

Improving the Lives of the Self-Employed

The Road to Effective Insurance

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Labor Markets and Social
Security Division

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SELF-EMPLOYED:

→ The road to effective insurance



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Document prepared by:

Oliver Azuara, Luis Carmona, Mauricio Mondragón, Fermin Vivanco

Inter-American Development Bank

The opinions expressed herein are those of the authors and do not necessarily reflect the views of the Inter-American Development Bank, IDB Lab, its Board of Directors, the Board of Governors or its member countries. In addition, thanks are due to the consulting teams in charge of preparing the documents for analyzing the case studies of Brazil, Chile, Colombia, Mexico and Peru.

June, 2023

Key concepts of this publication

Gig economy. Labor model in which a professional offers his/her services to a consumer through digital platforms. They are characterized by being self-employment jobs, of a specific duration and lacking exclusivity with the contracting company or individual.

Financial literacy. Knowledge associated with understanding how money is earned, spent and saved, as well as the skills and ability to use financial resources and products to make decisions.

Online hours. Number of hours a worker is available to take temporary jobs, usually through a digital application, and during a monthly period.

Financial inclusion. Access to and use of quality and affordable financial services for individuals and businesses.

Income. Total payment received by a driver in the previous four weeks using a platform.

MEI. Individual micro-entrepreneur or self-employed professional.

Service plan. Visual representation that allows design, redesign and test services, considering the complexity of its activities, interfaces and backstage and frontstage tasks.

Digital platform. Plug-and-play business model that allows multiple participants (producers and consumers) to connect, interact and create and exchange value.

Minimum hourly wage. Monthly minimum wage of the country, divided by 40 hours per week and multiplied by 4.3 weeks.

Social security. Protection for individuals and households, derived from an employment relationship and provided by the state to ensure access to health care and income security, particularly in cases of old age, unemployment, illness, occupational injury, maternity or the loss of a breadwinner.

Salaried worker. A worker who receives remuneration for his or her work activities under a contractual relationship as an employee.

Self-employed worker. A worker who receives remuneration for his work activities without having an employee contract, either because he/she has his/her own business or entrepreneurial activity, or because he/she invoices work as an independent contractor, for example, through a technology platform.

Executive Summary

The accelerated adoption of new technologies has changed our communication, coexistence, consumption and work. Flexibility is the common element in all of this. In the case of work, new technologies represent a great opportunity for income generation, but also a great challenge for labor institutions that classify workers according to their access to social security.

Self-employment in Latin America and the Caribbean represent a quarter of the total (50 out of 188 million people) and their level of informality is significantly higher than that of salaried work. Over the last 15 years, the aggregate percentage of self-employed workers has not decreased for almost all countries, and it is likely to increase due to the possibilities offered by recent technological changes. According to available data, labor flexibility is highly valued, so the recent adoption of new technologies can be a vehicle for increasing new forms of employment. This leads to the search for policy alternatives to close coverage gaps and achieve a better distribution of risks (for example, aging, health, accidents) by taking advantage of the cost reductions offered by technological solutions.

This document focuses on identifying areas of opportunity to improve insurance schemes for the self-employed. The starting point is the available labor force information contained in each country's household survey. The details of employment dynamics are limited within these surveys. For example, they do not allow us to know the trajectories and valuations of self-employment. This in turn can lead to erroneous conclusions about how to modify the current situation. For example, the composition of self-employed workers may seem constant over time, but the labor force is changeable. For all these reasons, it is essential to complement traditional information with new sources.

Current insurance schemes for self-employed workers are generally adaptations of the model for salaried workers. These adaptations do not respond well to their needs and circumstances, which is reflected in lower levels of insurance coverage. Ideally, self-employed workers should have their own schemes, but the feasibility of achieving this is low. An alternative is to optimize these schemes to try to facilitate their adoption. This paper illustrates the path that the legislation establishes for self-employed workers to use the mechanisms in place in Brazil, Chile, Colombia, Mexico and Peru. In each case we develop a service plan, documenting – from the user's experience – what steps must be followed to comply with the obligations established in the current regulation, both for social security

and tax payments. In each scheme we document an important variation in the complexity of each system and identify the areas of opportunity in the critical points (friction points) of the route followed by the worker, both in the procedures and the biases that impede it (behavioral economics). Although there is no universal solution, we documented the existence of common elements that could facilitate compliance with the obligations necessary to improve the insurance of self-employed workers. These include: electronic registration; aggregation of income from various sources; flexible insurance schemes with new products; automatic discounts; coordination of information with the tax system; coordination of information with the financial system; and, finally, tax incentives.

