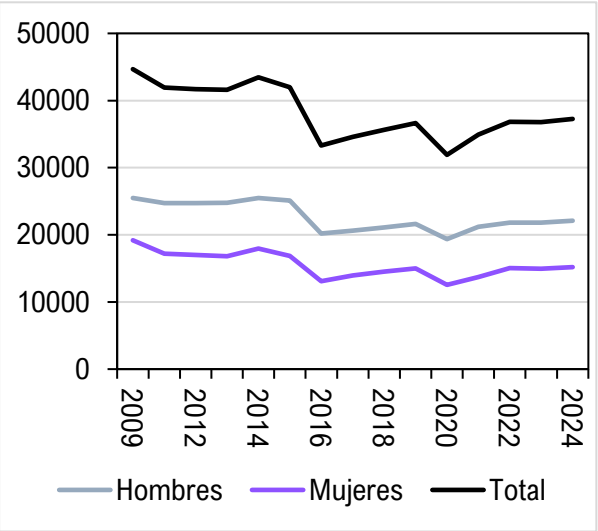
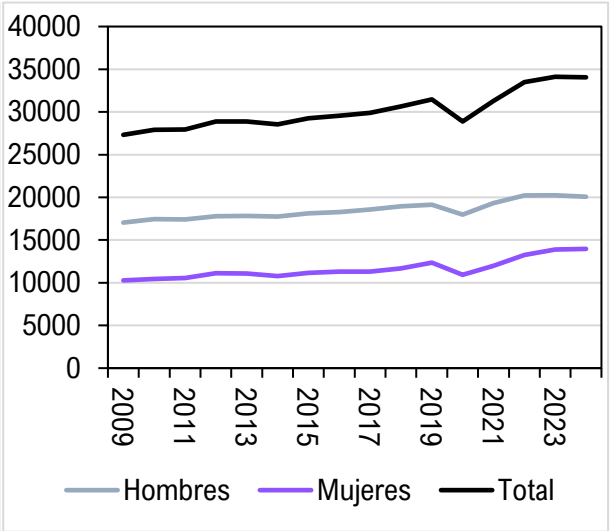


Figure 6. Informal Employment by sex. México



Source: ILO- Brazil: Pesquisa Nacional por Amostra de Domicílios Contínua. ILO-México. EFT - Encuesta Nacional de Ocupación y Empleo. Own elaboration

The literature identifies economic growth as the principal driver of informality reduction (ILO, 2024). However, in Brazil and Mexico —which experienced similar economic growth rates over the period— divergent trends are observed. Brazil grew at an average annual rate of 2.2 per cent (GDP annual growth, source: IBGE[31]) between 2003 and 2022; Mexico grew by 1.93 per cent between 2003 and 2023 (GDP annual growth, source: INEGI[32]). This differential of three-tenths of a percentage point cannot account for the fact that Brazil reduced informality by 8 million workers between 2009 and 2023, while Mexico increased it by approximately 7.5 million. Economic growth may be a necessary condition for reducing informality, but it is by no means sufficient; employment policies explicitly aimed at reducing labour informality, implemented in each country during each historical period, are essential.

A relevant aspect is that the reduction in labour informality in Brazil occurred between 2009 and 2016, during the first presidential term of Lula da Silva and the government of Dilma Rousseff[33], and that in recent years informality has risen slightly under the administrations of Michel Temer and Jair Bolsonaro (figure 5). It is also notable that the trajectory of labour informality for men and women in Brazil evolves in parallel. By contrast, the increase in labour informality in Mexico (figure 6) is sustained over time, interrupted only in 2020 by the pandemic, and the cumulative growth among women is substantially larger: of the 7.5 million additional informal workers recorded in the period 2002–2023, more than 5 million are women.

The evolution of informality in Colombia and Peru is characterised by high stability at around 12 million. A more detailed look revels growth in informal employment in Colombia between 2009 and 2012 o almost two millions (from 12 to 13.5 million), thereafter remaining stable over the last decade. In Peru the stability around 12 million informal workers is pronounced: the series begins in 2009 at 12.8 million and ends in 2024 at 12.5 million (graphs 7 and 8).

Figure 7. Informal Employment by sex. Colombia

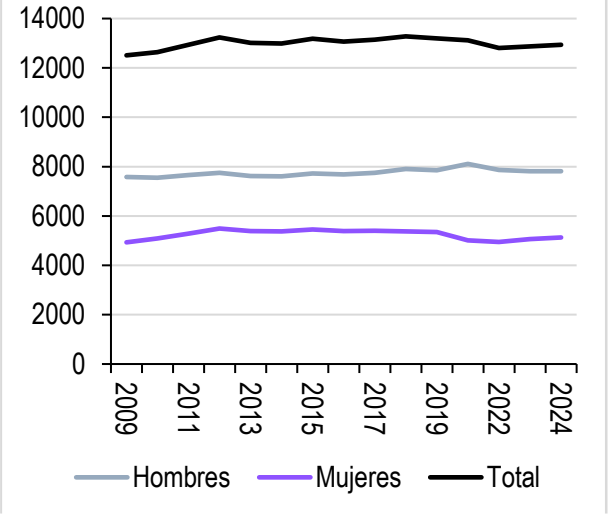
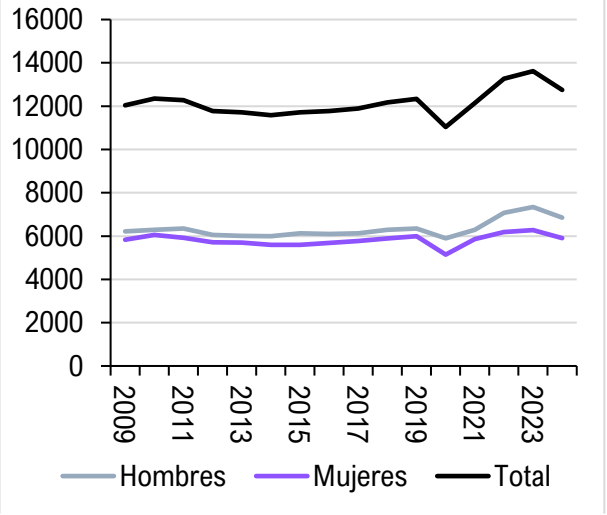


Figure 8. Informal Employment by sex. Peru



Source: ILO-Colombia- Gran Encuesta Integrada de Hogares. ILO-Perú. Encuesta Permanente de Empleo, Nacional. Own elaboration.

It should be noted that Peru has experienced a period of sustained economic growth in recent decades, which, according to the data, has not translated into a reduction in informality employment. The Banco Central Reserva de Peru (BCRP) reports an average growth rate of 4.4 per cent for the period 2002–2023; this growth has been more moderate in the most recent decade (2.3 per cent between 2014 and 2023). We observe that despite these periods of strong growth, informal employment has remained stable.

Figure 9. Informal Employment by sex. Argentina

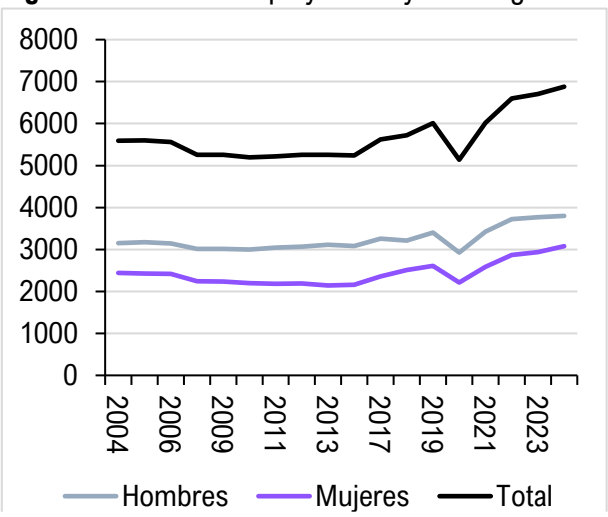
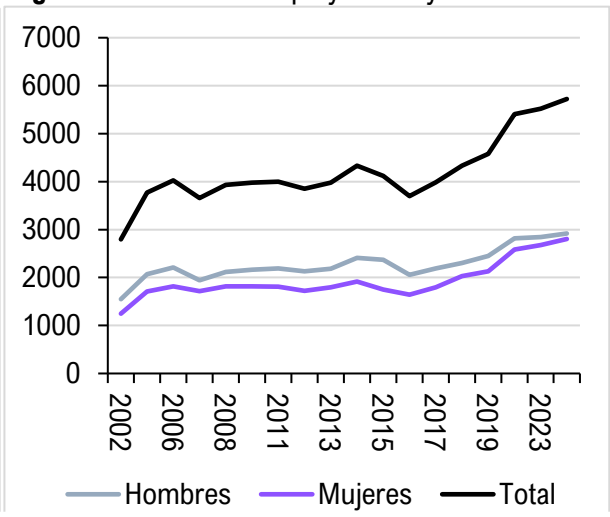


Figure 10. Informal Employment by sex. Bolivia



Source: ILO-Argentina- Encuesta Permanente de Hogares, Urbano. ILO-Bolivia. EFT-Encuesta Continua de Empleo. Own elaboration.

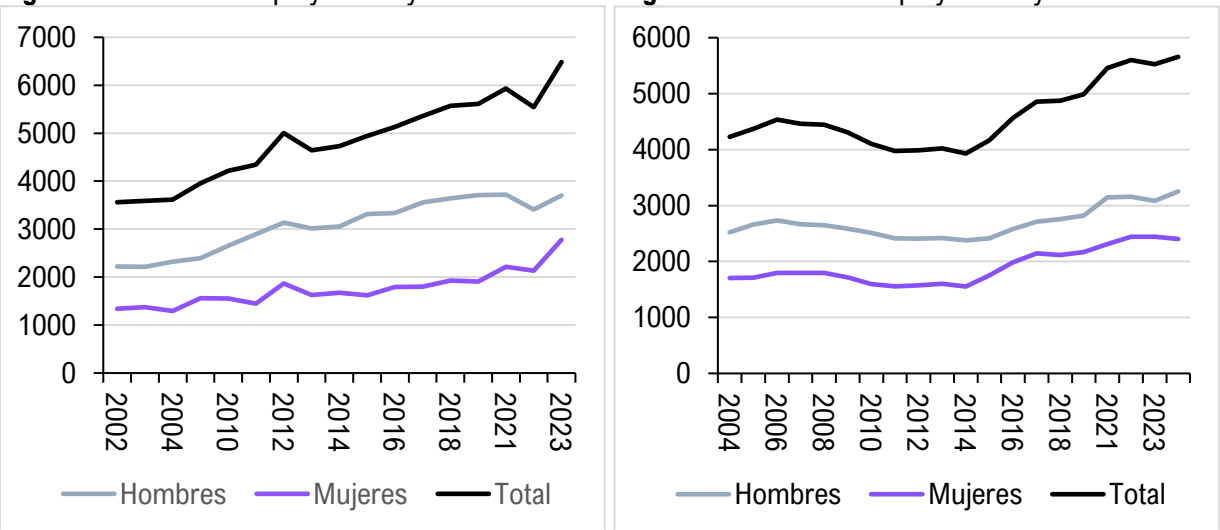
In the cases of Argentina and Bolivia, both countries have increased their numbers of informal workers over the last decade following a prolonged period of stability. Argentina maintained informality slightly above 5 million workers between 2008 and 2014 (the administrations of Néstor Kirchner and Cristina Fernández de Kirchner) and, from 2014 to 2024, saw volumes rise to 6.8 million (Figure 9). The period 2014–2016 coincides with the final term of Cristina Fernández de Kirchner, after which the governments of Mauricio Macri and Alberto Fernández

held office. It can be seen that during the two years of Javier Milei's government the number of informal workers has increased by 4 percentage points (0.3 million) from 6.5 million in 2022 to 6.8 million in 2024; if this trend continues, a substantial increase in informal employment in the country can be expected given the large-scale destruction of formal employment.

For its part, Bolivia estimates the number of informal workers at around 4 million until 2016; from that point it embarked on a trajectory of growth in informal employment, reaching 5.8 million in 2024 (figure 10). Apart from the interlude of the coup d'état —also accompanied by allegations of lawfare— between November 2019 and November 2020 during the administration of Jeanine Añez-, the country was governed first by Evo Morales (2006–2019) and subsequently by Luis Arce (2020–present), both of whom belong to the MAS-IPSP, although in the latter period they were at odds with each other and represented different currents within this political movement. It is noteworthy that Bolivia is the Latin American country that has experienced the highest growth in recent decades (an average annual GDP growth rate of 4.75 per cent over 2005–2019). This remarkable economic expansion has not translated into a reduction in the number of informal workers; on the contrary, formal and informal employment expanded concurrently.

In Guatemala, we observe steady long-term growth in the number of informal workers between 2002 and 2023, from 3.5 million to 6.5 million (figure 11); in other words, the volume of informal employment almost doubled over this period.

Figure11. Informal Employment by sex. Guatemala **Figure 12.** Informal Employment by sex. Ecuador



Source: ILO-Guatemala-Encuesta nacional de Ingresos y Gastos de los hogares. ILO-Ecuador. EFT-Encuesta Nacional de Empleo, Desempleo y Subempleo. Own elaboration.

Ecuador is a case of particular interest because it clearly illustrates the effects of an economic and labour policy focused on reducing informal employment and how progress in formalization can be rapidly reversed. In the period 2006–2015, under the government of Rafael Correa, the number of informal workers in Ecuador fell from 4.5 million to 3.9 million (see table 1 and figure 12). This decrease in absolute terms represents a dramatic reduction in relative terms. Thus,

the informality rate fell from 45.1 per cent in 2006 to 39.7 per cent in 2014[34] (INEC: ENEMDU). What followed — the final two years of Correa's mandate together with the presidencies of Lenín Moreno and Guillermo Lasso[35] — provides a clear example of how the progress achieved can be undone and the substantial reduction in the informality rate attained in 2006–2014 reversed. Since 2014, informality has skyrocketed in Ecuador, with an additional 1.6 million informal workers, reaching 5.6 million in 2024. In relative terms the situation is even more alarming given the severe destruction of formal employment that has accompanied the past decade, placing the informality rate at 55.7 per cent in 2023 (INEC: ENEMDU), 16 percentage points above the low recorded in 2014.

The next three countries are Honduras, El Salvador and Paraguay. Honduras exhibits a continuous upward trend in the number of informal workers, from 1.9 million in 2006 to 3.0 million in 2017[36]; thus, Honduras presents a profile similar to those of Mexico and Guatemala (table 1). By contrast, El Salvador shows stability in its volume of informal workers at around 1.9 million, with a modest increase of approximately 150,000 informal workers over the past 20 years. Paraguay's number of informal workers has remained broadly stable at around 2.3 million, although the notable recent development is a positive movement in informality, with a reduction of 150,000 informal workers over the past two years, from 2.4 million in 2021 to 2.16 million in 2023.

Figure 13. Informal Employment by sex. Chile*

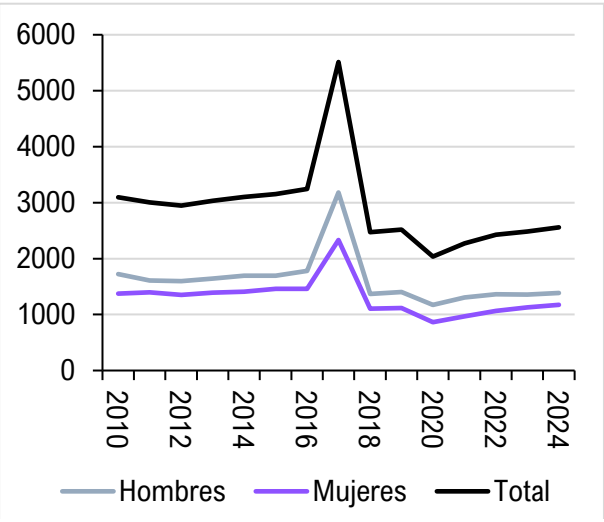
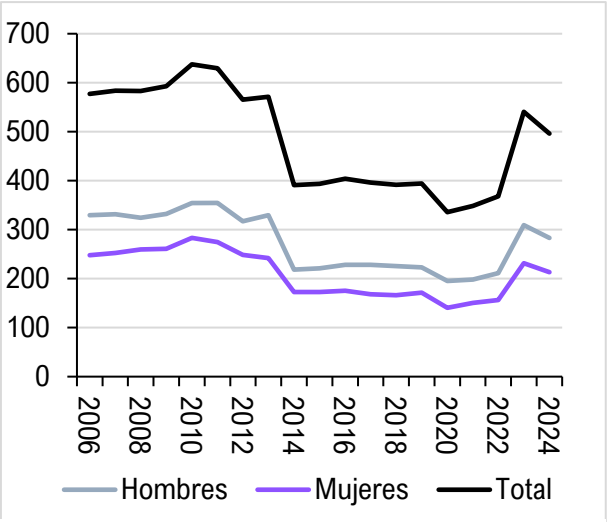


Figure 14. Informal Employment by sex. Uruguay



Source: ILO-Chile-Encuesta Suplementaria de Ingresos (2010-1016), Encuesta Nacional de Empleo (2017-2024). ILO-Uruguay. EFT- Encuesta Continua de Hogares. Own elaboration.

* In 2017 Chile implemented a methodological adjustment with the introduction of the Encuesta Nacional de Empleo, which replaced the Encuesta Suplementaria de Ingresos formerly used to estimate the population employed in the informal sector; this change accounts for the disruption in the trend observed in 2017, which was harmonised in subsequent year.

The two countries in the region with the lowest levels of informal employment in relative terms are Chile and Uruguay, and both have shown favourable reductions over the past decade. Chile's stock of informal workers was stable at around 3 million between 2010 and 2016, before falling by almost one million between 2016 and 2020 (figure 13); from that point, which coincides with

the COVID-19 pandemic, a rebound began that placed the number of informal workers at nearly 2.5 million in 2023. The most substantial progress in reducing informality appears to have occurred during Michelle Bachelet's second presidential term (2014–2018) and part of Sebastián Piñera's second term (2018–2022), who also assumes the rebound in the trend with the growth in the volume of informality in the last two years (2020–2022).

Uruguay, has a very small number of informal workers by regional standards, maintained a stable level of around 600,000 workers between 2006 and 2013, thereafter reducing to approximately 400,000 and remaining stable (figure 14). This substantial reduction occurred under the presidency of José Mujica and continued during Tabaré Vázquez's administration, both leaders of the Frente Amplio. It should be noted that, despite the sharp reduction in the country's informality statistics in a single year —2014, when figures fell from 571,000 to 391,000 informal workers— the ILO does not report methodological revisions to Uruguay's Encuesta Continua de Hogares (ECH) for that year, so the jump should not be attributed to a change in survey methodology. A methodological revision reported for 2022, producing a break in the time series that adjusts the 2023 figure to 541,000 informal workers. Regardless of the series discontinuity resulting from the 2022 methodological revision, this does not detract from Uruguay's good performance in containing informal employment, which remains the lowest in Latin America.

3. Conclusions

Based on the review of informal employment volumes in Latin America we may conclude that: a) labour informality exhibits persistent stability, suggesting an entrenchment of the phenomenon in the region; b) contrary to assertions by the ILO in its reports, labour informality is not a predominantly female phenomenon, at least in the region. Data on labour informality in Latin America do not show a higher incidence among women, in relative terms its incidence is similar for men and women, and in absolute terms that it is predominantly male; c) the principal advances in reducing labour informality in the region occurred in the first half of the 21st century, specifically between 2006 and 2015. The last decade can be described as a "lost decade" in terms of labour formalization, given that in light of the data, we consider the advances in formalization are modest compared with the enormous setbacks that have been observed.

Our analysis of ILO data shows that, if there were at least 137 million informal workers in the region in 2009, this volume fell to 130.4 million in 2016 and rose to 142.4 million by 2023; d) economic growth is not enough to reduce informality; it requires economic and labour policies explicitly aimed at labour formalization and the creation of formal employment. The divergent long- and medium-term trajectories of Brazil and Mexico are highly illustrative in this regard; e) the data suggest that reductions in labour informality and the success, albeit partial and limited, of formalization policies in Latin America usually occur in contexts that combine economic growth and progressive governments, of 21st-century socialism or left-wing social democracy,

with an explicit labour policy agenda of promoting labour formalization and expanding labour and social rights. Examples include Lula's first government in Brazil, Correa in Ecuador, Mujica in Uruguay, Bachelet in Chile, and, to some extent, the Kirchner administrations in Argentina and Evo Morales in Bolivia. Exceptions to this pattern would include the governments of López Obrador in Mexico and Luis Arce in Bolivia. At the same time, the data also indicate the devastating effect on informality of neoliberal governments, whose market-liberal agendas erode formal employment and increase labour informality across the region.

We believe that the ILO's perspective is accurate, as it is sensitive to the Latin American — and Global South — reality, where this phenomenon most severely affects the most unprotected and vulnerable populations; it links labour informality to poverty and inequality, being simultaneously a cause and consequence of low productivity and weak economic growth. The ILO departs from a Western ethnocentric, punitive view that treats informality primarily as a criminal matter focused on tax evasion, often under policies that curtail labour and productive activity and favour repressive and sanctioning measures. The ILO's work has been valuable in raising awareness, conceptualising informality in the region and harmonising statistics (objectives a, b and c), thereby enabling comparative analysis with a reasonable degree of reliability. Nevertheless, since the launch of its initiative in 2013, progress in labour formalization in the region has been meagre; on the contrary, in the period from 2013 to the present, informal employment has remained more or less constant in relative terms compared to total employment and has grown in absolute terms by several million workers[37].

In 2024 the ILO promoted the FORLAC 2.0 initiative as a formalization strategy for Latin America for the period 2024–2030[38]. One of the novel elements include the development of an integrated policy framework that combines four types of intervention: 1) productive development policies; 2) employment and skills development policies; 3) social protection policies; and 4) policies for the recognition and enforcement of labour rights and incentives for formalization. The diagnosis of institutional failures that underlie the stagnation of informality in Latin America is accurate, identifying what it terms the "informality trap" as the principal obstacle in the region to progress towards Decent Work and social justice, a perspective with which we concur. The initiative also addresses the digital transition as both a challenge and an opportunity for formalization a dimension in which a critical stance is necessary with regard to the adverse effects of digitalization on informality. This point is significant because the ILO explicitly recognizes the challenges posed by societal digitalization and the effects of the GIG economy. It also highlights that informality has increased during the COVID-19 recovery and that new forms of informal employment have emerged in this process, and that informality disproportionately affects particular groups in the region, such as migrants, certain ethnic groups and young people.

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[26] Households that produce goods exclusively for their own final consumption and households that employ paid domestic workers.

[27]https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@stat/documents/normativeinstrument/wcms_087544.pdf

[28]https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@stat/documents/meetingdocument/wcms_894213.pdf

[29] https://ilostat.ilo.org/es/topics/informality/

[30] Women have a significantly lower rate of informal employment than men in Brazil, Colombia, the Dominican Republic, Uruguay and Argentina in urban areas.

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[34] https://www.ecuadorencifras.gob.ec/empleo-en-el-sector-informal/

[35] The series does not cover Noboa's current term, but everything points to the negative trend continuing

[36] 2017 was the last year of the series offered by INE, Instituto Nacional de Estadística Honduras in the Permanent Multi-Purpose Household Survey, complied by ILO

[37] This assessment of the limited scope of the FORLAC strategy is shared to some extend by the ILO, which highlights mainly internal achievements: "FORLAC was implemented in the period 2013-2017. The programme's achievements include; its contribution to the design of the ILO's global formalization strategy; the strengthening of the Office's technical teams; the promotion of social dialogue and advocacy in public policies; and the increase in the exchange of experiences and mutual learning between countries and ILO offices themselves" (ILO FORLAC 2.0)

[38] https://www.ilo.org/es/publications/estrategia-de-formalizacion-para-america-latina-y-el-caribe-2024-2030

Annex 1. Informal workers in Latin America, 1999-2023 (thousands)

Year/ country	BRASIL	MÉXICO	COLOM-BIA	PERÚ	VENE-ZUELA	ARGEN-TINA	GUATE-MALA	BOLIVIA	ECUA-DOR	HONDU-RAS	NICARA-GUA	CHILE	PARAGU AY	EL SAL-VADOR	**AM. LAT***
1999								3152,4							
2000								2433,5							
2001								2677,2	4298,8						
2002		25726,6					3561,4	2796,9							
2003		26354,3					3587,8		3958,8						
2004		26879		12540,2		5555,6	3612,9		4226,7						
2005				11499,2		5568,8		3773,9	4369,1						
2006				11729,8		5527,2	3955,7	4023,1	4533,3	1921,2					
2007			11355,4	11804,7				3655	4463,1	1909,1					
2008		26422,5	11550,1	12073,9		5213,3		3933,9	4446,2	2259,6			2016,5		
2009	44670	27319,3	12509	12032,8		5215,5		3976,8	4305,4	2347,6			2191,4		134601,7
2010		27914,2	12643,7	12342,8		5152	4214,5		4104,1	2500,2		3094,5	2155,2		
2011	41908	27957,5	12941,7	12270		5176,5	4342,5	3997,9	3973,2	2545,1		3005,6	2181,1		133023,9
2012	41699	28894,3	13234,5	11775,9		5222,9	5005,4	3854,4	3984,4	2615,8	2385,9	2946,9	2340,3		134298,2
2013	41615	28898,2	13013,2	11708,7		5226,7	4643,6	3978	4018,1	2763,5		3031,1	2283,4		129942,8
2014	43444	28538,2	12989,8	11586,9		5214,3	4730,7	4330,9	3929,6	2618,2		3099,9	2229,3	1833,5	133207,1
2015	41960	29258,5	13185,2	11717,4			4941,5	4119,3	4163,1	2810,6		3153,1	2299,8	1841,6	135555,9
2016	33298	29546,9	13064,8	11776,9			5128,2	3699,2	4562,1	2805,1		3243,1	2253,5	1893,5	127781
2017	34567	29904,4	13138,1	11896,2	8505,4	5617,9	5357,5	3986,7	4855,6	3029,6			2249,8	1930,8	129898,6
2018	35625	30630,8	13278,1	12178,8		5723,2	5571,5	4330,4	4871,1			2473,3	2328	1927,5	132858,9
2019	36629	31464	13201,4	12338,7		6010,7	5611,9	4581,7	4984,3			2520,4	2333,4	2010,5	138127
2020	31909	28307,5		11038		5138,1						2036,3		1881,5	126578,1
2021	34903	30417,9	13117,1	12146,3		6015,8	5934,4		5454			2274,5	2398,7	1907,6	133933,5
2022	36851	32445,9	12811,8	13174,2		6594,7	5543	5442,8	5598			2428,3	2365,2	1929,5	139105,2
2023	36769	33156,9	12876,8	12613,4		6705,9	6483,6	5559	5526,4			2486,5	2165,3	1959,4	140223,2

Sources: *AM LAT: Reconstructed series: When data for a country is unavailable, the closest available data is used (to this data, countries with fewer than or approximately one million informal workers should be added: Uruguay 0.5M in 2023, Costa Rica 0.8M, Panama 1.1M). Informal employment by sex. Argentina: EFT - Permanent Household Survey, Urban; Brazil: EH - Continuous National Household Sample Survey; Mexico: EFT - National Survey of Occupation and Employment; Colombia: EFT - Great Integrated Household Survey; Peru: EFT - Permanent Employment Survey, National; Venezuela: EFT - Household Sample Survey; Bolivia: EFT - Continuous Employment Survey; Ecuador: EFT - National Survey of Employment, Unemployment and Underemployment ENEMDU; and Chile: EFT - National Employment Survey.

YOUTH AND LABOR INFORMALITY: A COMPARATIVE STUDY OF ARGENTINA, GERMANY, ITALY, SPAIN, AND POLAND

By Ianina Tuñón, Valentina González Sisto and Nazarena Bauso[39]

Summary

This study compares precarious youth employment in Argentina and four European countries (Germany, Spain, Italy, and Poland), identifying two distinct models: structural informality in Argentina, characterized by widespread lack of social protection, and "institutionalized" precariousness in Europe, based on temporary contracts and minijobs. Methodologically, the research is based on the analysis of microdata from the EPH-INDEC survey for Argentina and the EU-SILC database for the European countries.

The results reveal that cohabitation with a partner amplifies gender inequalities, negatively impacting women's labor market participation. Furthermore, while higher education is key to accessing quality jobs, its equalizing potential is limited due to the strong influence of social origin, particularly in Argentina, where a marked intergenerational reproduction of inequality is observed. Finally, the study confirms the determining role of the productive structure, as young people in micro and small enterprises face a systematic wage penalty, regardless of their individual characteristics.

Keywords: informal employment; prolonged youth; socioeconomic origin.

JEL Code: J13, J16, J21, J24, J46, O15

1. Introduction

The integration of young people into the labor market represents a key factor in contemporary inequality gaps. Numerous studies have documented that this group faces trajectories marked by low-quality jobs, characterized by contractual instability, lack of social protection, and low income, which constitutes a process of integration into the labor market that is characterized by precariousness (Longo & Busso, 2017; Stuth & Jahn, 2019; Thern et al., 2023). Young people are particularly vulnerable due to their lower experience, their initial position in the labor cycle, and the greater difficulties they face in entering the workforce in contexts of high job competition.

This precariousness takes different forms according to the productive structure, welfare systems, and historical trajectories of each society. Latin America and Europe provide contrasting examples: in the former, informal employment is the predominant feature; in the latter, the characteristic feature is the expansion of non-standard forms of employment within formalized markets.

Young people can adopt these non-standard forms of employment to gain flexibility, experience, and balance work and studies (ILO, 2016).

The configuration of precarious employment varies by country. In Germany, the expansion of minijobs constitutes new forms of instability; in Spain and Italy, the high rate of temporary youth employment prevents the consolidation of stable career paths; in Poland, labor market flexibility has expanded atypical contracts. Argentina stands out for its high proportion of workers without social security coverage, although young Europeans also experience fragmented career trajectories.

This study aims to comparatively analyze how precarious youth employment acts as an obstacle to autonomy and reinforces gender and social inequalities in structurally different contexts. It considers various indicators of precarious employment, analyzing participation in non-standard jobs, in the micro-informal sector—associated with low productivity and a lack of social security coverage (ECLAC, 2024)—and low incomes. These employment patterns prolong economic dependence and delay emancipation, shaping what the literature conceptualizes as prolonged youth (Bynner, 2005; Moreno Mínguez, 2012; Furstenberg, 2010; Navarrete & Roman, 2019).

Extensive literature exists on the main drivers of inequality in the labor market: sex and social origin. Gender gaps in participation, job quality, and sectoral segmentation persist, placing young women in more vulnerable positions (Rubery, 2013; Torns & Recio, 2012; Binder, 2024). The literature on marriage premiums studies wage differentials favoring married men and penalties for women (Gangl et al., 2009; Kleven et al., 2019; Jiménez-García & Cascales, 2025).

Regarding social origin, in line with the Bourdieuian tradition on social reproduction (Bourdieu, 1986), educational returns cannot be understood independently of the economic, cultural, and social capital of families of origin. This perspective continues in the literature on inequality of opportunity (Roemer and Trannoy, 2015; Terschuur, 2023), which empirically formalizes how family circumstances condition the capacity of education to generate social mobility. In Latin America, socioeconomic level determines youth employment trajectories (Gasparini & Tornarolli, 2009; Binder, 2024). In Europe, between 38 per cent and 74 per cent of the inequality in years of education can be attributed to family circumstances (Terschuur, 2023).

This study seeks to analyze youth precariousness in structurally different contexts, considering the forms of work it adopts and the intersection between structural factors of origin and individual factors. Special attention is paid to the role of cohabitation with a partner as a possible reinforcer of gender inequalities, and to the role of education in relation to the social stratum of origin.

2. Methodology

The analysis is based on a comparative strategy that seeks to establish a dialogue between the experiences of youth labor market integration in Argentina and in four European countries—Spain, Italy, Germany, and Poland—selected for their contrasting historical trajectories and welfare systems.

The study uses data from representative household surveys. For Argentina, the Permanent Household Survey of the National Institute of Statistics and Censuses (EPH-INDEC, 2023) is used, which is designed to periodically assess the living conditions and labor market of the urban population. In the case of the European countries, the data comes from the European Union Income and Living Conditions Survey (EU-SILC, 2023), which includes a section on occupational and economic-labor indicators, including income level, type of occupation, sector of activity, and tax status. To ensure comparability, databases are harmonized and indicators of job insecurity are constructed to reflect the diverse forms of informality and precariousness in each context.

From these sources, three indicators of job quality were constructed:

- Non-standard employment[40], which encompasses occupations outside the classic pattern of salaried, permanent, full-time employment with social security coverage, including temporary contracts, part-time jobs, subcontracting arrangements, and certain self-employed work.
- The micro-informal sector[41], which more accurately captures forms of labor market integration with low productivity and limited social protection, such as microenterprise employees, microenterprise owners, and non-professional self-employed workers.
- Low income, measured through hourly wages comparable to purchasing power parity (PPP-USD).

The independent and control variables incorporated were sex, cohabitation status (Europe) and marital status (Argentina), educational attainment, age, and family per capita income tertile, depending on the specific analysis. The samples of the population under analysis (employed young people aged 18 to 34) comprise 6,455 cases in Germany, 1,555 in Poland, 3,197 in Italy, 4,148 in Spain, and 9,991 in Argentina.

Since one of the research objectives is to study the inequalities introduced by the social context in educational returns, the family per capita income tertile (excluding the young person's own income) is used as a proxy for social stratum. While this objective is often addressed by considering the parents' educational level, data limitations—such as the lack of complete information on parental education and missing cases in European databases—lead to the use of income tertiles in this study. This strategy, however, restricts this particular analysis to the universe of employed young people aged 18 to 34 living with their parents. This represents 21.7

per cent of the study population in Germany, 33.7 per cent in Poland, 51.4 per cent in Italy, 47.5 per cent in Spain, and 39.4 per cent in Argentina.

The analytical approach combined logistic regression models to estimate the probability of employment in non-standard jobs and the micro-informal sector with linear regression models to assess the determinants of hourly income.

The study population comprises young people between 18 and 34 years of age, a range that corresponds to the notion of prolonged youth documented by the sociology of youth and contemporary demography (Bynner, 2005). The analysis is limited to urban regions, considering only medium- to high-urban areas in European countries to ensure comparability with the coverage of the Argentine Permanent Household Survey (EPH).

3. Results

In line with the multidimensional analysis of youth job insecurity, the dynamics of non-standard employment in each country are first evaluated. Differences emerge, especially between Argentina and European countries, in the prevalence of these forms of employment. While Argentina has the highest incidence of non-standard employment, across all the countries analyzed, these forms of labor market integration are more concentrated among younger people (see Table 1).

Table 1. Percentage of non-standard employment by age group. As a percentage of the employed population aged 18 and over.

Age group	Germany	Spain	Poland	Italy	Argentina
18-24	56.4	58.4	52.6	64.4	76.2
25-29	26.1	36.5	35.2	45.6	60.4
30-34	24.2	30.2	27.9	37.2	53.5
35-44	29.2	23.9	26.5	34.4	50.7
45-60	26.7	20.1	24.4	32.0	50.1
61+	32.1	20.6	39.7	40.3	59.6

Source: EPH-INDEC (2023) for Argentina & EU-SILC (2023) for Germany, Spain, Poland and Italy.

Spain, Italy, and Poland show similar levels of non-standard employment, with a composition marked by temporary contracts (see Table 2), reflecting dual labor markets: a portion of the workforce—especially young people and less experienced workers—accesses jobs with low stability, but generally formal. In Germany, non-standard employment has a lower incidence and is mainly concentrated in non-permanent contractual relationships associated with mini-jobs, combining some flexibility with high levels of formality and social security coverage. In contrast, in Argentina, non-standard employment is more widespread and multidimensional: in addition to the high proportion of part-time work, the absence of contracts and social security stands out, highlighting a structural precariousness where non-standard employment often also implies informality and lack of protection. Argentina has the highest level of social vulnerability among

young people, followed by Poland and Italy, with a rather marginal incidence in Germany and Spain. The results suggest a coexistence of flexible work arrangements with clearly disadvantageous ones, depending on the context.

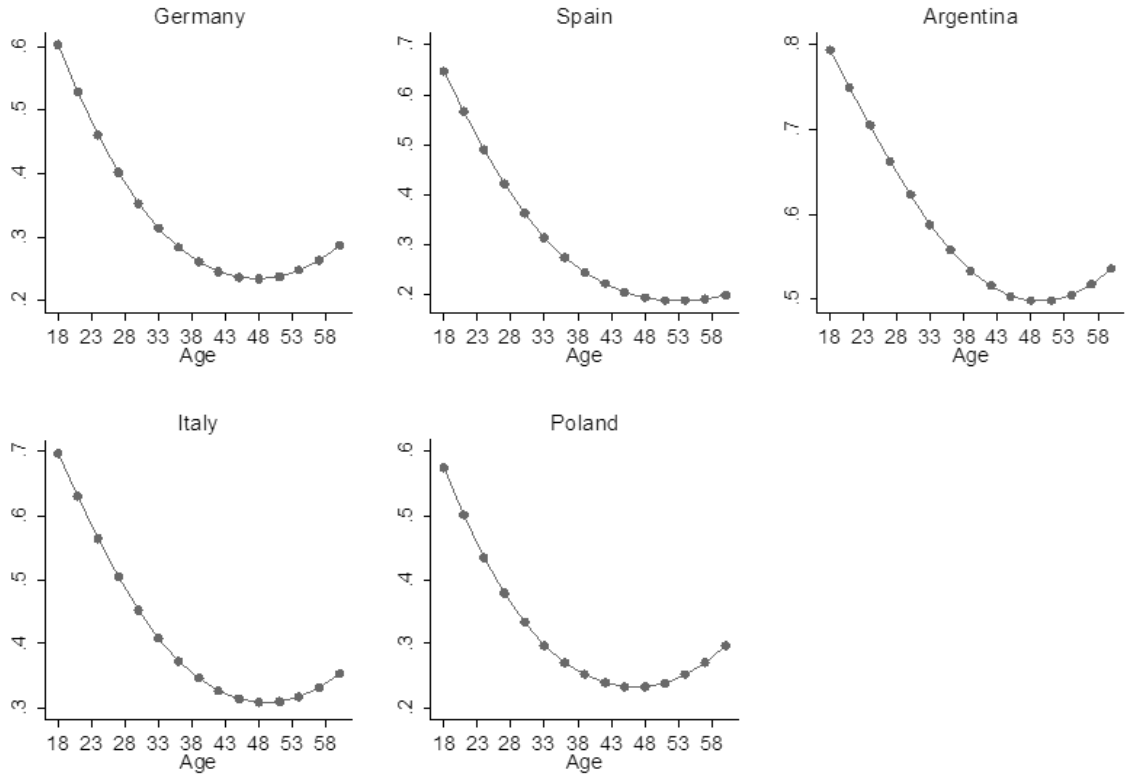
Table 2. Composition of non-standard employment by country, percentage incidence of each component. As a percentage of the employed youth population (employees and self-employed) aged 18 to 34.

Componente	Germany	Spain	Poland	Italy	Argentina
Part-time	38.5	53.8	14.4	56.5	61.2
Non-permanent or verbal contract	72.6*	69.43*	73.6*	68.21*	83.3*
No social security	1.0*	2.8*	32.1*	12.7*	78.0*

Source: EPH-INDEC (2023) for Argentina, and EU-SILC (2023) for Germany, Spain, Poland, and Italy. Percentage calculated over the total number of employees (contract type and social security coverage do not apply to the self-employed).

With age, labor trajectories become more consolidated, and more stable employment options emerge (see Figure 1).

Figure 1. Non-standard employment by age – Employed population (with controls)[1]



Source: EPH-INDEC (2023) for Argentina, and EU-SILC (2023) for Germany, Spain, Poland, and Italy.
Note: It is controlled by sex, marital status and educational level.

The marginal predictions in Figure 1 show that non-standard employment follows a U-shaped pattern throughout working life: it is primarily a youth phenomenon, with very high probabilities

in the early years, declining to a minimum around age 45–50, and showing a slight rebound in later years, confirming that career paths tend to stabilize over time.

Young people are more exposed to non-standard forms of work. However, not everyone is affected in the same way: identifying which subgroups face greater vulnerability, considering sociodemographic differences such as gender, family situation, or educational level, allows for a better understanding of who experiences greater job insecurity and how labor market conditions interact with personal characteristics to shape early career paths.

Social patterns of exposure to non-standard employment tend to be consistent across countries (see Table 3). Women participate in non-standard employment to a greater extent than men. In turn, groups with higher levels of education exhibit lower levels of non-standard employment, although the contrast between completing secondary school and completing tertiary or university education is variable and, in some cases, not very pronounced. Furthermore, consistent with the literature that finds differences in labor market participation between people with and without partners—frequently associated with a premium on marriage or cohabitation, particularly among men—the results show lower participation in non-standard employment among those living with a partner.

Table 3. Percentage of non-standard employment by individual characteristics. Employed youth aged 18 to 34.

		Germany	Spain	Poland	Italy	Argentina
Partnership status*	Lives with a partner	27,5	27,1	28,9	38,8	56,7
	Does not live with a partner	38,7	43,4	39,8	47,8	67
Sex	Man	28.9	31.4	31.9	36.5	54.9
	Woman	40.4	43.9	35.2	56.5	72.6
Educational attainment**	IS	65.8	41.4	67.5	54	71.8
	CS	28.2	45.3	39.2	44.8	60.9
	CTU	23.7	32.4	28.4	40.9	51.1
Social stratum based on household per capita income tercile.***	1st tertile	49.5	50.5	53.0	56.9	79.7
	2nd tertile	59.5	47.9	43.8	53.3	69.9
	3rd tertile	57.4	48.0	36.6	42.5	59.4

Source: EPH-INDEC (2023) for Argentina, and EU-SILC (2023) for Germany, Spain, Poland, and Italy.
Notes: * In the EU countries, the variable reflects current cohabitation with a partner. In Argentina, by contrast, it is based on marital status (married or in a consensual union), since cohabitation cannot be identified in the national source.
**IS: Up to incomplete secondary education; CS: Completed secondary education; CTU: Completed tertiary/university education.
***Self-income is deducted. Only young people living with their parents are considered.

Finally, the distribution of non-standard employment according to family per capita income tertile shows significant differences between countries. In Germany and Spain—where there is a higher level of social security—its incidence is somewhat independent of the income tertile, while in Argentina and Poland, and to a lesser extent in Italy, the incidence decreases as income increases. This could indicate that, in these contexts, non-standard employment tends to be

concentrated among young people from disadvantaged backgrounds, being more associated with precarious jobs than with voluntary flexible work arrangements.

The following section examines the factors that influence the entry of young people and young adults into non-standard employment.

Regarding cohabitation, the results show a sex-differentiated pattern. Among men, cohabiting with a partner is consistently associated with a lower probability of non-standard employment in all the countries analyzed. In contrast, the relationship is more heterogeneous among women: in Germany, Italy, and, to a lesser extent, Poland, cohabitation appears to be associated with greater exposure to non-standard employment, while in Spain and Argentina, such a marked penalty is not observed, although cohabitation continues to be associated with lower "gains" in terms of job stability compared to men. This suggests that starting a family or cohabiting tends to reinforce a traditional provider model, in which men are more likely to enter standard employment—full-time, with stable and more secure contracts—assuming the role of primary breadwinners. In contrast, for women, marriage or cohabitation is associated with a greater presence in part-time work, with temporary or more flexible contracts, which could facilitate balancing work and domestic life, albeit at the cost of less job security and protection.

Regarding the returns to education in terms of reducing non-standard labor market participation, the effect of attaining higher levels of education is neither clear nor consistent. While in all the countries considered, young people with the lowest levels of education (up to incomplete secondary education) are the most exposed to these non-standard forms of employment, the association between obtaining a higher degree and a reduction in these types of work is not consistent. Although a tertiary or university degree would be expected to reduce exposure to “atypical” jobs, its interpretation is not straightforward for young people, due to the aforementioned tension between the precariousness and flexibility of non-standard employment.

In this regard, it is relevant to analyze the determinants of the sector in which young people find employment. The micro-informal sector, which includes salaried workers and employers in microenterprises, as well as non-professional self-employed workers— allows for a more precise understanding of specific forms of precariousness, associated with less stability and social protection. This indicator offers a more direct approach to labor risk and makes it possible to examine how factors such as education, gender, and income influence the probability of entering this type of employment during the transition to the labor market.

The role of education becomes more evident as a structuring factor in the differences in terms of the productive characteristics of the sector in which young people find employment. Young people in the five countries considered who have only attained incomplete secondary education are the most exposed to employment in micro-informal sectors, followed by those who completed secondary education. Having a higher education degree, on the other hand, improves the likelihood of accessing more dynamic sectors with better working conditions, a pattern that

remains consistent despite differences in labor market structures between countries.

In contrast, the partnership status does not appear to be such a significant determinant. In the case of micro-informal employment, the patterns according to cohabitation are similar for men and women: living with a partner does not systematically alter the probability of working in this type of business, unlike what occurs with employment in non-standard forms. Instead, employment in microenterprises seems to be more determined by the level of human capital and less by intra-family negotiations regarding time and roles.

Turning to the analysis of hourly income, the existence of educational returns is once again clear. In the five countries considered, the most disadvantaged young people are those who attained the lowest level of education, followed by those who completed secondary school, who in all cases experience income penalties compared to the group with higher levels of education. For their part, in general there is an increase in wages associated with age (less clear in the case of Spain and Poland), although with some evidence of diminishing marginal returns.

In turn, a direct relationship is found between workplace size and income, showing that working in small companies is associated with lower wages. This association aligns with evidence on the wage-size premium, according to which larger companies tend to offer better pay due to their greater productivity, negotiating power, and structural conditions that differentiate them from smaller establishments.

The analysis of the differential impact of cohabitation on men's and women's income yields interesting results. First, for men, cohabiting with a partner is associated with increased income in all countries, with salary premiums ranging from 8 per cent to 13 per cent, being higher in Spain (+13.5 per cent) and Germany (+11.9 per cent).

The positive association between marriage and male hourly income has been documented in the literature. It may stem from changes in behavior and productivity, market signalling, or selection. This study confirms this pattern, without implying full causality, although it does show a trend consistent with the literature.

And how does cohabitation affect women? In Italy and Argentina, cohabitation does not appear to have a different impact on women and men, as it is linked to similar income increases for both. In contrast, Germany, Spain, and Poland are the countries where the difference between cohabitation and gender is most evident. In all three cases, cohabitation is associated with salary increases for men, while for women the effect is close to zero in Germany (+0.5 per cent) and negative in Spain (-4 per cent) and Poland (-5 per cent).

In these countries, the gender pay gaps among those who do not cohabit are smaller, suggesting that a significant portion of gender inequality is linked to having a partner and sharing a home. In Germany and Spain, the differences within the cohabiting group reach around 16 per cent and 20 per cent, respectively, compared to smaller gaps—around 6 per cent—among non-cohabiting individuals. In Poland, however, no significant gap is observed among non-cohabiting

individuals, but a difference of nearly 15 per cent does appear among those who do cohabit.

Part of the drop in income for women living with their partners can be explained by the employment penalty associated with motherhood, widely documented in countries such as Germany and Spain (Gangl & Ziefle, 2009; Bertelsmann Stiftung, 2021; Kleven et al. 2019, 2024; Molina & Montuenga, 2003; Jiménez-García & Cascales, 2025). Although this analysis examines the relationship between cohabitation and income, this situation often involves greater exposure to motherhood and family responsibilities, leading to career adjustments such as part-time work or a preference for more flexible jobs, thus reducing hourly earnings. Furthermore, factors like the incentives offered by joint tax systems such as *Ehegattensplitting* in Germany can not only reduce the female labor force participation but also encourage spouses to maintain unequal incomes to maximize tax benefits, generally at the expense of the second contributor, who is usually the woman.

When considering other factors that also structure labor inequalities, such as socioeconomic background, it becomes clear that this reveals different configurations depending on the context.

While the interactions between educational level and socioeconomic stratum of origin are not statistically significant —suggesting similar educational returns across strata once education is acquired—a relevant pattern emerges when comparing gross and net returns to education.

In all European countries considered except Germany, the "gross" educational return exceeds the net return when adjusted for socioeconomic stratum. This indicates that some of the wage increases associated with education are explained by the fact that people with higher levels of education predominantly come from households with a better socioeconomic position, thus accumulating advantages that transcend the educational effect per se.

The Argentine case illustrates this phenomenon more markedly. When controlling for socioeconomic stratum, the positive effect of completing secondary education on wages is reduced by 55.9 per cent, while for completing university-level tertiary education, the reduction is 25 per cent. These percentages suggest a greater impact of inequality of opportunity in Argentina compared to the European countries analyzed, possibly related to higher levels of structural inequality, lower social mobility, and specific characteristics of the local labor market.

The findings support the idea that the main influence of socioeconomic background operates through differentiated access to higher levels of education, a factor that—as has been demonstrated—significantly improves the quality of youth employment in terms of both income and formal labor market integration. However, once a certain level of education is reached, performance is relatively similar regardless of socioeconomic background. This implies that educational policies can be effective in improving working conditions, but they must be complemented by measures that guarantee equitable access to quality education for the most disadvantaged segments of society.

4. Conclusions

The comparative analysis of youth labor markets in Argentina, Germany, Spain, Italy, and Poland reveals two predominant models of precariousness. On the one hand, Argentina presents a model of structural informality characterized by widespread lack of social protection (78 per cent of young wage earners lack coverage) and multidimensional precariousness.

Table 4. Probability of non-standard employment by different factors (in odds ratios). Employed youth aged 18 to 34.

	1	2	3	4	5
VARIABLES	Germany	Spain	Poland †	Italy	Argentina
Does not live with a partner ©					
Lives with a partner	0.613***	0.469***	0.708**	0.582***	0.605***
	0,000	0,000	0,0425	0,000	0,000
Man ©					
Woman	1.477***	1.840***	1.101	1.856***	2.273***
	0,000	0,000	0,573	0,000	0,000
Woman#Lives with a partner	2.318***	1.562***	1.515*	2.023***	1.389***
	0,000	0,00374	0,0663	0,000	0,000
Age	0.897***	0.912***	0.910***	0.905***	0.917***
	0,000	0,000	0,000	0,000	0,000
CTU ©					
IS†	4.513***	1.311***	1.535***	1.517***	2.661***
(IS+CS)	0,000	0,00223	0,000	0,000	0,000
CS	0,967	1.321***		1.034	1.346***
	0,632	0,000		0,699	0,000
Constant	6.718***	6.592***	6.467***	10.68***	11.17***
	0,000	0,000	0,000	0,000	0,000
Observations	6,453	4,142	1,543	3,196	9,991

Source: EPH-INDEC (2023) for Argentina, and EU-SILC (2023) for Germany, Spain, Poland, and Italy. p-values in parentheses: *** p < 0.01, ** p < 0.05, * p < 0.1. © Reference category. IS: Up to incomplete secondary education; CS: Completed secondary education; CTU: Completed tertiary/university education. † IS and CS are considered together in the case of Poland due to the low number of observations.

On the other hand, the European countries exhibit a model of "institutionalized" precariousness where temporary contracts (Spain, Italy, Poland) and mini jobs (Germany) are the norm, keeping young people in low-quality jobs despite their formal status.

The study identifies common patterns that transcend these models. Cohabiting with a partner

acts as an amplifier of gender inequalities, associated with greater stability and income for men, but with adverse effects for women, who tend to increase their participation in non-standard jobs (particularly in Germany, Italy, and Poland) and experience wage reductions (−3.7 per cent in Spain and −5.1 per cent in Poland). Education confirms its role as the main individual factor for accessing better jobs, although its equalizing capacity is limited. Social origin strongly influences the returns to education, especially in Argentina, where controlling for social class reduces the wage benefit of secondary education by more than 55 per cent, demonstrating a marked intergenerational reproduction of inequality.

Furthermore, the productive structure determines the quality of youth employment. In all five countries, working in micro or small businesses entails a systematic wage penalty compared to large companies, regardless of individual characteristics.

Table 5. Probability of working in the micro-informal sector by different factors (in odds ratios). Employed youth aged 18 to 34.

	1	2	3	4	5
VARIABLES	Germany	Spain	Poland†	Italy	Argentina
Does not live with a partner ©					
Lives with a partner	1.048	0.742**	1.081	0,859	0.838***
	0,75	0,035	0,774	0,359	0,002
Man ©					
Woman	1.121	1.210**	1.894**	0,866	1.562***
	0,407	0,058	0,0117	0,249	0
Woman#Lives with a partner	0,882	1.161	0,875	1.376	1.152
	0,552	0,403	0,692	0,158	0,102
Age	1.020	1.016	0,99	1.008	0.959***
	0,119	0,139	0,657	0,558	0,000
CTU ©					
IS†	2.643***	2.937***	2.347***	3.241***	6.074***
(IS+CS)	0,000	0,000	0,000	0,000	0,000
CS	1.935***	2.598***		2.104***	3.603***
	0,000	0,000		0,000	0,000
Constant	0.0213***	0.0609***	0.0740***	0.0773***	0.709**
	0,000	0,000	0,000	0,000	0,0308
Observations	6,407	4,142	1,526	3,197	9,989

Source: EPH-INDEC (2023) for Argentina, and EU-SILC (2023) for Germany, Spain, Poland, and Italy. p-values in parentheses: *** p < 0.01, ** p < 0.05, * p < 0.1. © Reference category. IS: Up to incomplete secondary education; CS: Completed secondary education; CTU: Completed tertiary/university education. † IS and CS are considered together in the case of Poland due to the low number of observations.

Although the mechanisms of precariousness vary between Latin American informality and European flexibilization, their consequences are convergent: they delay economic autonomy and

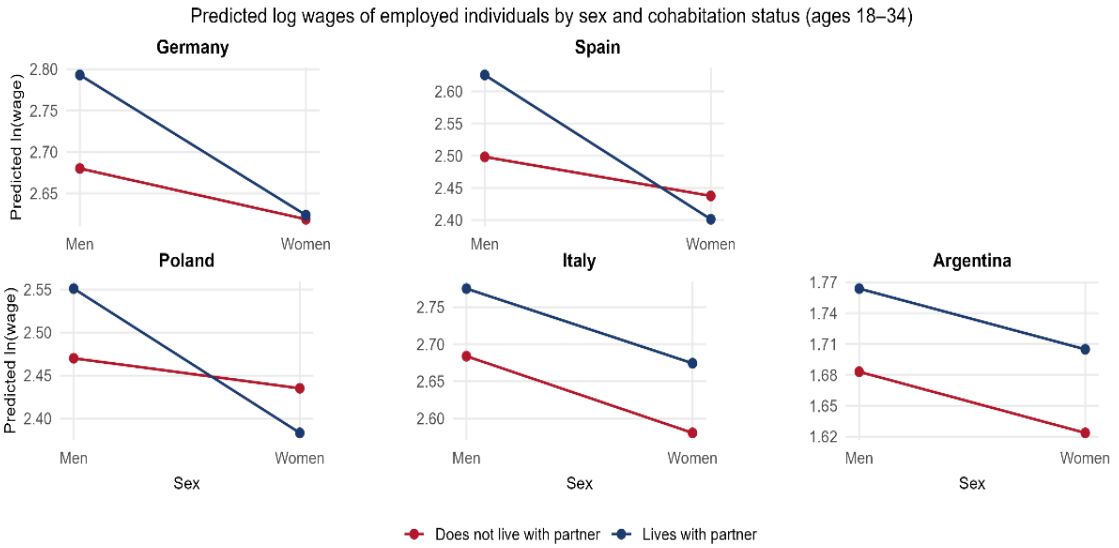
reproduce disadvantages associated with gender and social origin, challenging the notion of education as the great equalizer.

Table 6. Log of hourly earnings by different factors. Employed youth aged 18 to 34.

	1	2	3	4	5
VARIABLES	Germany	Spain	Poland†	Italy	Argentina
CTU ©					
IS †	-0.496***	-0.312***	-0.206***	-0.371***	-0.500***
(IS+CS)	0,000	0,000	0,000	0,000	0,000
CS	-0.153***	-0.191***		-0.144***	-0.333***
	0,000	0,000		0,000	0,000
Man ©					
Woman	-0.0614***	-0,0606	-0,0329	-0.103***	-0.0595***
	0,00348	0,141	0,487	0,000139	0,00228
Does not live with a partner ©					
Lives with a partner	0.113***	0.127***	0.0810*	0.0910***	0.0808***
	0,000	0,00011	0,094	0,00434	0
Woman#Lives with a partner	-0.108***	-0.164***	-0.133**	0,00283	0,000439
	0,000634	0,00943	0,0365	0,951	0,988
Age	0.294***	0,0504	0,0646	0.166***	0.0544***
	0,000	0,292	0,179	0,000	0,00629
Age^2	-0.0044***	-0,000524	-0,000962	-0.0025***	-0,000608
	0,000	0,549	0,27	0,000624	0,1
Large firm ©					
Microenterprise	-0.212***	-0.476***	-0.363***	-0.308***	-0.544***
	0,000	0,000	0,000	0,000	0,000
Small firm	-0.168***	-0.245***	-0.214***	-0.100***	-0.234***
	0,000	0,000	0,000	0,00223	0,000
Medium-sized firm	-0.123***	-0.131***	-0.0874**	-0,0232	-0.116***
	0,000	0,000	0,015	0,579	0,000
Constant	-1.764***	1.858***	1.683***	0,339	1.393***
	0,000	0,00445	0,00888	0,56	0,000
Observations	6,393	3,720	1,460	3,197	8,081
R-squared	0,304	0,079	0,102	0,122	0,213

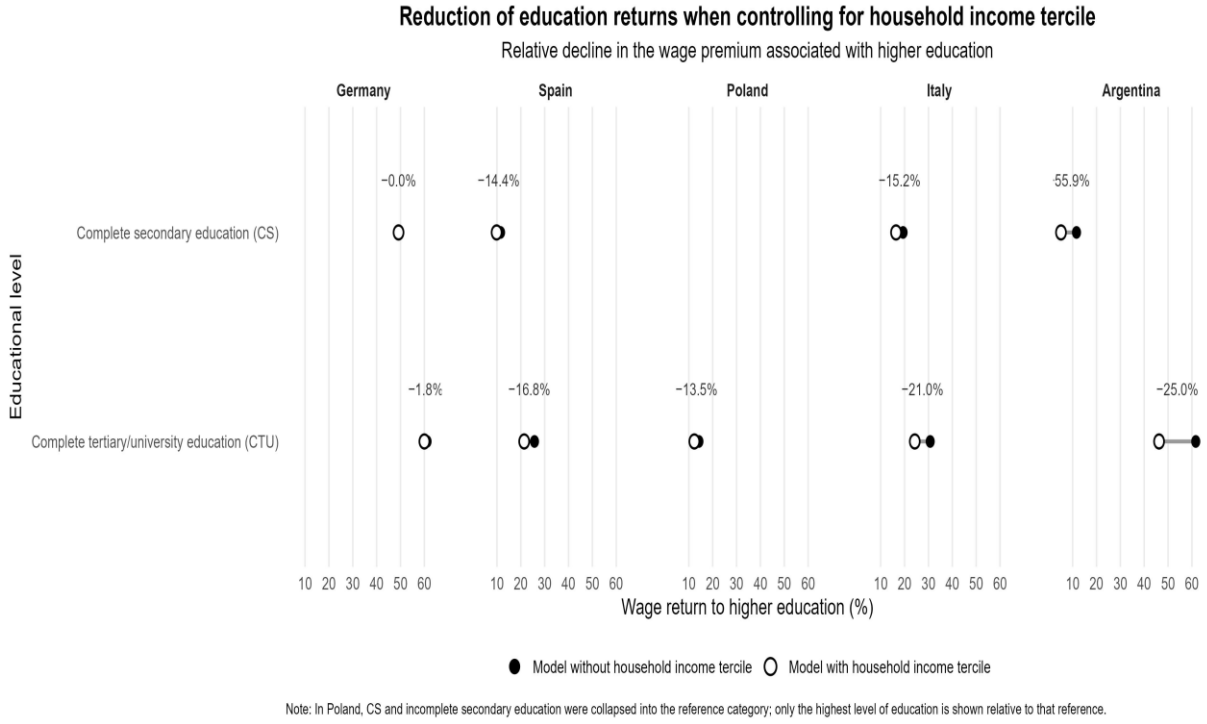
Source: EPH-INDEC (2023) for Argentina, and EU-SILC (2023) for Germany, Spain, Poland, and Italy. p-values in parentheses: *** p < 0.01, ** p < 0.05, * p < 0.1. © Reference category. IS: Up to incomplete secondary education; CS: Completed secondary education; CTU: Completed tertiary/university education. † IS and CS are considered together in the case of Poland due to the low number of observations.

Figure 2. Differences in average hourly earnings by sex and cohabitation status. Employed youth aged 18–34.



Source: EPH-INDEC (2023) for Argentina, and EU-SILC (2023) for Germany, Spain, Poland, and Italy.

Figure 3. Reduction of educational returns on income when controlling for socioeconomic status. Employed young people aged 18-34 living with their parents.



Source: EPH-INDEC (2023) for Argentina and EU-SILC (2023) for Germany, Spain, Poland, and Italy.

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[40] This refers to any form of employment that does not conform to the traditional pattern of salaried, full-time, permanent, and formal employment with access to social protection. This category includes temporary contracts, part-time work, informal employment arrangements, and part-time self-employment. Non-standard employment is useful for gauging the heterogeneity of youth employment trajectories, but it does not necessarily imply conditions of extreme precariousness, as in certain contexts it may reflect strategies of flexibility or combining work with studies (ILO, 2016; Kalleberg, 2018; Stuth & Jahn, 2019).

[41] This category includes microenterprise employees, microenterprise owners, and non-professional self-employed workers. Unlike non-standard employment, this category more accurately captures forms of job insecurity associated with low productivity, lower income, and a lack of social protection. It is a more precise indicator of labor vulnerability, as it reflects integration into structurally unprotected segments of the labor market (Tokman, 2007; Chen, 2012; Gasparini & Tornarolli, 2009).

LABOUR INFORMALITY: BETWEEN THE NORMATIVE AND THE STRUCTURAL

By Marina Gerolimetti, Pablo Granovsky and Fernando Larrosa[42]

Summary

In this paper, we are interested in addressing the problem of labour informality and the international discussion surrounding it, based on its development within the framework of the ILO. The central approach will aim to broaden the axes of the discussion, not only those centred on regulation and on a legal-normative perspective, but also on an economic and productive perspective. For this reason, we will refer to socio-productive development, the macroeconomic regime, productive structures, the labour market and how this is expressed in Latin America, particularly in the Argentinian case.

The main purpose of the paper is to characterise the global agenda on labour informality from the perspective of the ILO and from the Latin American and Argentinian problematic.

Keywords: Structural informality, Labour market, ILO.

JEL Codes: J46, O17, E24, O54, J08

1. Introduction

In this paper, we are interested in addressing the problem of labour informality and the international discussion surrounding it, based on its development within the framework of the ILO. The central approach will aim to broaden the axes of the discussion not only those centred on regulation and on a legal-normative perspective, but also on an economic and productive perspective. For this reason, we will refer to socio-productive development, the macroeconomic regime, productive structures, the labour market and how this is expressed in Latin America, particularly in the Argentinian case.

The main purpose of this paper is to characterise the global agenda on labour informality from the perspective of the ILO and from the Latin American and Argentinian problematic.

More specifically, we propose:

- to describe the conceptual perspective that we will adopt to address the discussion of this global agenda, integrating the tradition of labour sociology with heterodox perspectives in economics, to consider two dimensions: the macro dimension – both economic and political – and the structural dimension and the labour process;

- to present the main elements of the ILO document focused on the definitions and diagnoses of the problem of informality and the relevant policies;
- to characterise the discussion between approaches to informality centred on regulation and those focused on structural factors, based on a description of the reality of Latin America and, particularly, of Argentina.

2. Conceptual perspective for the analysis of informality, Economics and Labour Sociology

With regard to the general conceptual references, this paper starts from the tradition and the classical discussions of labour sociology, from the development of its different perspectives and from the current debates on the world of work. For this purpose, labour sociology, as the main research tradition of the study, is combined and placed in dialogue with heterodox economic perspectives. Among these traditions are included the classic and Marxist concept of labour, neo-institutionalism and neo-Keynesianism and their discussion with neoclassical economics; the developments of the sociology of the industrial model, and more recent approaches of segmentation theories, regulation theory, and neo-Schumpeterian, to mention some examples (Masello, Granovsky, 2017). It is from this perspective of economics and labour sociology that the problem of informality in contemporary societies and its demands on public policies is framed. From there, the analysis starts with the idea of development associated, in economic terms, with collective learning and the construction of national and sectoral productive capacities (Jacovkis, Masello, Granovsky and Oliva, 2021).

In the field of economics, the focus is placed on the different approaches to labour informality, from the perspective of the classics and unproductive labor to Keynesianism and its integration of monetary theory with activity and employment. More specifically, the perspective on informality was developed by Keith Hart and Hans Singer. The contribution of structuralist economists is highlighted, such as Prebisch and Pinto, as well as current structuralists such as Rapetti and Frenkel (Frenkel, Rapetti, 2012). In more specific terms, the perspective of Carbonetto and the theory of the urban informal sector are emphasised (Masello, 2025).

Macro political-economic analysis, structural analysis and labour processes

Based on the conceptual perspective outlined above and in dialogue with all these research traditions in economics and labour sociology, we identify two levels of analysis in order to account for the discussion of the ILO and of the normative and structuralist approaches to informality.

The first level of analysis starts from the macroeconomic and macro political dimension. Here, governance and the capacity to manage the main macroeconomic variables are considered, that is, the fiscal, exchange-rate and monetary situation, the level of economic activity, the evolution of incomes and prices, among other elements. In other words, the characterization of the

economic regime in force in a society. All these tools define the context in which, at a later stage, the in-depth study of productive structures and the labour market, labour processes, technological change, workers' qualifications, among other factors, is located (Ocampo, 2008).

Secondly, it is key to move towards the structural analysis of production and labour, considering productive units in their dynamics, identifying different socio-productive segments: the dynamic ones, characterized by the use of more modern physical technologies and processes, with highly qualified workers; the traditional segments, which have both technologies and medium-level qualifications; and the structurally informal segment, characterized by self-employment and, in micro and small business, unregistered employees (Jacovkis, Masello, Granovsky and Oliva, 2021).

Thus, these perspectives make possible to work with the ILO document in a precise manner, regarding the different segmentations of labour markets, in order, subsequently, to establish links with an in-depth analysis of the different processes and how they are expressed in the international debate.

3. The ILO perspective and the global discussion on informality

On the basis of the conceptual framework and the theoretical and research traditions that we adopt, the analysis of the document "Innovative approaches to tackling informality in favour of decent work" is of our interest, especially in relation to the Latin American problematic.

The macro-political and economic perspective of the ILO on informality

Changes in the world of work, the crisis of wage-based society, and capitalism fraught with uncertainty complicate the process of characterizing the problems of informal employment in our societies. Added to this is the absence of a defined international hegemony, with processes of deglobalization and without the creation of stable institutions at the global level. In this context, the ILO's global perspective helps to update the global agenda in terms of the conceptual, methodological, and public policy approach to employment and labour market issues, such as informal employment. This is due to the advantage of its tripartite structure and functioning at the international level, based on representatives of states, businesses, and workers.

Below, we summarise some institutional aspects of the ILO. Its central role in guiding the global regulation of employment problems is expressed in the fact that member states commit themselves to ratifying, within their national institutional frameworks, the conventions approved at the international level. For their part, in the case of recommendations, although they are not ratified, they are expressed in public employment policies and in labour legislation.

For functioning, the ILO has three institutional bodies:

- the International Labour Office, which has permanent operation in all aspects of day-to-day management that concern the ILO, acting as its permanent secretariat;

- the Governing Body (also tripartite), which meets three times a year to prepare the annual conference;
- the International Labour Conference, which is the annual Assembly that adopts the resolutions, that is, the orientations of ILO policies, under two modalities: conventions (binding) and recommendations (non-binding).

In general terms, the ILO includes within informality all economic activities insufficiently covered by protections, regulations and legal institutional frameworks (not illicit) and proposes the formalization as a central strategy, this transition to the formalization as the key axis of public policies. For this reason, there are three central objectives:

i. to facilitate the transition;

ii. to promote the creation of formal enterprises and jobs;

iii. to prevent the informalization of formal employment.

Following the analysis at the macro-political and economic level, the document points out certain characteristics that contribute to the extension of the phenomenon of informality, such as weak institutions in terms of economic management, the lack of coordination of macroeconomic and intersectoral policies and across different levels of government, and limitations in the very capacity to control the main economic variables. All these are factors that hinder the reduction of informality. At the political level, the difficulties in achieving institutionalized social dialogue with the main political actors and actors from the world of production and work are highlighted. These difficulties increase with the lack of representation and access to social dialogue of workers and productive units of the informal economy.

Advancing towards the construction of a more favourable environment for the development of policies aimed at formalization requires, as the main political instrument to manage these transitions (in the productive, technological, legal and working-conditions dimensions), social dialogue, tripartism and political and economic concertation as the framework for good governance and an adequate regulatory framework.

These agreements, as indicated in the document, require the organization and representation of workers and economic units of the informal economy within an inclusive social dialogue framework. Thus, it is indicated that it is key to strengthen political commitment, to establish a climate of trust and to promote a culture of formality[43] including traditional representatives of workers together with the organizations and representations of workers in the informal economy, as well as making it fundamental to promote access to effective social dialogue. From there, under this framework, it is possible to advance in structural transformation, in sectoral policies and in productivity-improvement policies in order to promote inclusive growth and decent work. A highlighted point is that within this dialogue it is important to integrate traditional trade unions, representatives of the social and popular economy, and civil society organizations that originate directly from the informal economy.

It is within this general framework that the document identifies social and economic heterogeneity as a key element in explaining the phenomenon of informality, associating it with poverty and inequality, with discrimination and gender inequality, with low levels of education and skills. For this reason, the need is emphasized to seek better working and living conditions through the transition to formality, in order to ensure labour rights, prevent informalization, and address new forms of precariousness, in a diverse and heterogeneous context.

This heterogeneity entails difficulties in methodological aspects, for example, in developing strategies for identifying informal productive units, their needs for growth and their potential for formalization. Challenges also arise in the field of public policies, since they must be sufficiently diversified in order to encompass a phenomenon which, as mentioned above, has multiple causes and diverse expressions (Masello, Granovsky, 2017).

The structural perspective in the ILO approach

Given this structural heterogeneity, it is important to emphasize the importance of not limiting the analysis to a normative view of informality, but rather to incorporate an analytical and practical dimension, with a focus on economic and productive aspects. In this regard, the ILO's transitional approach (transition from informality to formality) must consider, in addition to regulatory issues, the accumulation of capital (working capital and investment) by informal economic units, the incorporation of technology, the development of productive capacities, the strengthening of socio-productive networks, and the improvement of workers' skills.

This is related not only to difficulties in regulating and providing social protection for a significant portion of jobs, but also, as noted in the document, to the inability of developing countries' economies to generate sufficient jobs, which means that a significant portion of the working population must “create” a job in order to survive, always in conditions of very low productivity, low skills, no technological content, and precarious working conditions, among other factors.

Thus, from the structural point of view of informality, two segments are shaped:

1)employees of informal micro and small business, and 2)precarious self-employed workers engaged in subsistence activities. In this way, a segmentation of the different informal groups can be observed based on the nature and origin of the phenomenon and their own work trajectories (lack of regulation, poor socio-productive integration, lack of qualifications, difficulties in accessing dynamic technologies), and this also should imply different policies for each segment of informality, and distinguishing the problems between those related to regulations and those linked to the structural integration.

In summary, we consider it is important to highlight the ILO's perspective as a way of building a common language on issues related to work and informality for Latin America and Europe, understanding the specific differences between the regions. Furthermore, the phenomenon of informality cannot be reduced to a normative definition, and it is necessary to include its economic and productive conditions in a broader agenda of employment and labour market issues.

4. Informality from the perspective of regulation and the structural problem: the situation in Latin America and the case of Argentina.

The macroeconomic dimension in Latin America

Although by the mid-2000s most Latin American countries had achieved a degree of macroeconomic stability, with fiscal and external account balance, from that moment two groups of countries began to emerge. Those such as Brazil, Mexico, Chile, Uruguay, Paraguay, Colombia, and Peru managed to establish more stable economic policy regimes; and those such as Argentina, Bolivia, Ecuador, and Venezuela followed much more unstable regimes, favouring short-term actions in their macro-political and economic operating logic (Rapetti, Libman, Carrera, 2024).

The more stable regimes were structured on the basis of:

- exchange rate regimes with competitive, flexible, and managed exchange rates and a clear objective of accumulating reserves in their central banks,
- monetary regimes focused on inflation targets and without fiscal dominance, with autonomy and professional management teams,
- countercyclical fiscal programs and reasonable management of debt levels, under clear institutional rules accepted by the main political, economic, and social actors,
- a trend toward free movement of capital and greater connection with the international market (Rapetti, Libman, Carrera; 2024).

Based on this general context, the intention here is to contribute to the discussion sustained in the ILO document on the economy, employment, and informality, from the perspective of economic and labour development in Latin America, mainly in the current situation of the last two decades (Bértola and Ocampo, 2013), considering the role of the different economic regimes that have been taking shape. Following Rapetti, Liberman, and Carreras (2024), we highlight the aforementioned differentiation between two groups of countries: those that achieved a certain long-term political agreement to guarantee balanced economic regimes in monetary, fiscal, and exchange matters, and others with a behaviour focused on the current situation, underestimating the role of institutions and macroeconomic behaviour rules.

From this perspective of macroeconomic and political differentiation among Latin American countries, we can analyse the context, following the ILO document, to consider the domain of the “macro” as a necessary condition for acting on labour informality. But first, we will review the previous economic conditions of these countries. The intention is, using the examples of Latin America and Argentina, to broaden the analysis of informality from the normative to its economic and structural bases.

A brief review of the recent history of Latin American economies up to the 21st century

In the 1950s and 1960s, Latin America had a weak export performance, and showed a shift towards the domestic market, and the key role of the state. At the same time, stop-and-go cycles (bottlenecks in the external sector that restricted the smooth unfolding of the economic cycle) took hold in an international context that didn´t help the exporting profile of Latin American economies. At this time, some countries experienced chronic inflation, with continuous indexation processes, sometimes more structured and sometimes less structured (Rapetti, 2020).

In the 1970s, inflation accelerated in most countries, mainly due to the increase of the price of oil in 1973. For Argentina, Chile, and Uruguay, this was the moment when stabilization attempts were put into practice through exchange rate anchors, with downward and pre-set devaluation mechanisms, called "tablitas" (Rapetti, 2024). This led to exchange rate delays, significant indebtedness, and pronounced current account deficits. In the 1980s, contractionary policies in the central countries impacted the fragility of the external accounts of Latin American countries with high indebtedness, accelerating inflationary processes and even leading to hyperinflationary situations in many cases (Argentina, Brazil, Peru, Bolivia).

In the 1990s, faced with this scenario, critical positions regarding internal market policies prevailed. Economies moved towards greater trade openness and stabilization plans based on the principles of the so-called "Washington Consensus." In many countries, some stabilization and public debt restructuring objectives were achieved, converging to low inflation rates, but with great social costs. Bolivia, Chile, Colombia, and Paraguay began this stage with relatively low inflation rates. On the other hand, countries such as Argentina, Brazil, Mexico, and Uruguay adopted stabilization programs with fixed or semi-fixed exchange rates, and there is the extreme example of dollarization in Ecuador. The combination of long-term exchange rate rigidity and significant trade liberalization represented a profound damage to the productive structures and labour market in these economies. In the particular case of Argentina, it ended up shaping the current labour situation with levels of informality similar to those in the rest of Latin America.

After this period, at the beginning of the century and with an international context of high commodity prices and low international interest rates, by 2005, South American countries and Mexico had achieved significant levels of stabilization. The median for these countries in terms of some key indicators was a primary fiscal balance of 2.6 per cent of GDP, a current account balance of 1.3 per cent, international reserves of 13.6 per cent, annual inflation of 5 per cent, and GDP per capita growth of 3.2 per cent (average annual variation 2003-05), showing a different context from previous decades (Rapetti, Liberman, Carreras, 2024).

It is in this context that a significant group of countries began to combine institutionalized fiscal policies, autonomous monetary policies, managed floating exchange rate regimes with prudential reserve accumulation measures, and capital account liberalization. This was part of the technical and academic debate on the trilemma of open economies, where policymakers can

choose only two of the following three axes: 1) fixed exchange rates, 2) autonomous monetary policy, and 3) free capital mobility (Rapetti, 2020).

In practical terms, what ended up prevailing was a managed float with monetary policy autonomy and free capital mobility. Reserve accumulation was a distinguishing feature of the groups we mentioned, where the ratio of international reserves to GDP was much more virtuous in Brazil, Mexico, Chile, Colombia, Uruguay, Peru, and Paraguay.

In the case of Bolivia, with its fixed exchange rate, and Ecuador, with its dollarization, both extreme cases of exchange rate rigidity, we can see how price stability has the downside of strong exposure to external shocks, with great difficulty in absorbing international volatility domestically, with its corresponding impact on employment and activity. This is especially true when these rigidities are sustained over the long term.

In cases such as Argentina's, the exchange rate regime was predominantly guided by the economic situation and the short term, seeking to contain any discrete jump in the exchange rate by forcing a certain exchange rate delay, complicating the sustainability of the external sector. This was expressed in the establishment of permanent exchange restrictions, which resulted in the loss of reserves and the alteration of all economic incentives (especially for exporters and importers).

The other differentiating factor is the fiscal policy, where countries such as Argentina, Ecuador, Bolivia, and Venezuela were characterized by a shift from surpluses to pronounced fiscal deficits, influenced by subsidy systems and rapid increases in public spending.

In contrast, those who performed in more stable regimes sought to build institutions based on different fiscal rules, placing restrictions on the level of deficit, for example Chile with its stabilization fund, or the Colombian structural balance, which has a flexible framework that allows for the adoption of countercyclical measures. These fiscal rules operate on results, spending, and debt.

In the case of monetary policy, most countries that built institutions seeking less volatile economic regimes adopted policies aimed at the autonomy of their central banks, professionalizing their technical teams.

The structural dimension in Argentina

Below, we provide a socioeconomic and labour market overview of the employment profile in Argentina, relating the problems of precarization to structural factors. In this sense, we may speak of an expanded form of precariousness, which includes a wide range of labour market problems such as open and hidden unemployment, underemployment, unregistered employees, registered employees living below the poverty line, and informal self-employed workers.

In addition, there exists a hard core of workers facing structural problems of labour market insertion. In order to account for this, it is necessary to refer to the socio-productive structure, within which three sectors are configured in the productive and labour field, differing in their

working conditions, productivity, technological endowment, skill levels, and income (Jacovkis, Masello, Granovsky and Oliva, 2021):

Dynamic segment: productive sectors such as high-technology industries and Industry 4.0, the bioeconomy, renewable energies and energy efficiency, and the knowledge-based economy. These sectors are characterized by highly skilled workers, better working conditions, high productivity, and a strong technological content in jobs.

Traditional segment: industrial, commercial, and service activities involving workers with traditional skills that require re-skilling. Workers in this segment generally display medium skill levels, combining situations of registered and unregistered employment. Productivity and technological development are limited.

Structural informal segment: informal micro-units and precarious self-employment (employment-intensive). This segment is concentrated in sectors such as commerce, construction, agri-food production, textiles and apparel, the care economy, and the green/circular economy, among others. In these cases, productive units display very low or null technological content, and workers generally lack formal qualifications. Working conditions are the most precarious among the three segments.

In order to establish an approximation for measuring the structural informal sector, data from the Permanent Household Survey (EPH) are used. From the universe of employed persons, workers in state-owned enterprises, public entities, and sectors dominated by modern firms engaged in activities not susceptible to structural informality (such as the oil sector) are excluded.

Based on these prior procedures, the indicator is calculated for:

- Employees: according to establishment size, skill level, and technology.
- Self-employed workers: according to the technology of the productive unit.
- Employers: according to establishment size, technology, and ownership of the workplace.

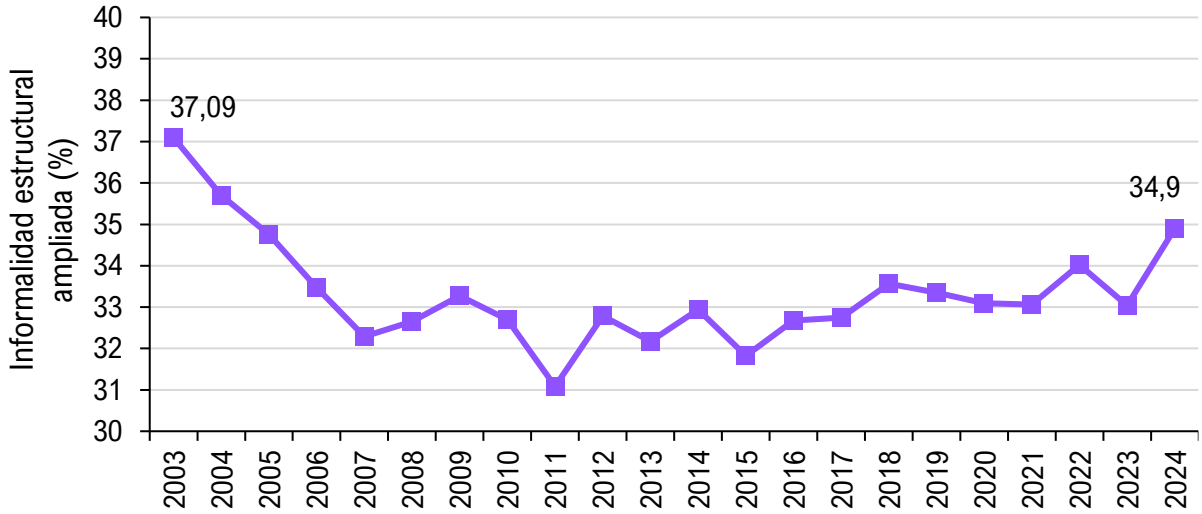
For the calculation of expanded structural informality, domestic work is incorporated into this procedure.

When applied in this way, the evolution of the indicator is observed as a percentage of the total employed population from 2003 to 2024.

To understand this evolution, it is important to refer to certain prior conditions. Until the mid-1970s, Argentina had an advanced industrial profile with a relatively homogeneous labour market when compared to other Latin American countries at that time. From that point onward, the 1976 civic-military dictatorship implemented a shift in the economic model toward trade liberalization, which undermined existing industrial structures. However, it was mainly during the 1990s that the current labour market took shape, based on a policy of trade liberalization combined with the maintenance of a highly rigid exchange-rate regime—convertibility—which

over time led to an appreciation of the exchange rate, deteriorating the productive structure and the labour market that Argentina had previously developed.

Figure 1. Evolution of Structural Informality



Source: Authors' elaboration based on data from the Encuesta Permanente de Hogares (EPH, INDEC).

This situation became evident during the 2001 crisis, with its severe employment consequences. This context explains what is observed in the figure, showing a high level of structural informality around 2003, the starting point of the analysis. Thus, Figure 1 shows a significant decline in structural informality up to 2010, considering the high levels inherited from the crisis. However, after that point, levels below 30 per cent of total employment were never reached. From 2008 onward, the indicator stabilized at these levels, ceasing to decline, in association with a gradual deterioration of macroeconomic balances and the absence of socio-productive programs aimed at improving productivity across the entire production and employment structure. This trend intensified over time, and from 2018 onward—amid a new debt crisis—the indicator rose above 33 per cent of total employment. This is the structural configuration of the Argentine labour market, where, beyond regulatory and normative aspects, there is a persistent structural presence of segments of workers engaged in subsistence jobs characterized by low skill levels, low productivity, and limited technological mastery (Poy, Robles, Salvia, 2021).

5. Returning to the discussion: a regulatory approach or a structural approach?

Based on Latin American and Argentine experiences, we can revisit the key arguments highlighted in the ILO document, expanding the normative and regulatory perspective on labour informality by complementing it with structuralist approaches. It is possible to underscore the importance of the macroeconomic and productive dimension, expressed in structural fractures within labour markets, which allow for the characterization of different segments of informality according to the nature of their origins. The aim is that, by integrating these dimensions

(normative and structural), a common analytical language may be constructed to address employment-related problems in contemporary capitalism.

Therefore, the challenges identified moving forward in thinking about informality in Latin America require starting from an understanding of the specificities of the phenomenon. Although informality responds to diverse causes, it can be argued that one of the key elements for its comprehension is associated with the perspective of structural heterogeneity. These challenges also imply methodological innovations, particularly in developing diverse strategies to identify informal productive units and to assess their potential for growth and formalization. Finally, in the realm of public policy, it can be noted that diverse policies will be required for such a heterogeneous phenomenon, enabling transitions toward formality accompanied by improvements in productivity, access to technology, working conditions, income levels, and social protection, among other factors.

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PART 4. WOMEN IN INFORMALITY

MEASURING LABOR INFORMALITY WITH A GENDER PERSPECTIVE: REVISITING THE ILO FRAMEWORK AND APPLYING IT TO THE BOLIVIAN URBAN LABOR MARKET

By Fernanda Wanderley and Arianne Villafuerte[44]

Summary

This paper examines labor informality in urban Bolivia from 2022 to 2025 as part of an effort to significantly incorporate a gender perspective into the informality debate. Combining the ILO's rights-based framework, ECLAC's structural heterogeneity approach, and feminist research that emphasizes unpaid care work and time use, the study develops a national operationalization of the 21st ICLS standards and applies it to detailed labor market data from the Continuous Employment Survey (ECE). The findings show that informality remains the dominant employment condition—affecting over 80 per cent of urban workers—and that gender shapes its distribution and effects, with women disproportionately found in insecure and low-wage informal jobs due to unequal care responsibilities. These results reveal that informality in Bolivia is simultaneously institutional, structural, and deeply gendered, and that promoting decent work requires policies that connect productive transformation and social protection with the redistribution of care duties within households and societies to ensure genuine gender equality in the workforce.

Keywords: Informality, Gender, Labor Market, Measurement, Bolivia, ILO

JEL Codes: J21, J46, O17, J71

1. Introduction

Labor informality continues to be a key feature of employment in the Global South and a persistent obstacle to inclusive development. Far from being a marginal or temporary issue, it has become a structural form of labor arrangement characterized by segmented access to social protection, low productivity, and high vulnerability. In Latin America, despite improvements in economic growth, poverty levels, and institutional reforms, informality still accounts for more than half of the employed population, exposing significant limitations in the region's development path (Ruesga, 2021; ILO, 2018). In this continent, the academic and policy discussions have been influenced by two prominent institutional viewpoints. The International

Labor Organization (ILO) has gradually redefined informality through the normative perspective, emphasizing the lack of labor rights and social security coverage. Meanwhile, and in mutual dialogue, the Economic Commission for Latin America, and the Caribbean (ECLAC) have understood informality as a result of structural heterogeneity and the limited ability of productive systems to create quality jobs (Abramo, 2021).

Both the ILO and CEPAL have made meaningful strides toward integrating a gender perspective into their analytical frameworks. Yet, despite these advances, much work remains to fully theorize and empirically capture the ways gendered dynamics shape Labor markets. The intersection between unpaid domestic and care work and women's restricted access to formal employment — or their overrepresentation in informal and precarious forms of work — continues to be insufficiently addressed. As Folbre (2021) argues, the reproductive Labor that sustains households and economies is still largely absent from dominant models of Labor market functioning, revealing persistent conceptual and methodological gaps. Truly understanding informality, therefore, requires not only recognizing gender as a variable, but also integrating care, time, and social reproduction as central pillars of Labor analysis.

Feminist research has shown that informality is a social institution through which the costs of social reproduction are externalized onto households—and disproportionately onto women (WIEGO, 2016). In Bolivia, where over four out of five urban workers are informally employed, and women are overrepresented in the most insecure jobs, the gendered roots of informality are especially significant. Understanding the mechanisms that uphold this situation is crucial for designing policies that effectively promote decent work and equality.

The main goal of this paper is to analyze labor informality in urban Bolivia from an integrated gender perspective that combines institutional, structural, and social reproduction dimensions. To do this, the study conducts an analysis that combines the ILO normative framework for measuring informal employment, CEPAL's structural insights into productive heterogeneity, and feminist analyses of time use, care responsibilities, and labor segmentation.

This paper contributes to current knowledge in three specific ways. First, it advances a unified analytical framework that recognizes informality as simultaneously a deficit of Labor rights, a manifestation of structural inequality, and a gendered mechanism of Labor allocation. Second, it develops a national operationalization of the ILO's 21st ICLS standards (ILO, 2023), adapted to the Bolivian context, enabling reliable, detailed measurement of formal and informal employment. Third, it applies this approach to examine empirical trends in urban Bolivia between 2022 and 2025, disaggregating results by sex, age, education, ethnicity, occupational category, economic sector, working time, and income.

Through this integrated analysis, the article argues that informality in Bolivia is not only a result of structural and normative barriers to development but also a core mechanism reproducing gender inequality. Addressing it requires policies that link formalization with productive transformation and, crucially, with the redistribution of care work through robust social

protection and care systems. Only by confronting these structural and gendered foundations can formalization become a real pathway toward decent work, social inclusion, and transformative development.

2. ILO, ECLAC and feminist contributions on Informality

Since the 1970s, the ILO has progressively expanded its understanding of informality. Early studies focused on making visible the large share of economic activity occurring outside state regulation in the Global South, conceptualised initially as the "informal sector," composed mainly of small, unregistered enterprises and self-employed workers. However, by the 1990s, mounting empirical evidence demonstrated that informality was neither marginal nor transitional, but structurally embedded across all sectors and occupations. This led to a paradigm shift from analysing the informal sector to the broader notion of informal employment, encompassing all jobs lacking legal or social protection, regardless of where they are located. This reconceptualization was formalised in the 17th and later refined in the 21st International Conference of Labor Statisticians (ICLS 2003; ICLS 2023), which linked informality directly to the absence—in law or in practice—of Labor rights, taxation, and social security coverage. This evolution ultimately aligns with the ILO's Decent Work Agenda, situating informality not merely as a structural Labor market feature but as a fundamental barrier to the universalization of Labor rights and social protection.

The ILO's two-dimensional analytical model combine the formality of the economic unit, referring to whether the production unit is legally recognised or registered; and the formality of the employment relationship, referring to the worker's effective access to social and Labor protection. This dual perspective introduced an essential innovation: it recognised informality as a condition of employment and a characteristic of the unit. It also underscored the heterogeneity of informal work, which may occur in formal firms (e.g., unregistered subcontracting), informal units, or in households (e.g., domestic work). By framing informality as the absence of protection and rights, the ILO established a normative basis for measurement, linking statistical definitions directly to international and national Labor standards. Countries are encouraged to adjust operational definitions to their legislative and data contexts while preserving conceptual coherence. This flexibility allows the ILO framework to function as both a measurement system and a comparative analytical lens, capable of capturing how different institutional configurations shape the boundaries of formalization.

Rooted in the Latin American structuralist tradition, ECLAC conceptualizes informality through the lens of structural heterogeneity — the coexistence of highly productive, capital-intensive sectors with extensive low-productivity segments where most workers are concentrated. From this viewpoint, informality emerges not merely from institutional deficits or legal non-compliance, but from asymmetries in productivity and accumulation. Firms and workers operating in low productivity sectors face structural barriers to formalization: limited access to

credit, technology, and markets; low capital intensity; and weak state capacity to implement adequate regulation and to enforce it. In this sense, productivity functions as a proxy variable for informality: sectors and occupations with lower Labor productivity tend to have higher rates of informal employment. ECLAC thus connects the measurement of informality to a broader developmental diagnosis. It interprets the persistence of informality as evidence of limited structural transformation and the inability of economic growth to translate into social inclusion. Overcoming informality, therefore, requires not only strengthening institutions but also transforming production systems — diversifying the economy, improving technological capabilities, and aligning Labor regulation with industrial policy (Abramo, 2021; Pineda, 2024).

Taken together, the ILO and ECLAC perspectives illuminate the institutional and structural foundations of informality. Yet feminist economics significantly expands and deepens these conceptualizations by demonstrating that informality cannot be understood without addressing the unpaid and underpaid forms of Labor that sustain the economy (Chant & Pedwell, 2008; ILO, 2019; Charmes, 2019a/b). Feminist scholarship has long argued that any analysis of Labor markets is incomplete unless it incorporates the gendered organization of care and nonmarket work (Boserup, 1970; Borderías & Carrasco, 1994; Anderson, 2011). Historically, statistical, legal, and economic systems have defined “work” in narrowly commodified terms, systematically excluding domestic Labor, family Labor, and much of women’s economic activity (Benería and Roldan, 1987). This exclusion is not simply a measurement gap, but reflects deeper ideological assumptions that naturalize women’s Labor as private, reproductive, and outside the sphere of economic value (Folbre, 2020). By foregrounding the centrality of care and social reproduction, feminist economics reveals informality as part of a wider economic regime that depends on — yet consistently devalues — the Labor that sustains life.

Feminist economics have demonstrated that unpaid care work and informal Labor are structurally interconnected. Women's disproportionate responsibility for unpaid domestic and care work restricts their access to formal employment and channels them into informal, flexible, and low-paid jobs. In this sense, informality functions as an institutional response to the unresolved tension between Labor market participation and social reproduction. It also highlights that informality is not just a Labor market condition, but a gendered social arrangement that reflects how societies privatize and feminize the costs of sustaining households and Labor forces. As Folbre (2020, 2018) argues, the boundaries that separate "productive" from “unproductive” or “market” from “non-market” Labor are embedded in power relations and serve to reproduce economic inequality.

This literature, therefore, reframes the analysis of informality from one focused solely on regulation or productivity to one that incorporates time, care, and social reproduction. By foregrounding unpaid work and the care economy, feminist economists reveal the hidden transfers that women’s Labor provides to the state, employers, and households — subsidizing both formal and informal markets. This theoretical lens challenges the assumption that expanding formal employment alone can overcome Labor inequality without transforming the

gendered division of care. It also calls for integrating time-use data, redefining Labor value within national accounts, and designing policies that link Labor formalization to care system expansion and social protection. In this way, feminist economics provides a crucial analytical bridge: connecting the ILO's rights-based approach and CEPAL's structural analysis to the deeply gendered and invisible dynamics that underpin informality in Bolivia and across Latin America (Chen and Carré, 2020)..

Three propositions synthesize this theoretical approach: informality is coconstituted with capitalism and patriarchy, functioning as a mechanism that sustains accumulation through gendered Labor divisions (Fraser, 2023); care is structurally linked to informal work, generating a feedback loop of flexibility, low income and time poverty; and formalization without redistribution of care responsibilities reproduces inequality, making regulatory reforms insufficient for substantive equality.

3. Adapting and Applying the ILO Informality Measurement Framework to the Bolivian Case

Building on this conceptual convergence, the next step was to apply the ILO framework (21st ICLS, 2023) methodology to the Bolivian case. Since the precise operational criteria used by ILOSTAT for each country are not publicly detailed, the exercise aimed to construct an operational criterion consistent with national legislation and statistical capacities, while maintaining coherence with the ILO's international standards. To achieve this, several combinations (proxy variables) were tested to capture the two dimensions of the ICLS framework—the unit and employment levels of formality. These proxies were cross-validated to evaluate their correspondence with the official ILOSTAT estimates, which are derived from the same database (Encuesta Continua de Empleo, second quarter). Despite rigorous efforts, it was not possible to fully reproduce the ILOSTAT estimation process, as the specific variables and weighting mechanisms used by the ILO are not publicly detailed.

Table 1. Bolivia: IISEC estimate of the informal employment rate (%), 2q, 2022 - 1q, 2025

	2q-2022	2q-2023	2q-2024	1q-2025
Bolivia	84.9	85.1	84.0	86.2
Urban area	80.7	81.4	79.8	83.1
Urban men	79.0	79.8	78.1	81.2
Urban women	82.5	83.2	81.7	85.1

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.

However, this iterative testing enabled the identification of the criteria set that achieved the highest temporal consistency and the closest match with ILOSTAT figures, ensuring both methodological comparability and empirical robustness. After testing various configurations, the following model was chosen as the most coherent and stable operationalization: the formality of the unit defined by the existence of an NIT, and the formality of the employment condition

defined by affiliation and contribution to long-term social security (Gestora/AFP). This operational criterion balances international harmonization with contextual relevance, reflecting Bolivia's specific legal definitions, data availability, and institutional characteristics. For more details on applying the criterion to each occupational category, see Annex 1.

Table 2. Bolivia: ILO estimate of the informal employment rate (%), 2q, 2022 - 1q, 2025

	2q-2022	2q-2023	2q-2024	1q-2025
Bolivia	84.2	84.2	83.3	85.7
Urban area	79.6	80.2	78.9	82.3
Urban men	77.5	78.2	76.7	80.2
Urban women	82.0	82.5	81.3	84.6

Source: International Labor Organization (ILO), ILOSTAT (September 2025).

Table 3. Bolivia: Difference between IISEC and ILO estimates of the informal employment rate (%), 2q, 2022 - 1q, 2025

	2q-2022	2q-2023	2q-2024	1q-2025
Bolivia	+0.7pp	+0.9pp	+0.7pp	+0.5pp
Urban area	+1.1pp	+1.2pp	+0.9pp	+0.8pp
Urban men	+1.5pp	+1.6pp	+1.4pp	+1.1pp
Urban women	+0.6pp	+0.8pp	+0.4pp	+0.5pp

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.

The construction of the IISEC estimate represents a crucial step toward deepening the analysis of informality in Bolivia. While aligned with the ILO's conceptual framework, it underscores the importance of clearly identifying the proxy variables used to define formal and informal employment, as these shape both interpretation and temporal comparability. Ensuring transparency in these operational choices is essential to distinguish conceptual coherence from empirical variation. Moreover, developing a national estimate enables intersectional analyses—by gender, age, ethnicity, occupation, and sector that are not available in standardized ILOSTAT datasets. In this way, the IISEC model maintains methodological consistency with international standards while enabling context-sensitive research on Bolivia's structural dynamics of informality.

4. Informality in Bolivia (2022–2025)

Building on the IISEC informality indicator, this section analyzes informal employment in Bolivia from the second quarter of 2022 to the first quarter of 2025. For consistency, the second quarter was chosen for all annual comparisons.

Meanwhile, the first quarter of 2025 includes the most recent data from the Continuous Employment Survey (ECE). The distribution of formal and informal employment in Bolivia shows the widespread dominance of informality across both national and urban contexts. Out of nearly 6.8 million employed people nationwide, about 5.7 million (84 per cent) are engaged in informal

work, while only 1.1 million (16 per cent) have formal jobs. In urban areas, informality remains high, with 3.7 million informal workers versus 930,000 formal workers, reflecting the ongoing presence of insecure labor conditions even in more modern and diverse economies. The gender breakdown further emphasizes this imbalance: women account for 1.77 million informal workers—about four in every five employed women—whereas men total 1.91 million informal workers, a slightly lower but still dominant share of the male workforce. On the other hand, formal employment remains limited for both sexes, with only 396,000 women and 536,000 men in protected, regulated positions. These numbers highlight that informality is not just a minor issue but the fundamental structure of Bolivia's labor market, shaping income distribution, job security, and access to social protection.

Table 4. Bolivia: Informal employment rate (%) by sector and sex, 2q, 2022 - 1q, 2025

Bolivia: total	2q/2002	2q/2023	2q/2024	2q/2025
Formal employment-formal sector	15,1	14,9	16	13,7
Informal employment-formal sector	8,3	8,8	9,5	8
Informal employment-informal sector	74,7	74,1	72,4	76,2
Formal employment-house sector	0	0	0	0
Informal employment-house sector	1,9	2,1	2,1	2,1
Uban area	100	100	100	100
Formal employment-formal sector	19,3	18,6	20,2	16,9
Informal employment-formal sector	11,6	12,4	12,9	10,5
Informal employment-informal sector	66,7	66,2	64,2	69,9
Formal employment-house sector	0	0	0	0
Informal employment-house sector	2,4	2,8	2,7	2,6
Urban men	100	100	100	100
Formal employment-formal sector	21	20,2	21,9	18,8
Informal employment-formal sector	12,3	12,7	13,4	10,9
Informal employment-informal sector	66,5	66,9	64,7	70,3
Formal employment-house sector	0	0	0	0
Informal employment-house sector	0,2	0,1	0,1	0,1
Urban women	100	100	100	100
Formal employment-formal sector	17,4	16,7	18,2	14,9
Informal employment-formal sector	10,8	12	12,4	10,2
Informal employment-informal sector	66,8	65,4	63,8	69,5
Formal employment-house sector	0,1	0,1	0	0
Informal employment-house sector	5	6	5,6	5,4

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.
Note: The coefficient of variation for formal employment-household sector and 'urban men informal employment-household sector is higher than 20.

Even more, the composition of informal employment in Bolivia reveals the multidimensional nature of informality, combining two interrelated levels of analysis: the formality of the economic unit and the degree of job protection. The data show that the bulk of informal employment is concentrated in informal economic units, accounting for between 72 per cent and 76 per cent

of total jobs nationally and 64 per cent and 70 per cent in urban areas between 2022 and 2025. However, informality is not confined to the informal sector: a significant share of workers—around 8 per cent to 10 per cent nationally and over 12 per cent in urban areas—are informally employed within formally registered enterprises. Finally, a smaller but persistent segment of informal employment—approximately 2 per cent (national and metropolitan areas) and 5 per cent among urban women—occurs in domestic work within private households.

The gender dimension remains particularly striking. Within urban areas, women are consistently over-represented in informal employment compared to men. Despite minor fluctuations, the gender gap widened again in 2025: while informal employment among urban men stood at approximately 81 per cent, it reached over 85 per cent among urban women. This pattern must be analyzed through the intersection between Labor segmentation and gendered structures of care, as women's higher time allocation to unpaid reproductive activities and unpaid family productive occupations continues to reinforce their exposure to informality, as we will discuss below.

4.1. Sociodemographic characteristics between formal and informal jobs

Education

Between 2022 and 2025, education levels reveal structural differences between formal and informal workers, as well as between men and women. Among formal workers, roughly four out of five (78–80 per cent) have completed higher education, while only around 38 per cent of informal workers have, indicating that education remains a strong determinant of formal employment. Within informality, most workers have completed secondary education (around 38 per cent), followed by those with primary education (16 per cent).

Gender differences within the informality show that men are more concentrated in secondary education (around 43 per cent), while women have higher shares in both primary (about 19 per cent) and tertiary education (around 38 per cent), reflecting a more polarized distribution: more women with low education and more with higher education, yet still facing barriers to formality. These persistent patterns highlight how educational attainment, while crucial, is not sufficient to guarantee formal employment, as gendered Labor segmentation and institutional barriers continue to reproduce informality even among highly educated women.

Table 5. Bolivia - Urban area: Distribution of formal and informal employment by educational level and sex (per cent), 2q, 2022 - 1q, 2025

	FORMAL				INFORMAL			
	2q-2022	2q-2023	2q-2024	1q-2025	2q-2022	2q-2023	2q-2024	1q-2025
None	0,3	0,1	0,1	0,0	1,8	1,4	1,5	1,6
Primary	3,9	3,6	2,8	3,1	17,4	16,6	16	16,1
Secondary	13,2	12,7	12,2	12,8	37,9	37,2	37,8	38,1
Higher	77,8	78,8	80,1	79,7	35,7	38	38,6	37,9
Other	4,8	4,8	4,8	4,4	7,1	6,8	6,1	6,3
Men								
None	0,1	0	0	0	0,6	0,3	0,4	0,5
Primary	4,2	3,9	3,5	3,9	15,2	14,5	13,9	13,6
Secondary	17,3	17	16,8	17,6	43,3	42,3	42,5	43,3
Higher	72,9	74,7	74,3	73,0	35,5	37,5	38,5	37,6
Other	5,5	4,4	5,4	5,5	5,4	5,4	4,7	5
Women								
None	0,5	0,2	0,1	0	3	2,5	2,6	2,6
Primary	3,5	3,2	2	2	20	19	18,3	18,8
Secondary	7,5	6,8	6	6	32	31,7	32,7	32,6
Higher	84,6	84,4	88	89	36	38,5	38,7	38,3
Other	3,9	5,4	3,9	2,9	9	8,3	7,7	7,7

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.
Note: The coefficient of variation for the non-educational level of formals is higher than 20.

Ethnicity

The data reveal persistent ethnic and gender stratification in Bolivia's labor market. Indigenous individuals are consistently overrepresented in informal employment. From 2022 to 2025, the percentage of Indigenous workers in informal jobs decreased slightly—from 45.8 per cent to 42.3 per cent—but remained higher than in the formal sector, where it dropped from 39.7 per cent to 36.9 per cent. This 6 to 8 percentage point gap highlights longstanding barriers for Indigenous workers in accessing formal, protected jobs.

Table 6. Bolivia - Urban area: Proportion of self-identified indigenous by sex (%), 2q, 2022 - 1q, 2025

	2q-2022	2q-2023	2q-2024	1q-2025
Informal	45.8	44.9	43.1	42.3
Formal	39.7	39.0	35.5	36.9
Informal men	44.1	43.7	41.2	39.9
Informal women	47.8	46.1	45.2	44.8
Formal men	40.9	38.9	35.1	35.8
Formal women	38.1	39.1	36.1	38.5

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.

Data show that Indigenous women are the most affected, with nearly 45 per cent of informal female workers and about 40 per cent of informal men identifying as Indigenous. In formal employment, the Indigenous share is lower but still notable—between 35 per cent and 38 per cent for both genders. These differences, while moderate numerically, reveal significant intersecting inequalities of gender and ethnicity that sustain segmented labor markets.

Age

The age distribution of formal and informal employment in Bolivia in 2nd quarter 2024 shows a clear life-cycle pattern of Labor informality. Informality is highest among young workers aged 15–24, who make up nearly 23 per cent of informal workers but only 4.6 per cent of formal jobs, due to limited access at Labor-market entry. Informality declines with age, while formal employment peaks among those aged 35–44 at 32 per cent, reflecting experience and stability.

Table 7. Bolivia - Urban area: Distribution of formal and informal employment by age and sex (%), 2q, 2022 - 1q, 2025

	FORMAL				INFORMAL			
	2q-2022	2q-2023	2q-2024	1q-2025	2q-2022	2q-2023	2q-2024	1q-2025
15-24 years	4.4	4.6	4.6	3.5	22.9	21.5	22.9	22.7
25-34 years	29.7	29.3	27.4	28.8	26.0	27.2	25.7	25.5
35-44 years	31.6	31.1	32.4	31.4	21.1	20.6	20.2	20.1
45-54 years	21.0	21.0	20.3	22.1	14.5	15	15.2	14.8
55-65 years	10.8	11.1	11.7	11.2	9.5	9.9	9.8	10.2
over 65 years	2.5	2.9	3.6	3.1	5.9	6.1	6.2	6.5
Men								
15-24 years	4.7	5.2	6.2	4.3	23.5	22.1	23.5	24.0
25-34 years	29.0	28.4	26.9	28.0	27.0	27.9	26.3	26.2
35-44 years	32.9	31.7	33.1	32.1	20.5	19.6	19.6	19.5
45-54 years	19.9	21.2	18.5	20.9	13.8	14.3	14.6	14.0
55-65 years	10.6	10.4	11.1	11.2	9.3	9.7	9.5	9.8
over 65 years	2.9	3.1	4.1	3.4	5.9	6.5	6.5	6.6
Women								
15-24 years	4.1	3.7	2.3	2.3	22.3	20.8	22.3	21.4
25-34 years	30.7	30.5	28.2	29.8	24.9	26.5	25.0	24.8
35-44 years	29.7	30.3	31.5	30.4	21.9	21.7	20.8	20.7
45-54 years	22.5	20.8	22.6	23.6	15.3	15.3	15.9	16.1
55-65 years	11.0	12.0	12.5	11.1	9.7	10.1	10.2	10.6
over 65 years	2.0	2.7	2.9	2.8	5.9	5.7	5.8	6.4

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.

After age 65, informality rises again to 6.2 per cent, indicating ongoing vulnerable employment.

Gender differences are modest: young men (6.2 per cent) are more likely than young women (2.3 per cent) to access formal jobs, but women experience slightly higher informality at all ages. Overall, the data show a U-shaped pattern—higher informality among youth and older adults—highlighting barriers at career start and late-career exclusion from social protections that sustain Bolivia's segmented Labor market.

4.2. Occupational Characteristics between formal and informal jobs

The distribution of employment by occupational category provides a crucial lens for understanding the composition and segmentation of Bolivia's Labor market. Among formal workers, the pattern is highly concentrated: over four-fifths are employees or wage workers, highlighting the centrality of salaried Labor relations in the formal economy. Nonetheless, a small but notable share of own-account workers also appear within the formal segment, demonstrating that self-employment can operate under formal arrangements when workers fulfil their social security contributions and tax registration requirements. This finding nuances the simplistic dichotomy that equates formality with wage Labor and informality with autonomy. The informal sector, by contrast, exhibits striking heterogeneity. Approximately half of informal workers are own-account workers, one-quarter are employees or wage earners, and around 13 per cent are unpaid family workers. These proportions have remained remarkably stable from 2022 to 2025, confirming that the structural segmentation of Bolivia's Labor market is persistent rather than cyclical.

Gender disaggregation reveals that, while men and women share similar occupational structures, the distributional weights differ. Among informal workers, the gender difference is most pronounced among employees/wage workers: between 2022 and 2025, roughly 32 per cent of informal men were employees, whereas women's share increased from 19.9 per cent to 22.2 per cent. Own-account activity represents almost half of total employment for both sexes, yet women's share is systematically higher. Unpaid family workers—among the most vulnerable occupational groups— constitute the third-largest category of informal employment, and here the gender asymmetry is more pronounced. The fourth category also diverges by sex: for men, it is mainly employers or business partners, while for women, it corresponds to domestic workers.

This difference highlights the structural duality of gendered informality: while men's informal independence usually leads to ownership or salaried positions, women's informality is mainly associated with reproductive and service work done within or near households. These patterns show that the occupational makeup of informality is not just due to low productivity but also shaped by social and gender hierarchies that decide who does what kind of precarious work and under what conditions of dependency.

Disaggregating by occupational branch offers a clearer view of how gender and education intersect with the formal–informal divide. Formal workers—who generally have higher education levels—are mainly found in scientific, professional, and intellectual roles, making up just over

30 per cent of all formal employment. About one-fifth work as technicians or mid-level professionals, roles that require specific credentials and are linked to regulated wages. These two sectors together represent roughly half of total formal employment. In stark contrast, informal workers are concentrated in services and sales (over 30 per cent) and in construction, manufacturing, and related activities (around 25 per cent). These sectors are usually low-skill and low-productivity but employ most urban workers. The gap between formal and informal sectors reflects the educational divide: formality tends to cluster where human capital and regulation align. Meanwhile, informality prevails where entry barriers are low, and oversight is weak.

Table 8. Bolivia - Urban area: Distribution of formal and informal employment by employment status categories and sex (%), 2q, 2022 - 1q, 2025

	FORMAL				INFORMAL			
	2q-2022	2q-2023	2q-2024	1q-2025	2q-2022	2q-2023	2q-2024	1q-2025
Employee/worker	85.0	89.6	85.1	90.3	26.1	26.4	26.6	27.7
Self-employed worker	12.8	8.9	13.6	8.3	51.1	49.9	49.2	49.8
Employer or unpaid partner	1.1	1.0	0.7	0.8	5.0	5.5	5.5	5.0
Cooperatives of production	0.7	0.4	0.4	0.4	0.1	0.1	0.1	0.1
Unpaid family worker	0.2	0.1	0.1	0.0	13.8	13.3	13.9	13.3
Unpaid apprentice	0.0	0.0	0.0	0.0	0.9	1.3	1.3	1.0
Domestic worker	0.1	0.0	0.0	0.1	3.0	3.5	3.3	3.2
Men								
Employee/worker	84.2	88.3	85.5	89.5	31.8	31.5	31.8	32.8
Self-employed worker	13.1	9.7	12.7	8.6	49.0	48.5	48.4	47.6
Employer or unpaid partner	1.3	1.3	1.0	1.1	6.8	7.4	7.5	6.9
Cooperatives of production	1.2	0.7	0.7	0.7	0.2	0.2	0.1	0.2
Unpaid family worker	0.1	0.0	0.1	0.0	11.4	11.1	11.2	11.6
Unpaid apprentice	0.0	0.0	0.0	0.0	0.7	1.2	0.8	0.7
Domestic worker	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.1
Women								
Employee/worker	86.1	91.5	84.6	91.5	19.9	20.8	21.0	22.2
Self-employed worker	12.5	7.7	14.8	7.8	53.5	51.4	50.1	52.1
Employer or unpaid partner	0.7	0.6	0.4	0.3	3.0	3.4	3.3	3.0
cooperatives of production	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Unpaid family worker	0.4	0.1	0.1	0.1	16.4	15.8	16.9	15.1
Unpaid apprentice	0.0	0.0	0.0	0.0	1.2	1.5	1.9	1.3
Domestic worker	0.3	0.1	0.0	0.2	6.0	7.1	6.8	6.4

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.
Note: The coefficient of variation for cooperatives' production of informal employment and for domestic workers of male informal employment is higher than 20. Only the coefficient of variation for employee/worker and self-employed workers of formal employment is lower than 20.

Table 9. Bolivia - Urban area: Distribution of formal and informal employment by occupational branch and sex (%), 2q, 2022 - 1q, 2025

	FORMAL				INFORMAL			
	2q-2022	2q-2023	2q-2024	1q-2025	2q-2022	2q-2023	2q-2024	1q-2025
Urban area								
Armed forces	0,3	0,8	0,6	0,5				
Public and business managers	5,7	5,0	5,2	3,9	1,4	1,4	1,6	1,1
Science and intellectual professionals	33,2	32,3	32,0	33,9	3,4	3,6	3,3	3,0
Mid-level technicians	18,3	20,0	19,9	20,3	5,3	6,7	6,0	5,9
Office employees	10,6	11,7	12,1	11,1	1,7	2,1	2,6	2,4
Service and sales workers	11,8	10,4	12,3	11,1	34,7	34,8	33,3	34,8
Agriculture, livestock, fishery, others	0,1	0,1	0,1	0,3	5,3	5,0	5,3	4,4
Construction, manufacturing, others	5,1	4,7	4,5	3,3	27,2	25,8	25,7	26,5
Plant and machine operators	7,0	7,0	7,0	8,1	11,8	11,4	11,8	11,7
Unskilled workers	7,9	7,9	6,3	7,5	9,2	9,3	10,4	10,1
Men								
Armed forces	0,6	1,4	0,6	0,9				
Public and business managers	6,9	5,8	6,7	4,3	1,7	1,9	2,0	1,4
Science and intellectual professionals	24,5	22,9	23,2	24,0	3,2	3,2	3,0	2,3
Mid-level technicians	19,5	21,6	20,6	22,3	6,6	8,4	7,6	8,0
Office employees	8,8	10,4	10,0	9,4	1,4	1,4	2,1	1,9
Service and sales workers	12,7	11,8	12,7	13,0	16,9	18,6	17,7	19,2
Agriculture, livestock, fishery, others	0,1	0,2	0,1	0,5	5,8	5,4	5,8	4,8
Construction, manufacturing, others	8,0	7,0	7,1	5,0	35,4	33,6	33,3	34,0
Plant and machine operators	11,7	11,7	11,8	13,4	22,0	21,3	22,2	22,0
Unskilled workers	7,2	7,2	7,1	7,3	6,9	6,0	6,4	6,5
Women								
Armed forces			0,5					
Public and business managers	4,0	3,9	3,3	3,2	1,1	0,9	1,1	0,8
Science and intellectual professionals	45,3	45,1	43,9	47,9	3,6	4,0	3,7	3,7
Mid-level technicians	16,5	18,0	19,0	17,4	3,8	4,8	4,3	3,6
Office employees	13,1	13,3	15,0	13,6	2,1	2,8	3,1	3,0
Service and sales workers	10,6	8,4	11,8	8,3	54,3	52,5	50,1	51,6
Agriculture, livestock, fishery, others	0,1	0,0	0,0	0,1	4,7	4,4	4,8	4,0
Construction, manufacturing, others	1,1	1,7	1,1	1,0	18,1	17,2	17,6	18,5
Plant and machine operators	0,3	0,6	0,3	0,6	0,4	0,5	0,6	0,7
Unskilled workers	8,9	9,0	5,2	7,8	11,8	12,9	14,7	14,0

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.
Note: The coefficient of variation for formal employment-household sector and 'urban men informal employment-household sector is higher than 20.

Within informal employment, horizontal segregation becomes even more evident. Nearly 35 per cent of informal men work in construction, compared to fewer than 20 per cent of informal women. The second-largest group of men—machine operators and drivers—includes over one-fifth of informal men but virtually no women (less than 1 per cent). Conversely, half of all informal women are focused on sales and personal services, where earnings are low. This

gender-based polarization within informality shows that the sector serves as a reservoir of labor organized around traditional gender roles. Men dominate physically demanding and infrastructure-related jobs, while women are pushed into care, commerce, and household services. Far from blurring gender boundaries, informality reproduces them—often more sharply than in the formal sector.

The size and structure of the economic unit act as indicators of productivity and capital intensity. Data on the percentage of workers employed in units with more than five employees reveal a significant division between formal and informal employment, along with a noticeable gender gap within the informal sector. Among formal workers, the vast majority—ranging from 84 per cent to 89 per cent throughout 2022– 2025—are employed in larger units, confirming that formal employment in urban Bolivia mainly occurs in medium and large enterprises with higher productivity and stronger institutional capacity to meet labor and social protection regulations. Conversely, only about 14–16 per cent of informal workers are employed in such units, indicating that most informal work occurs within micro- or family-based economic units. This dominance of small-scale units underscores the productivity limitations at the core of informality: low investment, limited technology, and fragile market access. However, the presence of informal workers in larger enterprises indicates that informality is not confined to micro-production; it also exists within formal businesses that do not comply with social security or labor obligations.

Gender differences are revealing. Among informal workers, women are six percentage points less likely than men to work in companies with more than five employees, reflecting their higher presence in household-based or small-scale production. Among formal workers, however, gender gaps vanish—showing that once women access formal employment, they do so on roughly equal terms regarding company size and institutional coverage.

Table 10. Bolivia - Urban area: Proportion of formal and informal workers in units with 5 or more workers by sex (%), 2q, 2022 - 1q, 2025

	2q-2022	2q-2023	2q-2024	1q-2025
Informal	14.2	16.4	16.2	15.8
Formal	83.9	88.3	83.6	88.9
Informal men	17.0	19.3	18.9	18.6
Informal women	10.8	13.0	13.2	12.5
Formal men	83.9	87.7	84.9	88.1
Formal women	83.8	89.0	81.9	89.9

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.

4.3. Working hours and income between formal and informal jobs

Working hours

In terms of working hours, the data show that workers in the formal sector consistently report longer weekly hours than those in the informal sector in urban Bolivia, with averages ranging

from 41.2 to 42.0 hours in the formal sector and 37.1 to 38.4 hours in the informal sector between 2022 and 2025. However, disaggregation by sex reveals significant internal gaps within each part of the labor market. Among men, the differences between formality and informality are relatively small: informal men work between 41.4 and 42.1 hours weekly—very close to the average of formal men (43.4 to 44.5 hours). This pattern indicates that men, regardless of their labor status, remain highly committed to paid work.

The most notable inequality exists among women. Formal women work between 37.4 and 38.9 hours a week, while informal women work substantially fewer hours, only 32.5 to 34.4. In other words, informal women work 4 to 6 hours less per week than formal women, and 8 to 11 hours less than formal men. These gaps highlight the ongoing gendered division of labor: women—particularly those in informal jobs—have less time for paid work because they carry a disproportionate share of unpaid care and domestic duties. This double burden—rooted in gender and employment type—limits both their working hours and access to income and career growth. In summary, differences in work hours reflect not only the formal– informal divide but also the structural interaction between gender and labor segmentation, which continues to reproduce inequalities in women's access to quality jobs in Bolivia.

Table 11. Bolivia - Urban area: Average weekly working hours by formal and informal employment and sex, 2q, 2022 - 1q, 2025

	2q-2022	2q-2023	2q-2024	1q-2025
Informal	38.4	38.1	37.1	37.8
Formal	41.8	41.2	42.0	41.3
Informal men	42.1	41.9	41.4	41.5
Informal women	34.4	34.0	32.5	33.8
Formal men	43.9	43.4	44.5	44.0
Formal women	38.9	38.1	38.6	37.4

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.

Income

The income data reveal a clear divide in Bolivia's urban labor market based on formality and gender. Formal workers consistently earn between 70 per cent and 100 per cent more per month than informal workers, and this gap has widened recently, especially for informal employment, where monthly income decreased from Bs2,242 to Bs1,974 between 2022 and 2025. From an ILO normative perspective, this income disparity highlights unequal access to labor rights and social protection, showing how workers without contracts or contributions tend to earn systematically less. From a CEPAL structural heterogeneity perspective, income gaps further suggest that informal workers—particularly women—are concentrated in low-productivity sectors that lack technological and capital investment.

The gender breakdown enhances this interpretation. Informal women earn just Bs1,520 per month in 2025, 36 per cent less than informal men (W/M = 64 per cent), while among formal

workers, the gender gap is smaller (W/M 89–93 per cent). These patterns align with the gendered occupational segmentation observed earlier: women are overrepresented in domestic work and low-productivity service jobs and underrepresented in better-paid informal roles linked to male sectors such as construction and transportation. When controlling for hours worked (hourly wages), women in informal employment still earn 17–20 per cent less per hour than men, indicating that gender wage discrimination persists beyond differences in time availability. Conversely, formal women have hourly earnings slightly higher than those of formal men (105–112 per cent), suggesting that when women overcome entry barriers to formality, wage equality—and even an advantage—is attainable. In summary, informality widens the gender wage gap both monthly and hourly, while formalization reduces it.

Table 12. Bolivia - Urban area: Average monthly income by formal and informal employment and sex (%), 2q, 2022 - 1q, 2025

	2q-2022	2q-2023	2q-2024	1q-2025
Informal	Bs2,242.4	Bs2,251.5	Bs2,175.1	Bs1,974.4
Formal	Bs4,043.4	Bs3,977.5	Bs4,031.6	Bs3,498.2
Informal men	Bs2,711	Bs2,694	Bs2,638	Bs2,378.5
Informal women	Bs1,689	Bs1,741	Bs1,634	Bs1,520.5
W/M (%)	62	65	62	64
Formal men	Bs4,219	Bs4,169	Bs4,234	Bs3,606.0
Formal women	Bs3,799	Bs3,716	Bs3,758	Bs3,345.1
W/M (%)	90	89	89	93

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.

Table 13. Bolivia - Urban area: Average hourly income by formal and informal employment and sex (%), 2q, 2022 - 1q, 2025

	2q-2022	2q-2023	2q-2024	1q-2025
Informal	Bs15.4	Bs15.5	Bs15.6	Bs13.9
Formal	Bs26.9	Bs27.3	Bs27.4	Bs24.0
Informal men	Bs17.0	Bs16.8	Bs17.0	Bs15.1
Informal women	Bs13.6	Bs13.9	Bs14.0	Bs12.5
W/M (%)	80	83	82	83
Formal men	Bs26.3	Bs26.8	Bs26.8	Bs22.9
Formal women	Bs27.8	Bs28.0	Bs28.1	Bs25.6
W/M (%)	106	105	105	112

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.

To deepen the analysis of the gender gap within formality and informality, we examined the share of workers earning below the national minimum wage in both sectors in urban Bolivia. Throughout all years, over half of informal workers (52– 57 per cent) earn below the minimum wage, compared to 7–10 per cent of formal workers, confirming that informality is closely linked

to insufficient labor income and increased poverty risks. Regarding formality, the share of low-income workers remained below 10 per cent for most of the period, with a slight improvement in 2025 (7.2 per cent).

Gender gaps within informal work are sharply evident. In 2025, nearly threequarters of informal women (74.7 per cent) earned below the minimum wage—almost twice the share of informal men (40.2 per cent)—making women the most impacted group in the labor market. Even in formal jobs, women consistently face higher vulnerability (8–13 per cent) compared to men (6–9 per cent). These figures show that women— especially those in informal employment—encounter the greatest challenges.

Table 14. Bolivia - Urban area: Proportion of formal and informal workers with monthly incomes below the national minimum wage (per cent), 2q, 2022 - 1q, 2025

	2q-2022	2q-2023	2q-2024	1q-2025
Informal	52.0	55.5	56.7	56.4
Formal	9.6	9.8	10.3	7.2
Informal men	34.8	39.1	39.9	40.2
Informal women	72.5	74.4	76.3	74.7
Formal men	7.8	7.7	9.3	6.4
Formal women	12.1	12.8	11.8	8.4

Source: IISEC-UCB, based on data from the Continuous Employment Survey (ECE), INE.

5. Conclusions

The findings of this study reaffirm the structural, institutional, and gendered nature of labor informality in Bolivia. The theoretical framework outlined here—integrating the ILO's rights-based approach, CEPAL's view of structural heterogeneity perspective, and feminist analyses of care and time—offers a multidimensional perspective that makes the empirical evidence more understandable.

From an ILO perspective, the persistent lack of labor and social protection for more than four out of five urban workers highlights the limited scope of formal rights and regulations. Informality remains the primary mode of labor participation, rather than just a fallback from standard employment relationships. From a CEPAL view on structural heterogeneity, the findings show the continued dominance of low productivity units in Bolivia's economy. The high number of informal workers in micro-enterprises and own-account activities, without tax registration and where productivity, scale, and technological capacity are limited, confirms that informal work persists because productive transformation remains highly incomplete.

Incorporating the feminist perspective reveals how these structural and regulatory conditions become deeply gendered. Women are not only more likely to work in informal jobs but are also systematically concentrated in the most vulnerable segments—domestic work, unpaid family

labor, and low-paid services linked to social reproduction. These types of employment depend on flexible hours that accommodate unpaid care responsibilities, reinforcing a cycle of time poverty and low earnings. While women who access formal employment significantly reduce wage gaps, barriers to entering such jobs remain high and are rooted in the unequal organization of care. The empirical evidence indicates that gender intersects with other social hierarchies—especially education and ethnicity— creating layered vulnerabilities. These patterns show that informality is not just an economic condition but a social institution that distributes risk, time, and vulnerability along gendered and racialized lines.

Taken together, these findings demonstrate that Bolivia's labor market segmentation results not only from insufficient productive transformation or weak institutional coverage but also from social norms that normalize women's unpaid labor. Since most care work remains privatized within households—mainly performed by women—informality will continue to be a gendered necessity that supports economic survival under limited public support (Wanderley, 2011). These insights have important policy implications. Strategies that focus solely on regulatory enforcement or business formalization while neglecting the reorganization of care are unlikely to reduce the gendered burden of informality. Similarly, productive transformation policies that fail to account for women's time constraints risk reinforcing existing inequalities (ILO, 2018a). A transformative approach to formalization must therefore include: expansion of social protection and labor rights to all types of employment, including domestic and own-account work; industrial and productive policies that increase access to high-productivity jobs for women; and comprehensive care systems that shift unpaid labor from households to the State, communities, and employers (Nieves and Robles, 2016; Esquivel and Kaufmann, 2017; ILO and UNDP, 2009).

In sum, a gendered political economy perspective redefines the stakes of the informality debate. The challenge for countries such as Bolivia is not merely transitioning workers from informal to formal employment but transforming the social relations that make informal work a gendered necessity. Recognizing care as productive work and a central economic function, and redefining production to include the labor that sustains life, are essential conditions for ensuring that formalization contributes not only to economic upgrading but also to gender justice and transformative development.

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WOMEN'S ECONOMIC AUTONOMY AND OVEREXPOSURE TO INFORMALITY IN CONFLICT CONTEXTS: AN EMPIRICAL ANALYSIS FOR TERRITORIAL PEACE IN COLOMBIA

By Emma Avila Garavito, María Moyano and Cristian Castillo[45]

Summary

This paper analyzes the effect of the armed conflict on the economic autonomy of women in Colombia, focusing on their structural overexposure to informal labor markets. Using a mixed-methods approach, it combines quantitative analysis of merged microdata from the Registro Único de Víctimas (RUV) and the Gran Encuesta Integrada de Hogares (GEIH) with a feminist and political economy perspective. A binary logit model was estimated to examine how gender and victimization interact to shape the probability of labor informality, controlling for age, education, and rurality. The results show that women exposed to the conflict are 1.33 times more likely to be employed without social protection than men, confirming the persistence of gendered vulnerability and the feminization of precarious work. Despite national reductions in overall informality, rates among women victims remain near 70 per cent, revealing an enduring exclusion from formal employment and limited economic recovery after displacement. The findings underscore that informal employment among women victims is not a transitory phenomenon but a structural manifestation of inequality that constrains their economic autonomy and threatens the sustainability of peacebuilding in post-conflict territories.

Keywords: Women's economic autonomy; labor informality; armed conflict; gender inequality; feminist economics; displacement; peacebuilding; Colombia.

JEL Code: J16, O17, J21, D63, O54, F51.

1. Introduction

The Colombian armed conflict has shaped, over more than five decades, a structure of inequalities that has differentially affected women. The loss of land, sexual violence, forced displacement, and the rupture of family and community networks have directly undermined their capacity to generate income and sustain dignified life projects. This constellation of violences has deepened economic dependence and restricted women's possibilities for material and

symbolic autonomy, placing them in conditions of structural vulnerability that persist even in post-agreement contexts. In this scenario, the research addresses a central problem: the overexposure of women victims of the armed conflict to labor informality as an expression of economic exclusion and of the fragility of the social fabric that underpins peace.

The purpose of the study is to explore the relationship between victimization and women's economic autonomy, describing differences in labor insertion according to gender and exposure to conflict. The specific objectives are oriented toward quantifying the incidence of victimization on the probability of informal employment, examining the interaction between woman × exposure to conflict, and interpreting the results through the theoretical frameworks of feminist economics, ECLAC's concept of economic autonomy, and Silvia Federici's critical reflections on reproductive labor and primitive accumulation. These perspectives help show that female precariousness is not a collateral effect of war but a structural manifestation of historical gender inequalities.

Methodologically, the research combines a quantitative and analytical approach with an interpretive, structurally oriented reading. A binary logistic model (logit) was estimated using matched microdata from the Registro Único de Víctimas (RUV) and the Gran Encuesta Integrada de Hogares (GEIH), corresponding to 28,241 employed individuals between 18 and 65 years of age. The dependent variable—labor informality—was defined as the absence of pension contributions, and explanatory variables included age, educational attainment, area of residence, and a combined categorization of sex and exposure to conflict. This empirical design made it possible to observe, in a differentiated way, the structural effect of victimization on women's labor insertion.

The results show that women exposed to conflict are 1.33 times more likely to be employed under informal conditions than men, even after controlling for education, age, and rurality. This finding confirms the persistence of a structural gender gap shaped by the unequal distribution of care, the loss of productive assets, and the absence of effective economic reparation policies. Far from being a temporary survival mechanism, female informality constitutes a trap of labor poverty that restricts the reconstruction of livelihoods and perpetuates women's exclusion in the territories most affected by violence.

This analysis reveals that women's economic autonomy is an essential condition for the sustainability of territorial peace. As long as the economy remains grounded in the precarization of women's labor and the invisibilization of care, overcoming war will remain incomplete. Promoting the productive inclusion of women victims—through a rights-based and feminist-economics lens—not only repairs material harm but also transforms the very foundations of inequality upon which the Colombian conflict has been built.

2. Objectives

General Objective

To analyze the relationship between exposure to the armed conflict and women's economic autonomy in Colombia, identifying how victimization affects their insertion into informal employment and the persistence of gender gaps in access to formal work.

Specific Objectives

-To describe the labor conditions of the population victim of the armed conflict, with particular emphasis on women's participation and labor informality.

-To estimate the probability of insertion into informal employment according to gender and exposure to conflict, through a binary logistic model applied to matched microdata from the Registro Único de Víctimas (RUV) and the Gran Encuesta Integrada de Hogares (GEIH).

-To interpret the empirical results in light of feminist economics and the concept of economic autonomy, analyzing how women's labor informality reproduces structural conditions of dependence and exclusion that hinder the construction of territorial peace.

3. State of the art

Women's Economic Autonomy

Women's economic autonomy is defined as the capacity to generate and control their own income, access productive resources on equal terms, and freely decide over their economic life. It encompasses not only access to paid employment, but also personal, social, and political dimensions of empowerment (López Mendoza & Palacio Puerta, 2020, p. 12). According to ECLAC, achieving economic autonomy requires articulating three inseparable dimensions: economic autonomy (control over assets and redistribution of care), physical autonomy (living free from violence), and autonomy in decision-making (full participation in public life) (Güezmes, Scuro, & Bidegain, 2022, p. 316). This implies that formal equality before the law is insufficient if the structures sustaining gender inequality are not transformed.

Despite normative advances, labor and wage gaps continue to restrict women's autonomy. In departments such as Nariño (Colombia), women exhibit lower labor force participation and higher unemployment rates than men, in addition to a wage gap fluctuating between 13 per cent and 16 per cent in favor of men (Goyes, Gallego, & Jaramillo, 2019, p. 127). This inequality is deepened by the unpaid care burden: women devote more than twice the time men spend on domestic tasks, which limits their labor-market insertion and social participation (Observatorio de Género de Nariño, 2019, p. 44). As a result, the so-called "feminization of poverty" persists as a structural expression of women's economic and social exclusion.

The literature agrees that economic autonomy can only be achieved through comprehensive

policies that combine access to decent work, redistribution of care responsibilities, elimination of gender-based violence, and strengthening of women's leadership (ECLAC, 2022, p. 57). This requires advancing toward substantive equality, ensuring that women not only participate in the labor market, but do so under conditions of equity and with the ability to influence economic and political decisions. In this sense, economic autonomy should not be understood as individual independence, but as a structural transformation oriented toward social justice and the construction of peace (López Mendoza & Palacio Puerta, 2020, p. 18).

Differential Effect of the Armed Conflict on Women's Economic Autonomy

The internal armed conflict in Colombia has differentially affected women, who—according to the Constitutional Court's Auto 092—face ten victimizing acts that impact them more severely than men, including sexual violence as a weapon of war, forced displacement, threats, and the dispossession of their land and productive assets. These factors aggravate pre-existing inequalities, amplifying gender gaps in the economic sphere. Numerous studies have documented that war and forced displacement generate massive patrimonial losses and socioeconomic shocks from which recovery is particularly difficult, especially for the most vulnerable households. Ibáñez and Moya (2010) found that most displaced households in Colombia lost their productive assets—land, housing, tools—during the conflict, and that only one quarter managed to rebuild their asset base after displacement.

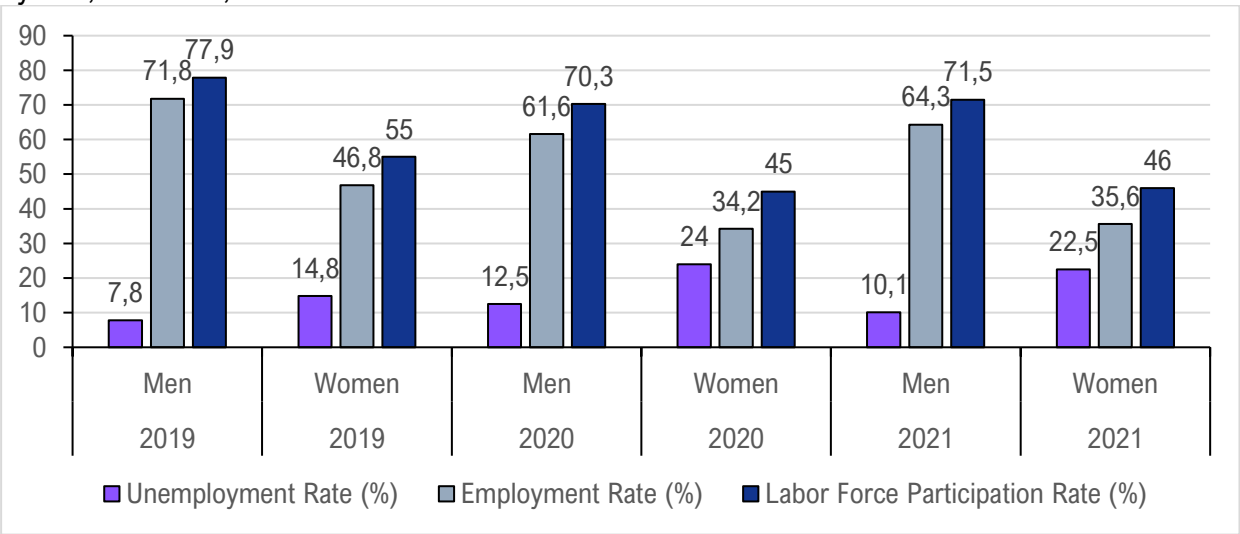
This loss of capital places families in long-term structural poverty: 75 per cent of displaced households remain trapped in low-income trajectories, unable to recover their previous level of well-being (Ibáñez & Moya, 2010). This process constitutes a "poverty trap" induced by violence, in which the destruction of livelihoods prevents resource accumulation unless sustained and reparative policy interventions are implemented.

In this context, many women victims—often having lost their partners, support networks, or economic capital—are forced to assume the role of sole providers under highly adverse conditions. Forced displacement has contributed to the feminization of poverty and informality in Colombia (ECLAC, 2022). A high percentage of displaced households are headed by women, many of them from rural areas, with low levels of education, unshared caregiving responsibilities, and fragmented social networks (DPS & UARIV, 2022). This trend is evident in data from the Registro Único de Víctimas (RUV), which as of September 2025 recorded 4,624,938 displaced women (51 per cent of the total).

Upon arriving in urban environments, these women face the dual burden of uprootedness and structural marginalization: they are unable to access stable formal employment due to their occupational profiles, saturation of the urban labor market, or the stigmas associated with being victims (Montiel Ensuncho, 2024). In the absence of formal opportunities, many resort to activities such as street vending, part-time domestic work, or small informal trades to survive. While these occupations provide minimal income, they reinforce their insertion into the informal sector under conditions of instability, lack of social protection, and, in many cases, institutional persecution.

Empirical data support this diagnosis. According to the technical report by UARIV and the Department for Social Prosperity (DPS & UARIV, 2022), between 2019 and 2021 the unemployment rate for victims of displacement exceeded the national average by several percentage points. This gap was especially critical for women victims: in 2021, unemployment among displaced women reached 22.5 per cent, more than double that of male victims (~10 per cent) and well above the national female unemployment rate (DANE, 2022).

Figure 1. Unemployment, Employment, and Labor Force Participation Rates of Conflict Victims by Sex, Colombia, 2019–2021.



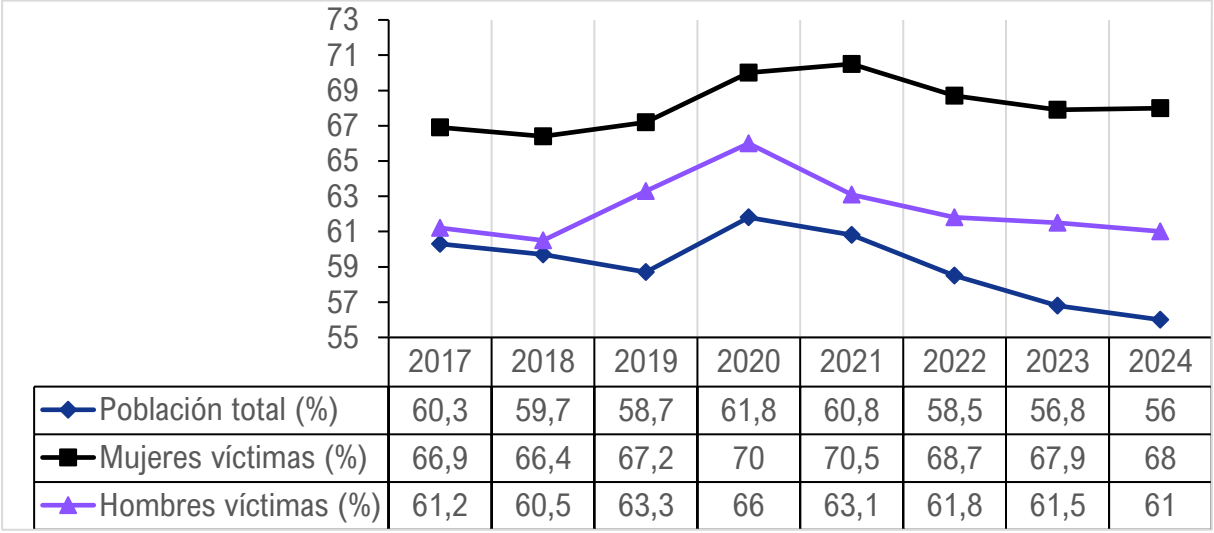
Source: Prosperidad Social based on GEIH–RUV matching, 2019–2021.

In addition to unemployment, labor force participation is notably low: only 46 per cent of displaced women were active in the labor market, compared to 71.5 per cent of displaced men. Among the few who manage to obtain employment, the vast majority do so under informal conditions. The labor informality rate among victims in urban areas reached 70.5 per cent, 14.5 percentage points above the national urban average (DANE & UARIV, 2022).

These problems were exacerbated by the COVID-19 pandemic, which disproportionately affected women in Colombia. In 2020, the gender unemployment gap reached historical levels (21 per cent for women versus 12 per cent for men), and many displaced women who had secured formal employment lost their jobs, falling once again into inactivity or the informal economy (ECLAC, 2021; DPS & UARIV, 2022).

The evolution of labor informality between 2017 and 2024 shows that this phenomenon is structural and persistent among the population victim of the armed conflict. Despite slight improvements in the national average, informality in this group remains above 67 per cent, reflecting a historical exclusion from the formal labor market. Within this group, women victims face the greatest precariousness: their informality rate exceeds that of male victims by more than 10 percentage points and the national average by 14 points, remaining close to 70 per cent throughout the entire period observed.

Figure 2. Evolution of Labor Informality Among the Victim Population (2017–2021



	2017	2018	2019	2020	2021	2022	2023	2024
Población total (%)	60,3	59,7	58,7	61,8	60,8	58,5	56,8	56
Mujeres víctimas (%)	66,9	66,4	67,2	70	70,5	68,7	67,9	68
Hombres víctimas (%)	61,2	60,5	63,3	66	63,1	61,8	61,5	61

Source: Author's elaboration based on RUV/UARIV – GEIH/DANE

The impact of the pandemic is evident in the informality peak recorded between 2020 and 2021, when women victims reached a maximum of 70.5 per cent, a direct result of the loss of formal employment and the need to resort to subsistence strategies. Although the post-pandemic phase shows a slight improvement in total employment, economic recovery has not closed the gaps: informality rates among women victims have not returned to pre-conflict or pre-pandemic levels, highlighting an unequal recovery with no gender-sensitive approach.

Follow-up studies indicate that, despite the Peace Agreement and socioeconomic stabilization policies, labor gaps based on gender and victim status persist (Montiel Ensuncho, 2024). The overexposure of women victims to labor informality is not a collateral consequence of the conflict but a direct effect of the way in which it differentially affected their access to resources, networks, and productive opportunities.

4. Methodology

The logistic model was used to estimate the probability of belonging to the group of informal workers, based on a set of sociodemographic characteristics and exposure to the conflict.

The general specification of the model is as follows:

$$logit\big(P(informali = 1)\big) = \beta 0 + \beta 1 Xsexo_{exposicio}\acute{}n, i + \beta 2 Edadi + \beta 3 Educacio\acute{}ni + \beta 4 Zona_{ruralI} + \varepsilon i$$

Where:

$P(\text{informal}_i = 1)$is the probability that individual i is employed under informal conditions.

$X_{\text{sex_exposure},i}$represents a categorical variable constructed from the intersection between sex and differential exposure to the armed conflict, which summarizes the degree of structural

vulnerability of the individual according to their gender and the intensity of collective victimization.

Age $_i$, Education $_i$, and Rural_area $_i$ are socioeconomic control variables.

Variable Construction

1. Dependent variable:

informal = 1 if the individual does not contribute to the pension system (P6920 = 2).

informal = 0 if the individual contributes (P6920 = 1).

This criterion was selected due to its relevance for measuring effective social protection, beyond the firm-size criterion used in DANE's official definition of informality.

2. Conflict exposure variable:

Information from the Registro Único de Víctimas (RUV, September 2025) was used and processed through sex-based aggregation.

Based on the total number of registered victims by sex, a sex-specific victimization proportion indicator was constructed, reflecting the greater affectation of women (50.7 per cent) compared to men (49.3 per cent).

3. Structural variable sexo_exposicion_f3:

A three-level categorical variable was defined by combining sex and exposure to the armed conflict:

0 = Man (reference category)

1 = Woman not exposed

2 = Woman exposed to the conflict

This categorization captures the combined effects of gender and conflict on the probability of informality, avoiding perfect collinearity between sex and exposure.

4. Control variables:

Age: age in completed years.

Education: highest educational attainment (from 1 = no education to 13 = postgraduate).

Rural area: dummy variable (=1 if the individual resides in a rural area; =0 if urban).

The analyzed sample included 28,241 employed individuals between 18 and 65 years of age, belonging to households surveyed by GEIH in the reference month.

Methodological Summary

- Database preparation and cleaning:

The GEIH General Characteristics and Employed Persons datasets were integrated using the

keys DIRECTORIO, SECUENCIA_P, and ORDEN. Individuals aged 18 to 65 who were employed were selected, and records with incomplete information were removed.

- Integration with the RUV:

Data from the Registro Único de Víctimas (RUV) were processed to calculate the proportion of victimization by sex, assigning this value to each individual according to their sex at birth (P3271).

- Model specification and estimation:

A binary logistic model (MLE) was estimated using Python's statsmodels library, employing a categorical variable (sexo_exposicion_f3) that combines sex and exposure to the conflict, with men serving as the reference group.

- Robustness checks and diagnostics:

The estimation using White-type robust standard errors (HC0) showed information-matrix singularity due to near-perfect separation among exposed women; standard MLE results were therefore reported, interpreting this instability as evidence of the structural precariousness experienced by women in contexts of victimization.

5. Results and Comments

The logistic model estimated with GEIH microdata (August 2025) made it possible to identify the factors that influence the probability of being employed under informal conditions, measured through the absence of contributions to the pension system. In total, 28,241 employed individuals between 18 and 65 years of age were analyzed, providing a solid representation of the working-age population.

The following table presents the odds ratios derived from the maximum likelihood estimation (MLE) model, where the dependent variable corresponds to the probability of labor-market insertion without pension protection. The control variables included age, highest educational attainment, and the rural or urban condition of the place of residence. The main explanatory variable, sexo_exposicion_f3, combines information on sex and exposure to the armed conflict to capture structural differences among men, non-exposed women, and women exposed to the conflict.

The results confirm the persistence of structural gender gaps in the Colombian labor market, particularly in contexts marked by violence and displacement. Compared to men (the reference category), women not exposed to the conflict exhibit a similar probability of working in the informal sector (OR = 1.00), whereas women exposed to the armed conflict are 1.33 times more likely to be employed in occupations without social protection—a difference that reflects the sustained impact of victimization and the loss of livelihoods on women's economic trajectories.

Table 1. Effects of Conflict Exposure and Socioeconomic Characteristics on the Probability of Informal Employment

Variable	Coefficient (β)	Odds Ratio (e^β)	Economic Interpretation
Intercept	2.90	18.20	Baseline logit value for men of working age, living in urban areas and with an average educational level.
Non-exposed woman (CT.1)	0.00	1.00	Non-exposed women have the same probability of informality as men.
Woman exposed to conflict (CT.2)	0.29	1.33	Women exposed to conflict are 1.33 times more likely to be in informal employment compared to men, controlling for age, education, and rural residence.
Age	-0.0085	0.99	Each additional year of age slightly reduces (≈0.8 %) the probability of informality.
Educational level	-0.4150	0.66	Each additional level of education reduces the probability of being in informal employment by 34 %.
Rural area (1 = yes)	0.67	1.95	Individuals living in rural areas are almost twice as likely to hold jobs without pension protection.

Source: Author's own calculations based on GEIH and RUV (August 2025).

The control variables displayed the expected signs, consistent with economic theory. Age shows a negative effect on the probability of informality (OR = 0.99), indicating that older workers have a lower risk of insertion into precarious jobs, likely due to accumulated work experience and social networks. In the case of education, the effect is also negative and statistically relevant: each additional level of education reduces the probability of informality by approximately 34 per cent (OR = 0.66), confirming the protective role of human capital against labor precariousness. Finally, the rural-area variable exhibits a substantial positive effect (OR = 1.95), meaning that those living in rural areas are nearly twice as likely to work without pension affiliation compared to urban residents.

These results reinforce the study's central hypothesis: exposure to the armed conflict magnifies gender inequalities in formal employment, placing displaced or violence-affected women in more unstable and less protected labor positions. The combination of low educational attainment, rural residence, and collective victimization creates a scenario of structural precarization in which women face greater barriers to accessing formal and sustainable employment.

Thus, the model demonstrates that women's labor informality—particularly among victims or those from conflict-affected areas—constitutes a persistent effect of the armed conflict on economic autonomy. Even though educational gaps have narrowed, the conditions of labor-market insertion continue to reflect the social scars of displacement and violence, confirming the need for public policies aimed at productive inclusion and economic reparation for women in the territories.

6. Conclusions

The logistic model applied to GEIH (2025) and RUV microdata shows that women's labor informality in Colombia is a structural phenomenon that reflects the differentiated impacts of the armed conflict and historical gender inequalities.

In a sample of 28,241 employed individuals aged 18 to 65, women exposed to the armed conflict are 1.33 times more likely to be employed without pension protection than men, while non-exposed women maintain a similar probability (OR = 1.00). This finding confirms that victimization and forced displacement are decisive factors in women's economic precarization, as they limit the reconstruction of productive assets and access to formal employment after the loss of livelihoods (Ibáñez & Moya, 2010; DPS & UARIV, 2022).

The control variables reinforce these structural inequalities: educational attainment significantly reduces the probability of informality (OR = 0.66), age slightly decreases it (OR = 0.99), and rural residence nearly doubles the risk of working without pension affiliation (OR = 1.95), reflecting the persistent territorial exclusion of rural populations and the low returns to women's human capital.

From a theoretical perspective, the results align with the arguments of feminist economics (Lagarde, 2012; ECLAC, 2022), which interpret informality as an expression of economic dependence and the unequal distribution of care work. The armed conflict and displacement have intensified these conditions, producing what may be termed a female labor-poverty trap, in which women assume productive roles in contexts of dispossession, precarity, and institutional invisibility

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STRUCTURAL INFORMALITY AMONG WOMEN RECIPIENTS OF SOCIAL PROGRAMS

By Nara Álvarez and Julieta Constantino[46]

Summary

This paper analyzes the labor trajectories of women enrolled in the Potenciar Trabajo program, based on the processing and reinterpretation of data collected between 2021 and 2022 for the Ministry of Social Development. The study examines how their conditions of labor insertion are shaped within a context marked by gender inequalities and high levels of informality.

The research adopts an explanatory approach, using methodological triangulation, and integrates sociodemographic, educational, and labor variables. Additional data updated to 2025 are incorporated for contextualization. A central contribution of the study is the use of a self, developed indicator: structural informality, along with its expanded version: expanded structural informality, which incorporates domestic work. This perspective enables a more precise understanding of the role played by historically feminized tasks in shaping women's labor trajectories and in sustaining their participation in circuits characterized by low protection and high precarization.

The results show that most women combine community and care activities with informal occupations that receive limited economic recognition, resulting in fragmented and persistent labor trajectories. These dynamics reveal that, even within policies aimed at socio-productive inclusion, the structural conditions that organize work continue to restrict women's real possibilities of accessing formal employment.

The analysis contributes to the debate on the scope and limitations of social and employment programs in promoting women's economic autonomy, as well as the need to recognize and integrate domestic, community, and care work into the evaluation of their labor trajectories.

Keywords: Informality, Potenciar Trabajo, gender, social programs

JEL Codes: J16, J46, I38, J16, J46, I38

1. Introduction

This paper builds on a study conducted between 2021 and 2022 for the Ministry of Social Development, whose purpose was to develop a baseline on the sociodemographic and labor characteristics of individuals enrolled in the "Potenciar Trabajo" program[47]. Building on that

foundation, the present research advances a more specific analysis: to understand the labor trajectories of women beneficiaries, incorporating a gender perspective that sheds light on the structural conditions shaping their labor insertion and their possibilities of accessing rights and achieving economic autonomy.

In 2020, the National Government, through the Ministry of Social Development, created the National Program for Socio-Productive Inclusion and Local Development, "Potenciar Trabajo". The program sought to promote the socioeconomic inclusion of people in situations of high vulnerability through the unification of previous programs ("Hacemos Futuro" and "Salario Social Complementario"), the improvement of existing employment, and the development of new productive initiatives. Its main lines of action included the formulation of socio-productive and socio-community projects, completion of formal education, and training and certification of labor competencies. These initiatives were articulated by local Management Units, responsible for designing projects according to the characteristics of each territory.

The program targets workers in the popular economy who cannot meet their basic needs or earn the minimum wage. It emerges as the result of the integration and evolution of various social programs aimed at promoting labor inclusion and improving income among vulnerable sectors, such as:

- "Argentina Trabaja" (2009): Promotion of cooperative work, socio-productive training, and improvement of community spaces.
- "Ellas Hacen" (2013): Inclusion of women heads of household through skill training, gender-focused education, and urbanization of vulnerable neighbourhoods.
- Transition to "Salario Social Complementario" (2017): Support for workers in the popular economy facing labor vulnerability.
- "Hacemos Futuro" (2018): Emphasis on education, health, and economic autonomy with a gender and diversity perspective.

These programs emerged as state responses to the expansion of informal employment, structural unemployment, and the crisis of 2001, consolidating a line of active social policies. The distinguishing feature of "Potenciar Trabajo" was its intention to integrate assistance with the logic of work and production, reinforcing coordination with local governments and social organizations.

Although there is academic research and national and international reporting on the program's impact since its implementation, most of this work does not examine in depth the role of women within initiatives that, in principle, aim to facilitate transitions toward formal employment. This gap is particularly significant considering that 70 per cent of the program's beneficiaries are women and nearly 60 per cent come from previous programs—bringing with them community and labor experience that is often rendered invisible.

Furthermore, most women beneficiaries engage in care-related activities, community kitchens,

maintenance of public spaces, and other assistance tasks that have historically been socially feminized. While the program's distinctive feature was the promotion and strengthening of productive units to advance toward full social inclusion and income improvement as a path to economic autonomy, this approach did not substantially alter the prevailing logic of labor insertion. In reality, women are already inserted in the labor market, but within circuits that have long been undervalued, precarious, and sustained by a heavy burden of domestic and community work.

This situation is clearly reflected in informal employment indicators. Between 2021 and 2024, levels of structural informality remained high, ranging from 74 per cent to 83 per cent; and when domestic work is incorporated through the expanded structural informality indicator, values consistently exceeded 83 per cent. This gap demonstrates that the unequal organization of labor and care continues to shape women's labor trajectories, reinforcing their concentration in low-paid, highly precarious, and socially undervalued sectors.

Against this backdrop, the analysis focuses on examining the type of labor insertion maintained by women within the program, as well as the activities they perform outside of it. To do so, the study considers sociodemographic and socio-labor variables such as occupations, caregiving responsibilities, household composition, and educational and training levels, in order to understand the factors that facilitate or hinder their incorporation into the formal labor market and the challenges they face regarding labor rights and economic autonomy.

In this sense, the guiding question of the study is: Do programs such as Potenciar Trabajo contribute to sustaining structural informality in women, or can they become tools to promote their economic autonomy and the recognition of their community-based labor and knowledge?

2. Objectives

General: Analyze the labor and social trajectories of women enrolled in the Potenciar Trabajo Program (2021–2022), based on their type of labor insertion.

Specific:

- Characterize labor and social trajectories.
- Identify gender differences in types of labor insertion.
- Analyze the factors that shape women's participation in social programs.
- Examine the factors that sustain their permanence in structural informality.

3. Background

The relationship between social programs and labor informality among women has been widely discussed in Latin American literature, especially in contexts where the feminization of poverty

and employment precarity are structural features of labor markets. In Argentina, as in other countries in the region, women's participation in the informal economy is shaped by longstanding gender inequalities, the lack of recognition of care work, and structural barriers to accessing formal employment. This section reviews key theoretical and empirical debates connecting these dynamics with the role of social programs.

In recent years, the concept of a gender perspective has gained relevance in the evaluation and implementation of social policies, as well as in academic work and research projects. Incorporating this perspective into public policies helps to denaturalize and make visible gender differences in order to promote equitable transformations.

A gender perspective contributes analytical tools that allow us to observe how social representations, biases, and stereotypes operate. This makes it possible to interrogate what is taken for granted, exposing differences and inequalities between men and women across different areas of life.

To begin, it is important to consider the economic and social context that took shape during the 1990s, which reshaped the way public policies were designed and implemented. In the late 1980s and early 1990s, the World Bank and the IMF promoted adjustment policies based on the Washington Consensus. These measures prioritized reducing the fiscal deficit to stabilize the macroeconomy. Alongside this, they proposed cutting public spending and targeting subsidies to areas such as education and health. The consequences for the working class were devastating, especially for women, who entered the labor market under far more precarious conditions.

As Repetto (Fabián) notes, "the actions of Argentine political authorities were more focused on the economic agenda than on the social agenda, taking into account that with the shift in the political and socioeconomic model, social policies—particularly those aimed at addressing poverty—ceased to be the exclusive responsibility of the national state." In this context, poverty alleviation programs targeting specific groups—such as mothers and children, small productive enterprises, and older adults—were created, financed by multilateral credit organizations, and decentralizing implementation toward civil society.

In 1994, the Social Development Secretariat was created, guided by principles of efficiency, effectiveness, and transparency in social spending; as well as targeting, monitoring, and strengthening community participation through coordination among government, community organizations, and municipalities. A program supported by international organizations was created to professionalize the design, targeting, and evaluation of social programs. SIEMPRO (Social Program Information, Evaluation and Monitoring System) led the production of knowledge around a new paradigm of social policy—one that redefined beneficiaries by distinguishing between levels of poverty, vulnerability, and exclusion (Kessler, 2014).

In this new model of state intervention, "the criteria were not only linked to highly sophisticated targeting strategies, but also reflected a compartmentalized, static, homeostatic reading of

families and of the subjects of state attention. In this model, women—adult, working, but 'unemployable,' expert caregivers, with plenty of available time,' with few resources and almost no power—became the privileged interlocutors of state bureaucracies" (Paura & Zibecchi, 2014).

During the Duhalde administration (2002), through Decree 562/02, the Social Inclusion Family Right: Unemployed Heads of Household Program was established, which provided a non-remunerative subsidy of 150 Argentine pesos to all unemployed heads of household with children under 18 or with disabilities (of any age), as well as pregnant women. Those receiving income from another employment program or receiving pension or non-contributory benefits were not eligible (Ana Laura Rodríguez Gustá, 2014).

The program also required recipients to complete a work requirement. To this end, employer registries were created in each municipality so that small and medium-sized enterprises—especially SMEs—could hire unemployed individuals enrolled in the plan. For greater efficiency and effectiveness, the Heads of Household Program was implemented through a decentralized structure that relied on municipalities. The program was composed mostly of women, who accounted for approximately 70 per cent of all beneficiaries (Roca et al., 2005).

Today, similar characteristics can be observed in the national Potenciar Trabajo program. One of its goals is to promote social inclusion by improving occupational insertion and, consequently, increasing the income of participants.

The program merges previous initiatives—"Hacemos Futuro" and the Complementary Social Salary—while aiming to transform social plans by emphasizing employability and productive activities. At the same time, "Potenciar Trabajo" incorporates key features of earlier programs such as "Argentina Trabaja", "Ellas Hacen", and "Hacemos Futuro".

In this regard, in both earlier programs and "Potenciar Trabajo", a new notion of universality emerges—one that revalues and links labor market incorporation to the requirement of a work-related contribution. However, this does not necessarily mean that the diverse situations experienced by program participants are adequately addressed—especially those faced by women, who make up the majority of beneficiaries and who remain the most excluded from formal labor markets.

Aligned with the discussion in this study about the expectations that were meant to differentiate "Potenciar Trabajo" from previous programs in terms of labor development and insertion, Ledda's (2023) analysis offers a critique along the same lines. The author argues that many women were already performing, prior to the program, the same tasks they continue to carry out within it, revealing continuity rather than transformation in their labor trajectories. Although the program does introduce a process of valuing the work women do in their households and communities, this is not sufficient to alter the logic of the sexual division of labor: "the program valorizes the social organization of care, defamilializing it, although the limitation remains that it is still women who are exclusively responsible for these care tasks" (Ledda, 2023).

All these programs were formulated with the goal of enabling participants to enter the labor market or exit poverty or extreme poverty. However, they did not take into account the specific situations faced by the groups involved. Although universality and new forms of social policy implementation introduced significant changes in how beneficiaries were understood, the gender perspective remains a pending issue—one that still requires deeper analysis and implementation. This debate continues to be open both in academic spaces and within feminist movements.

4. Methodology

This study builds on and reinterprets data from the research conducted for the Ministry of Social Development (2021–2022), which characterized beneficiaries of the "Potenciar Trabajo" program. However, this investigation explicitly incorporates a gender perspective, which entails an analysis focused on women and considers variables such as gender, education, type of labor insertion, and employment trajectories. In addition, data were updated to 2025 using secondary sources to contextualize the findings.

The research employed a mixed-methods design, based on the triangulation of qualitative and quantitative methodological approaches, which were combined to complement the information obtained. In this way, the development and application of multiple strategies to address the object of study enabled an in-depth understanding and analysis of the beneficiaries and their socio-labor situation, allowed for validating and contrasting information, and reduced analytical uncertainty while enhancing the study through diverse data sources.

On the one hand, a structured survey was implemented to collect sociodemographic and labor characteristics of the participants. On the other hand, a semi-structured interview guide was used with representatives of the Management Units, in order to further explore organizational aspects and program implementation dynamics.

Additionally, several criteria were considered for selecting the units, such as the size of the city or locality where each unit operates—which generally correlates with the number of associated beneficiaries; the inclusion of both governmental units and those belonging to social organizations; the incorporation of management units located in the Metropolitan Area of Buenos Aires (AMBA) as well as in other provinces; and the consideration of units with different political or party orientations, among other factors.

For the qualitative component, analytical dimensions were developed jointly with the Ministry's team to guide conversations on aspects relevant to the design and management of the Program. As interviews were conducted in different territories, a set of conceptual dimensions was progressively structured, which generally cut across the management processes of the Potenciar Trabajo program.

Finally, an intentional and analytically representative sample of projects was defined, segmented

by municipality and by the predominant productive sectors in each area. Since probabilistic sampling was not feasible, efforts were made to ensure that the selection adequately reflected the diversity and key characteristics of the population under study. In the end, 40 projects were selected, resulting in a total sample of 288 beneficiaries.

5. Results and Discussion

Argentina's socio-productive structure has historically been characterized by profound structural heterogeneity, which is strongly reflected in the labor market. The country exhibits a coexistence of dynamic economic activities—with high productivity and formal employment—alongside low-skilled sectors marked by low wages and high levels of precariousness. Evidence shows that this segmentation is not reversed solely through periods of economic growth or macroeconomic stability, as it stems from structural conditions deeply embedded in the development model.

Within this context, a broad segment of informal workers faces persistent constraints associated with limited economic, social, and technological capital. These limitations exclude them from accessing modern, protected employment and push them into precarious occupations as a basic survival strategy. Even during periods of cyclical economic expansion, the persistence of informality highlights the absence of a sustainable and inclusive development pattern capable of integrating these sectors under better-quality labor conditions.

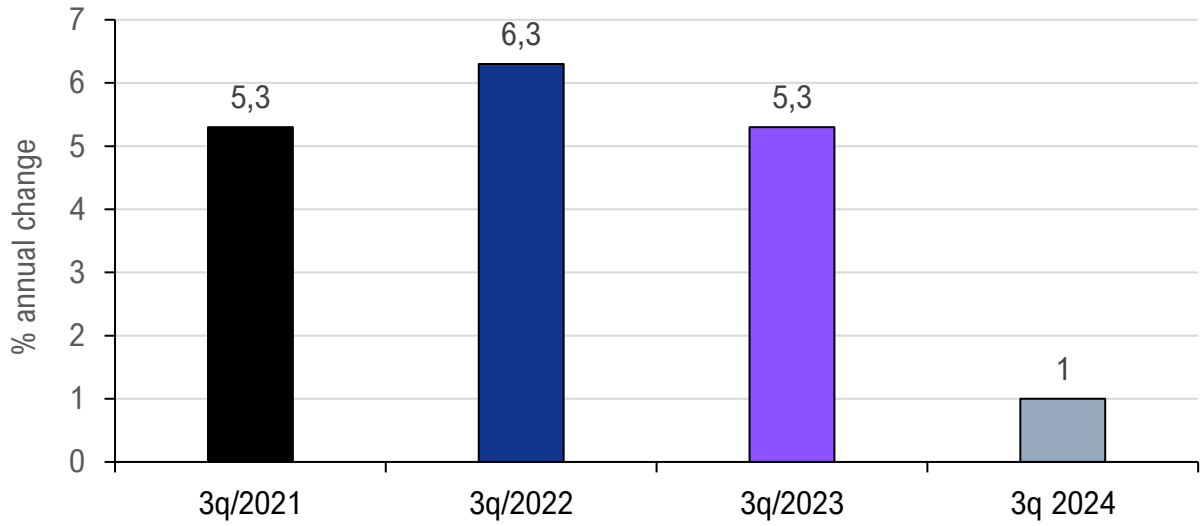
It is important to distinguish, within this population, between unregistered employment and structural informality—two concepts often conflated. While unregistered employment refers simply to the absence of formal labor registration (something that, within the modern sector, can be addressed through monitoring and enforcement mechanisms), structural informality refers to a surplus labor force operating with extremely low levels of capital and productivity. This is not merely an evasion problem but rather a material impossibility of complying with labor regulations due to the limited economic and technological scale of productive units. Consequently, rigid public policies may generate counterproductive effects in these cases, eliminating precarious jobs instead of promoting their formalization.

To calculate the structural informality indicator, various groups are included: non-professional self-employed workers, owners of unskilled microenterprises, employees of small, low-technology productive units, and unpaid workers whose labor participation is linked more to family or community functioning than to the formal labor market.

For empirical analysis, data from the Encuesta Permanente de Hogares (EPH) of the National Institute of Statistics and Censuses of Argentina are used, considering only the employed population. Jobs in state-owned enterprises and government agencies, activities not subject to structural informality conditions, and domestic service are excluded, although the latter is incorporated when calculating expanded structural informality. Classification differentiated employees by establishment size, skill level, and technology; self-employed workers by the technological level of their productive unit; and employers by size, technology, and workplace

ownership.

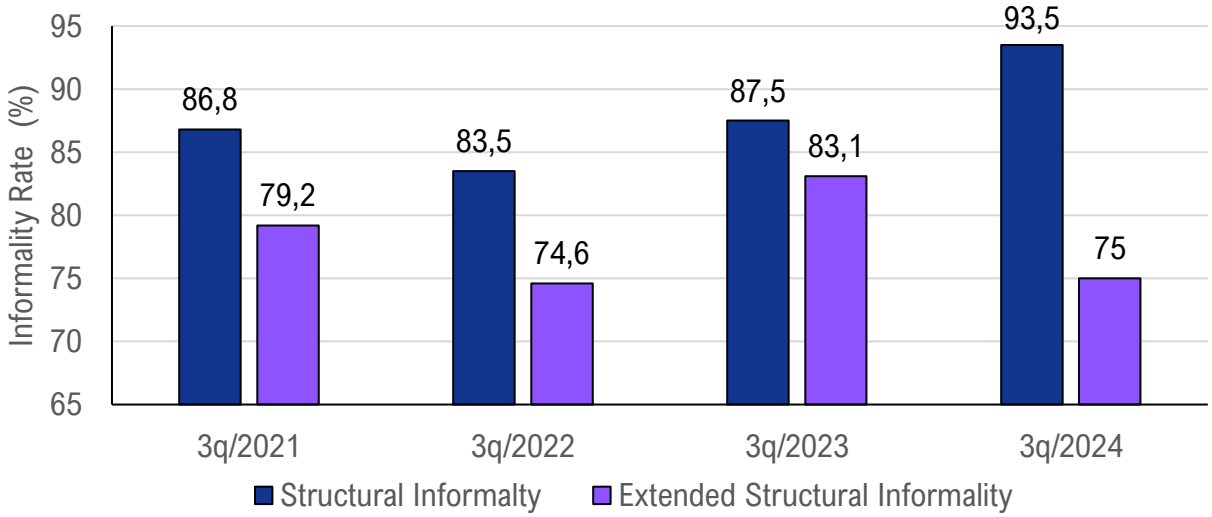
Figure 1. Trends in social programs, 3q 2021/2024



Source: Own elaboration with data from EPH, INDEC.

Focusing first on the development and impact of social programs—specifically, on program participation—it can be observed in the following figure that, although small annual variations exist, the indicator of program receipt remains consistently between 5 per cent and 6.3 per cent throughout the period 2021–2024. This stability suggests that program participation is a structural characteristic within the population analyzed. This information allows us to infer that, despite potential fluctuations in other labor or sociodemographic indicators, the proportion of beneficiaries receiving programs remains constant, reflecting a persistence in the conditions and modalities of social and economic integration.

Figure 2. Informality Rate among women participating in programs



Source: Own elaboration with data from EPH, INDEC.

The same pattern is observed with the informality indicator, and when domestic work is

incorporated, this becomes even more evident, clearly showing that the unequal organization of work and care shapes women's labor trajectories.

Characterization of Women Beneficiaries

The characterization of women beneficiaries of the Potenciar Trabajo social program provides a key analytical foundation for understanding patterns of participation, socioeconomic conditions, and labor profiles among those who take part in this public policy. Through the analysis of available data, it is possible to identify trends, inequalities, and trajectories that help assess the program's scope and its contribution to the social and economic inclusion of women. The following section presents a structured and integrated overview of the main demographic, educational, and labor-related characteristics of these beneficiaries.

Educational Profile

A first dimension of analysis concerns educational attainment. Nearly half of the surveyed women (48.5 per cent) completed secondary school, and among them, 24.7 per cent did so through a social program, highlighting the relevance of educational completion initiatives embedded in Potenciar Trabajo. At the tertiary and university levels, incomplete studies are more prevalent than completed ones—a pattern that contrasts with primary and secondary education, where completion rates are higher. This distinction reflects the program's orientation toward promoting school completion among adult participants.

In addition, 35 per cent of women reported having a trade or skill, predominantly in areas such as beauty services, gardening, sewing, and cooking. These skills play a significant role in shaping their economic opportunities and possible income-generating activities.

Demographic Characteristics

The average age of women is 39 years. Gender-based age segmentation reveals distinct patterns: men are proportionally younger (29 per cent are under 29 years old, compared to 16 per cent of women), while women are more concentrated in the 40–49 age group (37 per cent versus 12 per cent of men). These differences have implications for labor trajectories and the types of activities undertaken within the program.

Participation in Program Projects

Differences by gender also emerge when examining the types of projects in which beneficiaries participate. While 87 per cent of men are engaged in socio-productive projects, this figure drops to 77 per cent among women. Conversely, women show a higher presence in socio-community projects (15 per cent, compared to 7 per cent for men). This distribution illustrates a persistent gendered division of labor: men tend to be associated with productive tasks—particularly construction and maintenance—whereas women are more involved in community-oriented work, such as managing community kitchens, providing personal care, or supporting educational institutions.

Access to Social Programs

Program continuity and interaction with other social policies also reveal gendered patterns: 61 per cent of the women interviewed reported receiving either the Universal Child Allowance (AUH) or the Tarjeta Alimentar, compared to 38 per cent of men. Although the AUH prioritizes mothers in benefit allocation, the survey asked about receipt at the household level, indicating a broader pattern of women's roles in program linkage and household welfare management.

Labor Market Situation and Economic Activities

To further understand women's insertion in the labor market, a complementary set of indicators was applied to document other activities performed by beneficiaries. These data reveal that 53.5 per cent of women engage in an additional activity beyond Potenciar Trabajo, while 46.5 per cent do not work outside the program.

Among those not engaged in other activities, a marked disconnection from the labor market becomes evident: 70 per cent are inactive due to personal reasons—such as caregiving, study, or health issues—or due to difficulties in finding employment. Furthermore, 77 per cent have been unemployed for more than 24 months, indicating prolonged labor exclusion and disrupted work trajectories. Notably, 60 per cent of unemployed women had been wage workers in their last job, underscoring the instability of their employment pathways.

Across the activities performed, jobs tend to present low entry and exit barriers, allowing rapid incorporation or withdrawal. For women who are wage earners, almost half (53 per cent) work in establishments with fewer than five workers. Income levels are predominantly low: half earn up to ARS 10,000 per month, while only 23.5 per cent exceed ARS 20,000. Working hours also vary: 58.8 per cent work more than four hours per day, while 41.2 per cent work fewer, suggesting the prevalence of part-time or low-intensity employment.

The findings on social protection are particularly revealing: 91.2 per cent of employed women do not contribute to pension systems, pointing to widespread informality and limited long-term security.

A significant share of informal employment under quasi-wage arrangements is concentrated in care-related tasks. These activities typically involve fixed compenzation, hierarchical organization under a supervisor, and a dependent relationship that mirrors wage labor, even in the absence of formal labor rights.

Occupational Segmentation and Project Sectors

Gendered occupational segmentation within the program is clearly visible. Whereas 35.3 per cent of men work in construction-related activities, women are primarily engaged in food preparation (36.1 per cent) and have a minimal presence in construction (2.8 per cent). These trends reproduce traditional gender roles even within programs designed to foster socio-labor inclusion. Similar patterns appear across project sectors: women are notably concentrated in family agriculture, recycling and environmental activities, and community care and services.

Self-Employment Dynamics

A final dimension concerns the self-employed activities undertaken by women beneficiaries, which represent 37 per cent of the cases among those who engage in additional work. These activities are predominantly initiated individually (63.6 per cent), and 62.2 per cent of women reported that no family member had performed the activity before; instead, they pursued it due to urgent economic need. Self-employed women work an average of five hours per day and, for 56.8 per cent, up to three days per week.

Most conduct their activities at home (48 per cent) or in another family's home (29 per cent), which serves as their workplace. Additionally, 37 per cent operate in premises they own, while 20.3 per cent work directly on the street. Income levels are modest: 52.6 per cent earn up to ARS 32,000 per month from these activities.

6. Conclusions

The "Potenciar Trabajo" Program currently assists more than one million beneficiaries, providing most of them with the opportunity to engage in work experiences and receive a monetary compenzation that carries significant weight within this population segment. Participation in the Program also helps strengthen the beneficiaries' identification with the work they perform, regardless of its nature. In this sense, many women recognize themselves as workers and reject the stigmatization that portrays them as "planeras," or individuals who rely on social benefits without engaging in productive activities.

These policies have facilitated progress in formalization, educational completion, and participation in productive projects. Nevertheless, structural challenges persist, including informality, labor market fragmentation, and gender inequalities that continue to shape access to work and economic autonomy.

Gender inequalities not only affect women's opportunities but also influence the types of work they can access, the conditions under which they perform these jobs, and their ability to build stable labor trajectories. High levels of informality among women beneficiaries of social programs persist, and these are further exacerbated when unpaid domestic and care work is considered. This demonstrates that the unequal organization of work and care constitutes a structural factor in shaping women's labor trajectories, limiting access to labor rights and the development of greater economic autonomy.

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GENDER INEQUALITY AND INFORMALITY IN REMOTE WORK IN BRAZIL

By Adriana Fontes, Danielle Carusi Machado and Valéria Pero[48]

Summary

The rapid expansion of remote work in the post-pandemic period has reshaped occupational structures and revealed new dimensions of gender inequality in Brazil's labor market. Using microdata from the PNAD Contínua – Telework and Digital Platform Work Supplement (4th quarter of 2022), this article examines gender earnings gap across two modalities - home-based work and remote work -, distinguishing between formal and informal segments. We apply a quantile regression approach to estimate gender wage gaps along the earnings distribution, disentangling composition effects due to observable characteristics from differences in the returns to those characteristics. Gender earnings gaps vary substantially by work modality and formality. In remote work, women's observable characteristics would predict higher wages than men's, yielding a positive explained component, whereas in home-based work the explained component is negative at all quantiles, indicating compositional advantages for men. In both modalities and in both formal and informal segments, however, the unexplained component is persistently negative, revealing systematically lower returns to women's characteristics. Gaps are particularly large in home-based work and at the top of the distribution in remote work, suggesting a "glass ceiling" effect.

Keywords: gender inequality, remote work, home-based work, wage differentials, informal, Brazil.

JEL Codes: J16, J31, J71

1. Introduction

In recent years—and especially in the post-pandemic period—the debate around new forms of work organization has intensified, particularly concerning home-based work or the so-called home office. Regarding women's participation in the labor market, flexible and home-based work arrangements have long been viewed as an alternative to reconcile paid employment with domestic and caregiving responsibilities, which continue to fall disproportionately on women. Unlike men, women's total working time extends beyond the labor market to include household and family duties. In Brazil, the number of hours women dedicate to unpaid work (domestic

chores and caregiving) is, on average, twice that of men.

Following the Covid-19 pandemic, this scenario did not change—and in some cases, it even intensified. Remote work, initially adopted as a necessity during social distancing, became a more permanent feature in many occupational settings. Depending on the nature of the task and the sector of activity, some occupations are more susceptible to being performed remotely. Dingel and Neiman (2020) show that occupations more likely to be performed from home have, on average, higher earnings than those that cannot. Evidence for Italy and the United Kingdom indicates that gender wage inequalities are more pronounced among those who work—or could work—remotely (Bonacini et al., 2024; Wielgoszewska et al., 2024). These findings contradict the initial expectation that flexibility would reduce gender disparities by mitigating women's "double burden" of paid work and unpaid household and care duties (Bertrand, 2018).

Building on this evidence, this article seeks to contribute to the literature by analyzing the effects of flexible work modalities that can be performed at home on gender earnings differentials in Brazil. For this purpose, we distinguish between two types of home-based arrangements, following the IBGE (2022) definitions. The first, home-based work or working from home (WFH), refers to the main activity habitually carried out in the worker's home, which may even be defined as the standard workplace by the employer. Remote work, in turn, refers to professional activities performed in a location different from the employer's usual workplace (which may include the worker's home) and is characterized by being conducted away from that standard workplace at least one day per week, including hybrid arrangements. Both modalities share the feature of moving part of the working time away from the employer's physical facilities, thus representing more flexible arrangements than fully on-site work.

Furthermore, the analysis distinguishes between formal and informal labor market segments. In Brazil, nearly half of all occupied individuals work informally, which makes this distinction particularly relevant. The segmentation is crucial because the mechanisms of determining wages, access to social protection, measurement of working hours, and bargaining power differ substantially between the two groups. Moreover, the adoption and remuneration of home-based and remote work tend to be more concentrated in the formal sector, which may either amplify or mitigate gender disparities and introduce composition bias if the segments are not analyzed separately.

Accordingly, the article examines gender earnings differentials for two work modalities—(i) home-based work and (ii) remote work—across both the formal and informal labor market segments. Using microdata from the Continuous National Household Sample Survey (PNAD Continua)—Supplement on Telework and Work through Digital Platforms, for the fourth quarter of 2022—we apply a quantile regression approach to estimate gender wage gaps along the earnings distribution for each modality and labor market segment.

The descriptive analysis shows that women are overrepresented in both home-based and remote work, yet their average earnings remain lower than men across all modalities. Moreover,

wage dispersion is higher among remote workers, with a greater male presence in the upper tail of the distribution. The quantile regression results indicate that gender wage differentials are more pronounced in home-based work, reaching 59.2 per cent at the 70th quantile. In remote work, the gender gap is smallest at the lower end (10th quantile) but increases steadily toward the top, peaking at 30.8 per cent, suggesting a "glass ceiling effect."

Beyond these aggregate patterns, the results reveal that formality plays a crucial role in shaping gender gaps within each work's modality. In the formal segment, gender wage differentials in home-based and remote work are relatively small at the bottom of the distribution but widen substantially in the upper deciles, consistent with "glass ceiling" effects in more highly paid positions. In contrast, the informal segment displays a dual pattern: while women may exhibit a relative earnings advantage in some parts of the informal remote labor market due to more favorable observable characteristics, home-based informal work remains strongly associated with lower-quality jobs and large penalties at both ends of the distribution. In all cases, however, the unexplained component of the gap is systematically negative, indicating that women receive lower returns to similar characteristics regardless of formality status and work modality. This interaction between flexible work arrangements and formality status suggests that informality and unequal returns jointly reinforce structural gender inequalities.

The paper is organized as follows. Section 2 presents the objectives; Section 3 presents a brief literature review on remote work and its implications for gender inequality, the state of art in this topic. Section 4 describes the methodology (dataset, variable construction, and econometric methodology, with emphasis on the quantile decomposition approach). Section 5 reports the main results, highlighting gender wage differentials across the two flexible work modalities—home-based and remote—by formal and informal segments. Section 6 concludes by discussing the main findings and their implications for the debate on work organization and gender inequality in the post-pandemic context.

2. Objectives

This article aims to examine how flexible work arrangements performed at home—working from home (WFH) and remote work—affect gender earnings differentials in Brazil. To do so, it distinguishes between these two modalities and analyzes them separately across the formal and informal labor market segments using the methodology of wage decomposition in Firpo, Fortin, and Lemieux (FFL, 2018).

3. State of the art

During the period of social distancing caused by the COVID-19 health crisis, remote work became widely diffused. While this new mode of work brought gains in autonomy and flexibility for employees, it also revealed important challenges—particularly for women. Beyond the debate on its effects on productivity—which remains inconclusive given the conflicting findings across

studies, as discussed by Kouki and Sauer (2020)—a growing, though still limited, body of literature has examined the topic.

On one hand, home-based work has been regarded as a strategy to reconcile paid employment with domestic and caregiving responsibilities that fall predominantly on women (ILO, 2020). On the other hand, the blurring of physical boundaries between home and workplace can make it harder to distinguish between professional and personal time. Eurofound and ILO (2017) highlight this duality in a study conducted in Brazil in 2015, based on a survey of call-center employees performing their activities remotely. The results showed that 98 per cent of respondents reported an improvement in quality of life, mainly due to reduced commuting time (93 per cent) and greater availability of time with family (91 per cent). However, half of the participants also reported negative effects of remote work, citing interference of domestic issues in their professional tasks. Similar patterns were observed in the United States, India, and Japan.

As noted by Wheatley et al. (2023), reduced commuting time and costs—often considered the least enjoyable part of workers' daily routines—constitute one of the main advantages of remote work. Commuting plays an important role in defining the spatial separation between home and workplace (Kurland & Bailey, 1999), helping to establish clear boundaries between household duties and professional responsibilities. Another advantage of home-based work is the reduction of childcare costs and time, as discussed by Kouki and Sauer (2020) in a U.S. study examining the relationship between children's health and potential wage penalties for mothers who must stay home to care for sick children while working remotely. The study found that women who work from home face significant wage penalties, partly due to reduced working hours, limited professional interaction, and their concentration in less productive—and thus lower-paid—tasks that can more easily be performed outside the employer's premises.

In their cross-country analysis, Dingel and Neiman (2020) estimated the share of jobs that could be performed remotely in the United States and other nations, finding a positive relationship between the potential for remote work and each country's per capita income. Moreover, jobs that could be performed from home tended to offer higher average wages than those requiring physical presence. However, these higher earnings are not evenly distributed. Bonacini et al. (2024) and Wielgoszewska et al. (2024), using national datasets and estimates of labor markets operating remotely in Italy and the United Kingdom, respectively, found that gender wage inequalities are more pronounced among those who work—or could work—from home. These empirical results run counter to the expectation that flexible work would help reduce gender disparities by alleviating the double burden faced by women who combine paid employment with unpaid domestic and caregiving responsibilities—long recognized as key drivers of gender wage gaps (Bertrand, 2018).

In practice, flexible work arrangements often result in an additional workload for women, exacerbating the challenge of balancing productive and reproductive labor. Fares et al. (2021) conducted a survey across several Brazilian states during the social distancing period to assess

the relationship between remote work and the increase in unpaid labor. As expected, about 77 per cent of respondents reported spending more time on domestic tasks during the pandemic—80 per cent among those working remotely and 68 per cent among those who were not. Among remote workers, 82 per cent of women reported an increase in domestic work, compared to 76 per cent of men. These findings align with Wielgoszewska et al. (2024), who, beyond analyzing wage inequality, examined gender differences in mental health and personal well-being among remote workers in the United Kingdom. Their results showed that women working remotely—particularly in hybrid arrangements—had higher rates of depression and anxiety and lower levels of individual satisfaction than those working on-site.

Reproductive labor thus imposes a double penalty on women, subjecting them to long working hours and lower-quality or more precarious jobs that allow greater flexibility (Pinheiros et al., 2023). Using PNADC data from IBGE, Maia and Lu (2024) found that women experienced the largest wage penalties when shifting from office-based to home-based work. The authors propose three hypotheses to explain this result: (1) an increased labor supply of women—who adopted remote work more than men during the pandemic—may have exerted downward pressure on wages; (2) lower productivity in home-based work, particularly among women, led to wage reductions; and (3) the lack of in-person interaction with colleagues limited opportunities for career advancement. Indeed, the study observed that women working from home during the pandemic were less likely to be promoted to managerial positions compared to men working remotely.

4. Methodology

In order to analyze the earnings differential according to the way work is performed, at home or not, remotely or not, we will use data from the National Household Sample Survey (Pesquisa Nacional por Amostra de Domicílios - PNADC) – Teleworking and Work by Digital Platforms Supplement for the 4th Quarter of 2022.

We identified whether the employed person, who usually does not work from home, worked in their own domicile for at least one day of the week in the 30-day reference period. We used the question: “During a period (30-day reference period), how often did you work at home?”, with the answer: at least once a week. This variable defines the total number of remote workers. As for the people who work from home, they are defined as those who have their own domicile as their standard workplace or as an alternative location.

From the PNADC, we have information regarding each worker´s occupations, based on the COD – the classification of occupations in household surveys developed by IBGE based on the International Standard Classification of Occupations (ISCO-08). To control differences that may exist in terms of the potential for remote and working from home (WFH). It is worth mentioning that we chose to remove the following workers from the database: firefighters, police officers, armed forces members, and military personnel, as their work activities do not fit into domestic

environments. We also excluded domestic workers from the dataset because they perform activities in households that are not their own. Workers with ill-defined occupations or missing occupational codes were likewise excluded. Similarly, we did not include construction workers, since their professional activities also take place in non-owned residential settings and are not (potentially) feasible to perform remotely. It is noteworthy that since the supplement is applied to workers with questions for the 30-day reference period, absent workers, whether due to leave or vacation during the period, did not participate in this module of the survey. Therefore, the total number of employed people may be lower than the total number of employed people in the basic survey. Finally, we restricted the sample to workers aged 18 to 64.

The decomposition methodology used in the analysis of gender earnings differentials in the context of WFH and remote work is based on Firpo, Fortin, and Lemieux (FFL, 2018). The FFL method is used to analyze differences beyond the mean, unlike the traditional Oaxaca-Blinder decomposition method, which analyzes only the difference in the mean. FFL method allows for the decomposition of wage differentials at different quantiles of the distribution, using unconditional quantile regressions. This approach allows us to capture phenomena such as the "sticky floor" – which refers to the greater difficulty of upward mobility for historically discriminated groups at low wages, and the "glass ceiling", – which expresses the barrier preventing women and other minority groups from accessing the highest-paid positions, even with similar qualifications. The FFL method thus makes it possible to observe not only whether there is a wage inequality between men and women, but where in the earnings distribution it is most pronounced, highlighting whether the penalty for being a woman is concentrated at the bottom, the center, or the top of the wage distribution.

The decomposition is based on the estimation of separate earnings equations for two groups – in this case, men and women – and allows the wage difference along the distribution to be broken down into two components: one explained by differences in observable worker attributes, such as race/color, schooling, age, occupation, position in occupation (composition effect), and another unexplained, associated with differences in the rates of return for these attributes, often interpreted as a reflection of wage discrimination. (structure effect), highlighting structural gender inequality in the labor market.

Moreover, the analysis is conducted separately for the formal and informal segments of the labor market. Following IBGE (PNADC) definitions, the formal segment includes formal employees in the private sector, public-sector employees, and employers or own-account workers who contribute to the public pension system or have a registered business (CNPJ). The informal segment comprises informal employees, own-account workers and employers without CNPJ, and unpaid contributing family workers. This distinction is essential, as Brazil's labor market is characterized by a high incidence of informality, and the mechanisms governing earnings, bargaining power, and access to social protection differ substantially between the two segments.

The estimated earnings equation follows the traditional form in the labor economics literature, based on the Mincerian equation, in which the logarithm of the individual´s hourly earnings i belonging to group g is modelled as a linear function of a vector of observable characteristics (Xig) and an error term (εig):

lnwhourig = Xig βg+ εig

The dependent variable is the usual hourly earnings in the main job. We use traditional controlling variables such as schooling, age, and type of occupation. So, we have eight decompositions: total remote and working from home; formal and informal occupation; formal and informal work from home and remote work.

The combination of these methods provides a more detailed and accurate picture of wage inequalities, allowing for more qualified interpretations of the mechanisms of gender discrimination and occupational segregation.

5. Results and Comments

5.1.Descriptive statistics

Table 1 presents the proportions of employed individuals working from home and remotely. Women exhibit a higher incidence of both WFH (11.4 per cent) and remote work (8.9 per cent) compared to men (7.3 per cent and 7.0 per cent, respectively), which may indicate a greater concentration in potentially more flexible occupations, but also a higher burden of domestic activities. The difference is more pronounced in working from home, which is characterized by a high presence of self-employment.

White workers are more likely to engage in these flexible work arrangements (10.7 per cent in WFH and 10.4 per cent in remote work) than non-white workers (7.9 per cent and 5.7 per cent), highlighting potential racial barriers in terms of occupations and qualifications that allow for home office arrangements.

The prevalence of working from home or remotely rises sharply with educational attainment. Workers with a college degree or higher show the highest shares (12.9 per cent in WFH and 18.2 per cent in remote work), whereas those with only incomplete elementary education rarely participate in these arrangements (5.3 per cent and 2.2 per cent). This pattern underscores the skill bias and task-specific nature of remote jobs.

WFH is largely an own-account phenomenon, concentrated among the self-employed (27.8 per cent) and much less common among private-sector employees (around 4-5 per cent) or public-sector workers (around 1-2 per cent). Remote work, in contrast, is rooted in formal employment and the public sector: higher among employers (16.4 per cent), military/civil servants (10.7 per cent) and other public employees (9.5 per cent). The incidence in the private sector (5.6 per cent) is moderate, but higher than in WFH. In short, WFH reflects autonomous, home-based arrangements, while remote work corresponds to employer-granted flexibility within formal

employment relations, including those of public servants and business owners.

Table 1 – Proportion WFH and remote work by group (%).

	WFH	Remote
Men	7,3	7,0
Women	11,4	8,9
White	10,7	10,4
Non-white	7,9	5,7
Up to incomplete elementary I	5,3	2,2
Completed element I and incomplete middle	6,6	2,1
Completed middle and incomplete high school	7,3	2,5
Completed high school and incomplete college	8,5	5,3
College degree or more	12,9	18,2
Formal employee in the private sector	4,1	5,6
Informal employee in the private	5,1	5,6
Formal employee in the public sector	2,1	9,5
Informal employed in the public sector	0,9	7,2
Military and civil servants	2,2	10,7
Employer	6,7	16,4
Self-employed	27,8	11,8
Directors and managers	7,4	18,0
Science and intellectual professionals	16,4	21,2
High school graduated technicians and professionals	10,4	11,0
Administrative support workers	4,1	5,3
Services and salespeople in retail and market workers	12,9	5,1
Qualified agriculture, forest, hunting and fishing workers	2,5	2,9
Machines and installation operators and assemblers	6,2	1,3
Elementary occupations	1,8	1,0

Source: IBGE, PNAD 2022

Regarding occupational groups, highly qualified occupations—such as science and intellectual professionals (16.4 per cent WFH; 21.2 per cent remote) and directors and managers (7.4 per cent; 18.0 per cent)—concentrate most of the remote work, reflecting the feasibility of performing cognitive and analytical tasks outside the traditional workplace. In contrast, lower-skill occupations, including services and sales workers, machine operators, and elementary occupations, display very limited participation, particularly in remote work (below 2 per cent). Overall, WFH is somewhat more widespread across intermediate occupations, while remote work is strongly concentrated in high-skill, formal professional categories.

In Brazil, both remote and home-based work are associated with higher education, white and female workers, and professional or managerial occupations, revealing structural inequalities in access to flexible work arrangements. However, their profiles differ: WFH is more connected to own-account and home-based activities, often reflecting individual autonomy and informal flexibility, whereas remote work is concentrated among formal employees in high-skill,

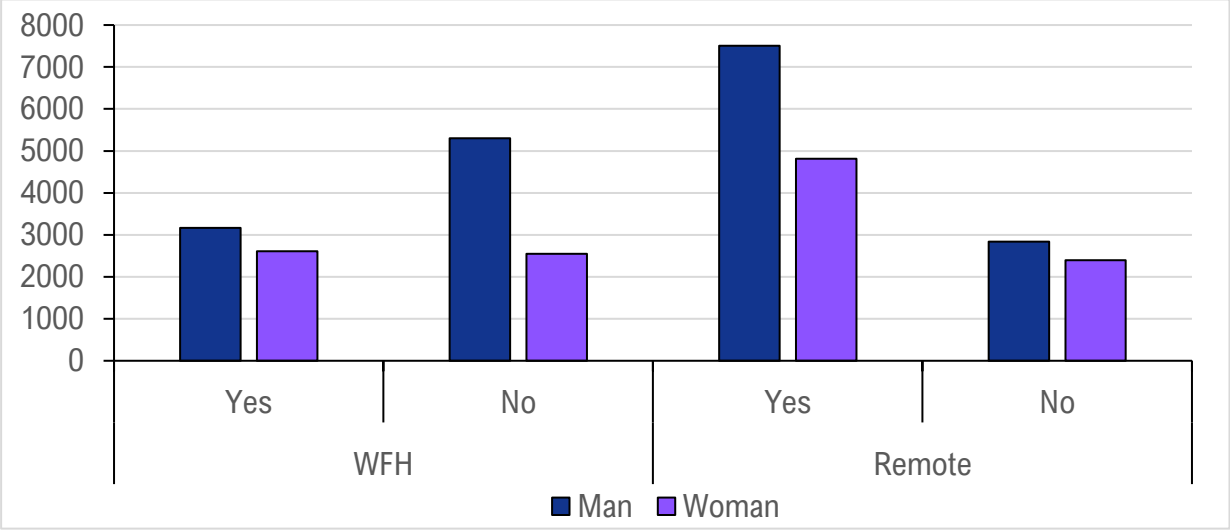
organizationally structured occupations — particularly managers, professionals, and public-sector workers—where employer-granted flexibility plays a central role.

The descriptive analysis of average monthly usual earnings across work modalities reveals two main patterns. First, women consistently earn less than men in both WFH and remote work arrangements. Second, gender gaps are notably wider among remote workers. In remote work, men earn an average of R$7,500, compared to R$4,800 for women—a difference of approximately 56 per cent. Among those not working remotely, the gap narrows to around 19 per cent.

In the case of WFH, average earnings are lower than in on-site work for men, while women's earnings remain nearly the same across both modalities. Specifically, men working from home earn about R$3,200 on average, compared to R$5,300 in on-site work, whereas women earn roughly R$2,700 in both. This pattern suggests that, for men, home-based work is more frequently associated with lower-paying activities, such as self-employment or informal work, while for women, earnings levels remain relatively constant across modalities.

Overall, these descriptive results indicate that, although remote work is associated with higher earnings, it also corresponds to a greater gender wage gap, suggesting that the benefits of flexibility are unevenly distributed between men and women.

Figure 1. Average monthly usual earnings of WFH and remote work by gender (2022 R$).



Source: PNADC 2022.

5.2. Composition and earnings of WFH and remote work by informality and gender

In this section, we analyze informality within each work modality, at home or remotely and considering men and women separately. It is noted that the proportion of formal workers in WFH and remote work is similar between men and women, with a slightly higher proportion being remote. Among informal workers, the proportion that is in WFH is much higher, especially among women. The percentage of informal women in the WFH is 21.7 per cent, more than double the percentage of informal men (8.9 per cent).

Regarding the rate of informality, the data reveal a marked segmentation in access to remote work modalities, with emphasis on gender inequalities and, above all, on the weight of informality among those who carry out their activities at home. Among those working from home (WFH), 54.2 per cent are in an informal situation – a proportion substantially higher than that observed in the total employed population, in which informal workers represent 33.9 per cent. This data indicates that WFH is often associated with unregulated activities. Informality is even more significant among women in WFH (62 per cent). In the case of men, this proportion is 43.5 per cent. This difference suggests that working at home, for most women, although it is a more flexible alternative, is a more precarious form of insertion in the labor market.

In contrast, remote work has a more formalized composition: about 70 per cent of workers in this modality are formal. Although the distribution by sex in remote work is relatively balanced (51.3 per cent women and 48.7 per cent men), men outnumber women in formal modality, which also indicates qualitative differences in labor insertion between the sexes. The informality rate among women in remote work is 32.5 per cent, also higher than the informality rate of men who are in remote work (27 per cent).

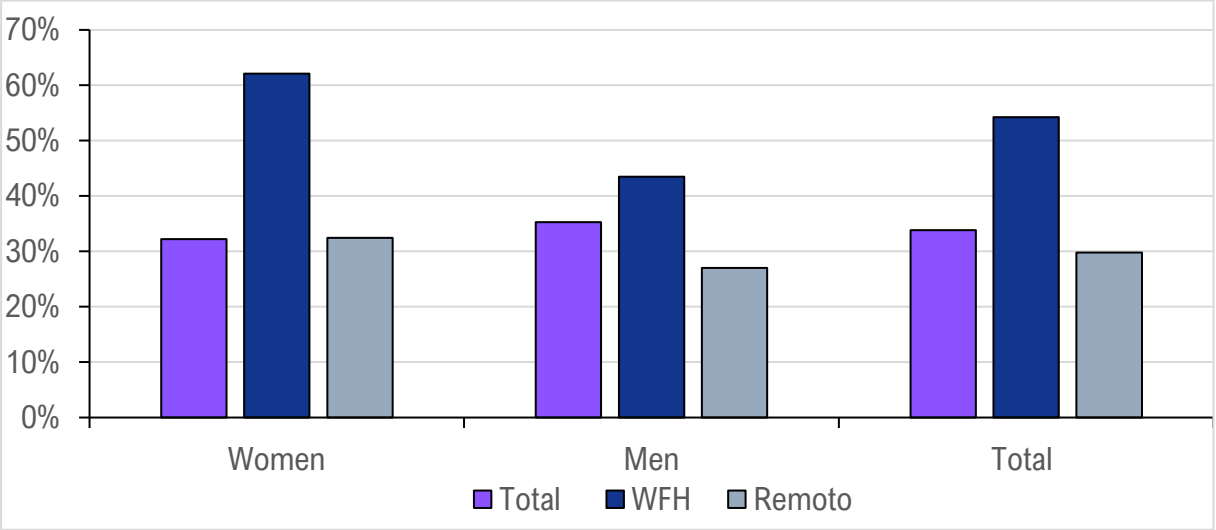
Median earnings are higher in remote work than in WFH, regardless of gender or whether it is formal/informal. However, gender differentials are more pronounced in WFH, where men earn 1.5 times more than women in the formal sector. Among informal workers, incomes are slightly lower, and gender gaps are slightly smaller, but still present. In summary, the data show that remote work covers different realities: WFH is mostly informal, more present among women and marked by higher gender differentials, while remote work is more common among formal occupations and with higher incomes.

Table 2 – Proportion of WFH and remote work and average hourly earnings by informality and gender (2022 R$).

	WFH		Remote	
	%	(2022 R$)	%	(2022 R$)
Formal	6,4		8,1	
Men	6,4	47,1	7,9	52,9
Women	6,4	28,6	8,4	37,9
Gap formal (M/W)		1,6		1,4
Informal	14,6		7,3	
Men	8,9	21,2	5,4	32,1
Women	21,7	14,3	10,0	23,8
Gap Informal (M/W)		1,5		1,3

Source: PNADC 2022.

Figure 2. Informality rate by gender (%).



Source: PNADC 2022.

5.3. Gender wage gaps across the earnings distribution in home-based and remote work

Table 3 reports the results of the wage decomposition between women (group 1) and men (group 2) home-base work across different quantiles of the hourly earnings distribution (from q10 to q90). At all points of the distribution, there is a systematic wage disadvantage for women. While men exhibit higher average earnings in every quantile, these differences become more pronounced in the upper segments of the distribution. At the 10th quantile, for instance, the estimated log hourly wage is 1.083 for women and 1.516 for men, yielding a gap of –0.434. At the 90th quantile, the corresponding values rise to 3.698 and 4.175, respectively, resulting in a gap of –0.477. Although the absolute differential increases only modestly across quantiles, it is important to note that it remains statistically significant at every point of the distribution.

This pattern suggests that wage penalties for women working from home are not confined to the lower tails of the distribution but also extend to its upper end, indicating the simultaneous presence of both “sticky floor” and “glass ceiling” effects. The fact that the differential remains large and rising up to q70—where it peaks at –0.592—may reflect the precarious nature of home-based work for women, yielding lower returns to productive attributes and the possible overlap between paid and unpaid reproductive activities. These results highlight the need for policies that address gender gaps in home-based work, particularly given the expansion of this modality in the post-pandemic labor market.

Table 4 presents the decomposition results for remote work and reveals persistent wage disparities between men and women across the entire hourly earnings distribution, although the magnitudes are less pronounced than those observed for home-based work. In every quantile, estimated earnings are higher than those found in home-based work, and consistently higher for men than for women, resulting in negative and statistically significant differentials for female workers.

Table 3: Results of the quantile regression estimates of log hourly wages for WFH

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
EQUA-TION	VARIABLES	q10	q20	q30	q40	q50	q60	q70	q80	q90
Overall	Women	1.083***	1.613***	1.898***	2.143***	2.352***	2.555***	2.857***	3.272***	3.698***
		(0.025)	(0.019)	(0.015)	(0.014)	(0.015)	(0.015)	(0.016)	(0.019)	(0.023)
	Men	1.516***	2.052***	2.333***	2.638***	2.861***	3.091***	3.448***	3.768***	4.175***
		(0.033)	(0.019)	(0.020)	(0.020)	(0.020)	(0.021)	(0.022)	(0.024)	(0.027)
	Difference	-0.434***	-0.439***	-0.435***	-0.495***	-0.508***	-0.537***	-0.592***	-0.496***	-0.477***
		(0.042)	(0.027)	(0.025)	(0.024)	(0.025)	(0.026)	(0.027)	(0.031)	(0.035)
	Explained	-0.122***	-0.166***	-0.196***	-0.216***	-0.251***	-0.272***	-0.289***	-0.312***	-0.303***
		(0.023)	(0.019)	(0.015)	(0.015)	(0.016)	(0.016)	(0.017)	(0.020)	(0.023)
	unexplained	-0.312***	-0.273***	-0.239***	-0.279***	-0.257***	-0.264***	-0.303***	-0.184***	-0.174***
		(0.043)	(0.028)	(0.025)	(0.024)	(0.024)	(0.025)	(0.027)	(0.031)	(0.037)

Source: IBGE, PNAD 2022

Table 4: Results of the quantile regression estimates of log hourly wages for remote work

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
EQUA-TION	VARIABLES	q10	q20	q30	q40	q50	q60	q70	q80	q90
overall	women	1.956***	2.305***	2.600***	2.821***	3.048***	3.321***	3.517***	3.759***	4.246***
		(0.018)	(0.017)	(0.018)	(0.017)	(0.017)	(0.016)	(0.016)	(0.020)	(0.025)
	men	2.052***	2.441***	2.730***	2.986***	3.263***	3.478***	3.733***	4.097***	4.554***
		(0.021)	(0.020)	(0.019)	(0.019)	(0.019)	(0.020)	(0.023)	(0.023)	(0.028)
	difference	-0.096***	-0.136***	-0.130***	-0.165***	-0.215***	-0.157***	-0.216***	-0.338***	-0.308***
		(0.028)	(0.026)	(0.026)	(0.026)	(0.026)	(0.025)	(0.028)	(0.031)	(0.037)
	explained	0.064***	0.063***	0.080***	0.072***	0.055***	0.043***	0.032**	0.018	0.006
		(0.015)	(0.016)	(0.017)	(0.017)	(0.015)	(0.014)	(0.013)	(0.014)	(0.016)
	unexplained	-0.161***	-0.199***	-0.210***	-0.236***	-0.269***	-0.200***	-0.248***	-0.356***	-0.314***
		(0.026)	(0.024)	(0.023)	(0.023)	(0.023)	(0.023)	(0.027)	(0.030)	(0.038)

Source: IBGE, PNAD 2022

At the 10th quantile, the differential is –0.096, widening to –0.338 at q80 and remaining elevated through q90 (–0.308). These results suggest that although the wage penalty for women in remote work is smaller than in home-based work, it becomes more pronounced at the top of the distribution, indicating a possible “glass ceiling” effect.

This pattern of inequality—less pronounced in the lower and middle segments and sharper in the upper quantiles—may be associated with discriminatory mechanisms in higher-paying or higher-prestige positions, even in work arrangements that offer greater flexibility, such as remote work. Although remote work is often linked to improved work–life balance, the data show that such flexibility does not necessarily translate into pay equality. The positive sign of the

explained component indicates that women's characteristics should, in theory, reduce the gender gap; however, the unexplained component is larger and negative, suggesting that women's productive attributes are valued differently in the labor market. This reinforces the need for gender equity strategies in the more qualified and digitalized segments of the labor force.

WFH exhibits the largest differentials across nearly all quantiles, suggesting that this modality—often associated with more informal or precarious occupations—imposes a steeper wage penalty on women. Remote work, in turn, exhibits smaller differentials in the lower and middle quantiles, but a sharp increase in the upper ones, indicating that inequality is concentrated in higher-prestige positions.

In sum, both forms of work analyzed here show that gender wage inequalities do not dissipate with the flexibilization of work arrangements. On the contrary, these new forms of labor organization appear to reproduce or even exacerbate historical patterns of discrimination, especially for women who attempt to reconcile paid and unpaid work within the household. We hypothesise that informality, particularly within home-based work, may be deepening wage disparities between men and women. Accordingly, the next subsection analyzes gender wage differentials within each work modality—remote and home-based— considering whether jobs are formal or informal.

5.4. Gender wage gaps across the earnings distribution for formal and informal workers

The quantile decomposition results reveal distinct patterns in the formal and informal sectors. In the formal sector, the wage differential between women (group 1) and men (group 2) is generally very small at the lower end of the distribution and tends to widen as we move toward the upper quantiles. For instance, at the 10th quantile, the difference is virtually zero and statistically insignificant. By the 30th and 40th quantiles, the gap becomes negative (−0.059 and −0.052, both statistically significant). At the top of the distribution, the pattern becomes more pronounced: at the 90th quantile, women earn an hourly wage that is 18.7 per cent lower than men.

When decomposing this difference, the explained component (composition effect: education, experience, occupation, etc.) is positive across several quantiles. This suggests that, on average, women's observable characteristics would predict higher expected wages relative to men in some parts of the distribution. However, this advantage is more than offset by the unexplained component, which is negative—and crucially—grows in magnitude toward the top quantiles. Even though women possess characteristics that should increase their wages, they receive lower returns for these characteristics at higher wage levels. This pattern is consistent with evidence of a "glass ceiling" or reduced remuneration for women's qualifications at the upper end of the wage distribution.

Table 5: Results of the quantile regression estimates of log hourly wages for formal and informal

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
EQUA-TION	VARIABLES	q10	q20	q30	q40	q50	q60	q70	q80	q90
FORMAL										
overall	women	1.983***	2.084***	2.159***	2.319***	2.506***	2.727***	2.983***	3.313***	3.661***
		(0.002)	(0.002)	(0.003)	(0.004)	(0.005)	(0.006)	(0.006)	(0.007)	(0.009)
	men	1.979***	2.095***	2.218***	2.371***	2.584***	2.766***	2.970***	3.354***	3.848***
		(0.002)	(0.002)	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)	(0.008)	(0.011)
	difference	0.003	-0.010***	-0.059***	-0.052***	-0.078***	-0.038***	0.013	-0.042***	-0.187***
		(0.002)	(0.003)	(0.005)	(0.005)	(0.006)	(0.007)	(0.009)	(0.010)	(0.014)
	explained	0.024***	0.038***	0.083***	0.124***	0.174***	0.212***	0.228***	0.213***	0.160***
		(0.001)	(0.002)	(0.003)	(0.004)	(0.005)	(0.006)	(0.007)	(0.007)	(0.008)
	unexplained	-0.020***	-0.048***	-0.142***	-0.176***	-0.252***	-0.250***	-0.216***	-0.254***	-0.347***
		(0.003)	(0.003)	(0.005)	(0.005)	(0.006)	(0.007)	(0.008)	(0.010)	(0.014)
INFORMAL										
overall	women	1.182***	1.665***	1.861***	2.036***	2.143***	2.334***	2.622***	2.848***	3.321***
		(0.013)	(0.009)	(0.006)	(0.004)	(0.005)	(0.007)	(0.008)	(0.008)	(0.011)
	men	0.986***	1.459***	1.748***	1.927***	2.057***	2.204***	2.431***	2.722***	3.256***
		(0.011)	(0.008)	(0.006)	(0.004)	(0.004)	(0.005)	(0.006)	(0.008)	(0.012)
	difference	0.197***	0.206***	0.113***	0.109***	0.086***	0.129***	0.191***	0.126***	0.065***
		(0.017)	(0.012)	(0.008)	(0.006)	(0.006)	(0.008)	(0.010)	(0.011)	(0.016)
	explained	0.390***	0.284***	0.188***	0.135***	0.164***	0.231***	0.271***	0.252***	0.252***
		(0.015)	(0.010)	(0.007)	(0.005)	(0.006)	(0.008)	(0.009)	(0.009)	(0.012)
	unexplained	-0.194***	-0.078***	-0.075***	-0.026***	-0.078***	-0.102***	-0.080***	-0.126***	-0.187***

Source: IBGE, PNAD 2022

In the informal sector, the pattern differs markedly and is, in some sense, more favorable to women. The raw differential is positive across the lower and middle quantiles: at q10 and q20, women exhibit gaps of roughly +0.20 (0.197 and 0.206, both highly significant). The decomposition indicates that most of this positive differential arises from the explained component—meaning that compositional differences account for the female advantage. Observable characteristics of women, such as relatively higher schooling levels, occupational composition, or other measured attributes, explain a substantial portion of the wage advantage in informal work. The unexplained component in the informal sector is frequently negative, offsetting part of the advantage, but its magnitude is generally smaller than that of the explained component, leaving the overall differential positive. In practical terms, this indicates that in the informal sector, differences in composition between men and women account for most of the wage advantage observed for women, while differences in returns—potentially reflecting discrimination or other unobserved factors—act in the opposite direction but do not fully eliminate the gap.

The comparison between workers who perform their activities at home and the overall labor force shows that, in both the formal and informal sectors, wage distributions are characterized by lower average earnings, greater dispersion, and more pronounced gender differences across quantiles.

The quantile regression results for formal home-based workers reveal a clear and consistent pattern of gender wage inequality throughout the distribution. In every quantile, women (group 1) earn lower hourly wages than men (group 2), and this negative differential becomes especially pronounced from the middle quantiles onward.

The wage decomposition results show that the explained component is negative across the entire distribution, ranging from approximately −0.08 at q10 to around −0.18 at q40–q50. In other words, observable characteristics—such as education, experience, occupation, and sector—systematically favor men. This pattern suggests that men occupy a disproportionately larger share of better-paid formal positions and possess characteristics, such as higher levels of human capital, that contribute to higher earnings.

However, the explained component does not fully account for the observed gender wage gap. In nearly all quantiles, a substantial share of the wage differential is attributed to the unexplained component, which reflects differences in returns to characteristics, unobserved factors, finer occupational segregation, and possible discriminatory practices. The unexplained component is also negative throughout the distribution, ranging from approximately −0.12 at q10 to between −0.20 and −0.31 in the middle and upper quantiles.

This pattern indicates that even when women and men possess similar observable characteristics within formal home-based work, women receive lower returns on those characteristics. In other words, men not only hold attributes that, on average, predict higher wages (composition effect), but they also earn more than expected even after controlling for those attributes (returns effect).

The quantile regression results for informal workers who perform their activities at home reveal a marked pattern of gender wage inequality, although the magnitude of this inequality varies across the distribution. The female disadvantage is concentrated primarily in the lower quantiles. At the first quantile, women earn an hourly wage 41.5 per cent lower than men. This differential decreases at q30 and q40 to 22 per cent and 21 per cent, respectively, and rises again toward the top, reaching 38.5 per cent in the last quantile.

In the decomposition analysis, the explained component is negative and larger for the upper quantiles, which means that women's observable characteristics are less favorable in terms of expected remuneration compared with those of men. That is, even before considering discrimination or differences in returns, men are distributed across occupations and possess educational profiles that lead to higher earnings. These compositional differences help explain the larger wage gaps observed at the upper end of the informal wage distribution.

The unexplained component captures the portion of inequality that cannot be attributed to differences in observable characteristics. Because the unexplained component is negative across the entire wage distribution, this means that even when women and men have the same observable attributes, women still receive lower wages. In other words, even "holding characteristics constant," women face lower returns on their attributes.

Table 6: Results of the quantile regression estimates of log hourly wages for formal and informal workers for WFH

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
EQUA-TION	VARIABLES	q10	q20	q30	q40	q50	q60	q70	q80	q90
FORMAL										
overall	women	1.948***	2.176***	2.431***	2.627***	2.846***	3.047***	3.362***	3.635***	4.162***
		(0.021)	(0.021)	(0.022)	(0.023)	(0.024)	(0.026)	(0.028)	(0.031)	(0.041)
	men	2.150***	2.567***	2.768***	3.010***	3.337***	3.507***	3.800***	4.096***	4.516***
		(0.026)	(0.024)	(0.026)	(0.027)	(0.027)	(0.027)	(0.028)	(0.030)	(0.038)
	difference	-0.202***	-0.390***	-0.337***	-0.383***	-0.490***	-0.461***	-0.438***	-0.461***	-0.354***
		(0.034)	(0.032)	(0.034)	(0.035)	(0.036)	(0.038)	(0.040)	(0.043)	(0.056)
	explained	-0.083***	-0.118***	-0.154***	-0.173***	-0.178***	-0.183***	-0.177***	-0.152***	-0.150***
		(0.014)	(0.016)	(0.017)	(0.019)	(0.020)	(0.022)	(0.023)	(0.024)	(0.029)
	unexplained	-0.119***	-0.272***	-0.183***	-0.210***	-0.312***	-0.277***	-0.262***	-0.309***	-0.204***
		(0.034)	(0.031)	(0.032)	(0.033)	(0.033)	(0.036)	(0.039)	(0.042)	(0.057)
INFORMAL										
overall	women	0.755***	1.274***	1.684***	1.938***	2.103***	2.315***	2.672***	2.933***	3.316***
		(0.031)	(0.025)	(0.020)	(0.018)	(0.017)	(0.018)	(0.019)	(0.021)	(0.024)
	men	1.170***	1.662***	1.909***	2.156***	2.426***	2.725***	2.959***	3.332***	3.701***
		(0.037)	(0.031)	(0.026)	(0.026)	(0.028)	(0.027)	(0.028)	(0.032)	(0.038)
	difference	-0.415***	-0.388***	-0.225***	-0.218***	-0.323***	-0.411***	-0.287***	-0.398***	-0.385***
		(0.048)	(0.040)	(0.033)	(0.031)	(0.033)	(0.032)	(0.034)	(0.039)	(0.045)
	explained	-0.007	-0.033	-0.072***	-0.098***	-0.150***	-0.172***	-0.191***	-0.218***	-0.193***
		(0.033)	(0.028)	(0.022)	(0.021)	(0.021)	(0.022)	(0.022)	(0.025)	(0.027)
	unexplained	-0.408***	-0.354***	-0.152***	-0.120***	-0.173***	-0.239***	-0.096***	-0.180***	-0.192***
		(0.055)	(0.043)	(0.035)	(0.033)	(0.033)	(0.033)	(0.034)	(0.040)	(0.048)

Source: IBGE, PNAD 2022.

Remote work

The analysis of gender wage differentials in remote work shows that women face a greater disadvantage in the formal sector. At the lower end of the wage distribution, women earn 12.8 per cent less than men in formal remote work. This differential increases steadily and reaches 30.1 per cent at q90. Among informal remote workers, the differences are not as pronounced in the lower quantiles; however, at the upper end, they also reach 31.2 per cent. These results

indicate that, although the intensity of the wage gap varies, female wage penalties persist in remote work in both the formal and informal sectors.

In formal remote work, if wages were determined solely by the composition of attributes, women would actually earn slightly higher wages because the explained component is positive. The unexplained component—associated with differential returns or discrimination—is the factor truly responsible for the disparity, reaching –0.185 at q10 and remaining negative across all quantiles, such as –0.172 at q80 and –0.297 at q90.

Table 7: Results of the quantile regression estimates of log hourly wages for formal and informal for remote work

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
EQUA-TION	VARIABLES	q10	q20	q30	q40	q50	q60	q70	q80	q90
FORMAL										
overall	women	2.245***	2.597***	2.841***	3.052***	3.314***	3.478***	3.683***	3.980***	4.372***
		(0.020)	(0.021)	(0.020)	(0.019)	(0.018)	(0.018)	(0.020)	(0.024)	(0.029)
	men	2.374***	2.724***	2.985***	3.254***	3.463***	3.638***	3.985***	4.237***	4.673***
		(0.023)	(0.021)	(0.021)	(0.022)	(0.022)	(0.023)	(0.025)	(0.026)	(0.032)
	difference	-0.128***	-0.126***	-0.144***	-0.202***	-0.149***	-0.160***	-0.301***	-0.257***	-0.301***
		(0.031)	(0.030)	(0.029)	(0.029)	(0.028)	(0.030)	(0.032)	(0.036)	(0.043)
	explained	0.056***	0.072***	0.063***	0.055***	0.040***	0.023*	0.014	0.006	-0.004
		(0.016)	(0.018)	(0.017)	(0.015)	(0.014)	(0.012)	(0.013)	(0.014)	(0.015)
	unexplained	-0.185***	-0.198***	-0.207***	-0.257***	-0.190***	-0.182***	-0.316***	-0.264***	-0.297***
		(0.029)	(0.027)	(0.026)	(0.027)	(0.026)	(0.028)	(0.031)	(0.035)	(0.044)
INFORMAL										
overall	women	1.483***	1.927***	2.161***	2.345***	2.570***	2.826***	3.067***	3.322***	3.737***
		(0.047)	(0.028)	(0.026)	(0.028)	(0.028)	(0.029)	(0.029)	(0.030)	(0.043)
	men	1.498***	2.013***	2.213***	2.485***	2.720***	2.966***	3.260***	3.495***	4.049***
		(0.053)	(0.032)	(0.032)	(0.032)	(0.033)	(0.034)	(0.035)	(0.037)	(0.059)
	difference	-0.015	-0.085**	-0.051	-0.140***	-0.150***	-0.140***	-0.192***	-0.172***	-0.312***
		(0.071)	(0.042)	(0.041)	(0.043)	(0.044)	(0.044)	(0.045)	(0.048)	(0.073)
	explained	0.122***	0.048*	0.052**	0.054*	0.069**	0.080***	0.059**	0.051*	0.047
		(0.043)	(0.027)	(0.026)	(0.029)	(0.030)	(0.030)	(0.029)	(0.029)	(0.038)
	unexplained	-0.137*	-0.133***	-0.103**	-0.194***	-0.220***	-0.220***	-0.252***	-0.223***	-0.359***
		(0.075)	(0.042)	(0.041)	(0.041)	(0.041)	(0.042)	(0.044)	(0.048)	(0.077)

Source: IBGE, PNAD 2022.

In informal remote work, the explained component again acts against the observed wage gap, with +0.080 at q10, indicating that, based on productive characteristics alone, women should not be in a disadvantaged position. However, the unexplained component is decisive and becomes stronger in the upper quantiles, with a substantial value of –0.359 at q90—the same

region where the percentage difference between the groups is also largest.

Comparing the formal and informal segments suggests that, although women face lower returns to their characteristics in both markets, the penalty in the formal remote sector is relatively stronger in the lower quantiles, while in the informal sector it intensifies at the upper end of the wage distribution. Overall, the results indicate that wage inequality in remote work does not stem from differences in the composition of productive characteristics between men and women, but rather from the way these characteristics are remunerated. The predominance of the unexplained component, combined with persistent percentage gaps throughout the distribution, suggests that traditional patterns of gender inequality remain present—and in some cases become even more pronounced—even in a work environment associated with flexibility, autonomy, and the potential reduction of physical barriers.

6. Conclusions

This study shows that flexible work arrangements in Brazil—home-based work (WFH) and remote work — do not reduce gender wage inequality; they reconfigure it. Women are overrepresented in both modalities and earn less than men throughout the distribution. Gaps are largest in WFH, where informality is pervasive, and penalties for women are steep across quantiles; in remote work, gaps are modest at the bottom but widen sharply at the top, consistent with a glass-ceiling pattern. Decompositions indicate a clear asymmetry: in remote work, women's observable attributes would predict higher pay than men's (positive composition effect), but lower returns erase that advantage; in WFH, composition effects favor men from the outset, and lower returns for women compound the gap. Across all settings, the unexplained component is persistently negative for women, signalling systematically lower remuneration of equivalent characteristics.

Formal status is pivotal. WFH is largely composed of informal and lower-quality jobs—especially for women—while remote work is concentrated in formal, high-skill roles, where unequal returns intensify at the top of the distribution. The interaction between modality and formality thus reinforces structural inequalities: compositional sorting (who ends up in which jobs) and valuation (how similar attributes are priced) jointly sustain the gender gap.

The post-pandemic reorganization of work, while expanding entry opportunities for women, has not dismantled structural gender inequalities. On the contrary, new work arrangements can reproduce—or even intensify—these patterns unless paired with policies that address the sexual division of labor and ensure equitable valuation of women's work. Sustaining these modalities, therefore, requires public policies and organizational practices that guarantee equal opportunities and equal returns, tackling the structural barriers that depress women's pay and advancement.

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On November 20th and 21st, 2025, the first workshop of the INSEAI project took place: International Network for Knowledge and Comparative Socioeconomic Analysis on Informality and the policies to be implemented for its formalization in Europe and Latin America [https://www.inseai.eu, https://cordis.europa.eu/project/id/101182756]. Following the project schedule, the team responsible for Work Package 1, from the University of Valencia (UVEG) and GEWAK, in coordination with the local team from the Universidade Federal Fluminense (UFF) and the central coordination team from the Universidad Autonoma de Madrid (UAM), organized this first workshop in a hybrid format: online and in person at the Universidade Federal Fluminense at Niteroi, Brazil. It also served as a mini-conference within the VI RISE-SASE 2025 meeting [https://sase.org/events/vi-rise-sase-2025/]. This first workshop of the INSEAI project is entitled "*Theoretical Context on Informal Activity. Conceptual Framework. Informality and Sustainable Growth Models. Macro and Micro Perspectives*" and compiles the theoretical work on the phenomenon of labour informality from the teams that make up the network in this first year of the project [https://www.inseai.eu/en/workshop-1].

The first workshop has been an excellent forum to share our work and research on informal employment, and to discuss, reach consensus and arrive at fruitful syntheses on our perspectives on the phenomenon, its manifestation in different socio-economic realities such as the various European countries and the various Latin American societies, as well as to make explicit the disagreements and different approaches we have on addressing the phenomenon of informal work, many of them derived from the multidisciplinary approach and the different disciplines from which we start, which on the other hand contribute a great richness to the project.