The basis for greater insurance effectiveness is the traceability of individual income and the interoperability of bank and tax data. This information would provide certainty regarding the number and amounts needed to access a mechanism to protect against different risks, mainly health and aging. There is a positive relationship between the number of processes developed in each country and their level of insurance. In other words, in countries where institutions have been developed to attend to the needs of the self-employed, the levels of compliance are higher.

In addition to the modernization of revenue control, it is essential to rethink the existing insurance products included in social security schemes. Undoubtedly, the basis for expanding insurance coverage is to have a solid contribution base, which reflects the total income of individuals and can be verifiable. However, self-employed workers can have very low income levels and high volatility, which makes it very difficult to meet payments that are not aligned with their income. This leads to the need to identify how to lower the underwriting costs that are currently incurred in traditional systems. Three of these are identified in this paper, including: automatic discounts, the creation of new underwriting schemes, and tax incentives.

In sum, the labor flexibility of self-employed work is something that has been permanent in Latin America and the Caribbean, and technology can be a catalyst for more workers to decide to carry out activities on their own. This may increase the vulnerability of more people, within the context of accelerated aging in all countries. It is time to modernize insurance schemes to improve their lives. Effectively protecting the self-employed from health, illness and old age risks requires a rethinking of social insurance schemes to adapt them to the reality of the region's labor markets. Trends towards working careers with several transitions between sectors and types of employment will become more and more frequent and, therefore, it is essential to test solutions to prevent people from facing the risks of not being insured. Some of these solutions can be achieved by improving existing

mechanisms, using technological tools. In other words, the transformation of work that we are experiencing raises the need to adapt social security systems to the needs of workers and not vice versa.

We have the opportunity to test new products and processes that complement traditional social security schemes. At the IDB's Digital Social Security Lab, we are committed to finding evidence to enable a more informed discussion on this topic and will continue to collaborate with governments, the private sector and entrepreneurs to improve the lives of the self-employed.

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I Introduction

The accelerated adoption of new technologies has changed our communication, coexistence, consumption and work. Flexibility is the common element in all of this. Technological developments have been instrumental in increasing the productivity of millions of occupations and accelerating economic activity. Instant communication without personal interactions, whether for personal or consumer reasons, is very different from what it used to be. Work is no exception. The evolution that work is undergoing around the world has a twofold effect. On the one hand, these changes risk rendering various occupations unviable or requiring a level of skill for which many people are not prepared. On the other hand, technological adoption has allowed the creation of income opportunities for new occupations that did not exist before, and where people provide services that are increasingly valued by society.

New technologies represent a great opportunity for income generation, but also a huge challenge for labor institutions that classify workers according to their access to social security. Digital innovation and increased online connectivity have created new opportunities for more people to be employed and earn income almost immediately. This is because the costs to offer and demand services that were previously offered on a limited basis are now significantly lower, which has favored participation in economic sectors that in the past required significant investments. This change brings with it a great challenge: how to determine the type of labor relations, since these new forms of employment are not considered in traditional labor institutions and their characteristics are very different. People can now increase their income without the need for a subordinate relationship with an employee, a specific designated place to perform their work activities, as well as the observance of specific rules and working hours.¹

Technological advances represent both a great challenge and a great opportunity for Latin America and the Caribbean. Self-employment is traditionally unprotected, so using technology to close coverage gaps is a viable option. There is great sociodemographic, economic and institutional heterogeneity in the region's labor markets. This generates

¹ Existing labor regulations in many countries, including those of Latin America and the Caribbean, have many gaps in terms of definitions of platform work, and are therefore subject to intense debate. Strictly speaking, platform work does not meet the requirements of dependent work, so the de facto option has been to treat them as self-employed workers. However, a fraction of these workers use platforms as their sole activity at some points in their working lives, which changes the traditional model that assumes it as part-time. Both Hall and Krueger (2018) and Gruber (2022) suggest the creation of a new labor classification to address the need for better coverage against the risks to which these workers are subject.

important differences in the labor dynamics of workers and largely explains the differences in the levels of what is considered formality for both self-employed and salaried workers, i.e., coverage for various risks (health, labor, aging) through social security. The labor opportunities created by new technologies have generated additional complexity in the functioning of labor markets. This includes high labor flexibility, full traceability and electronic payment systems in each country. Such advances can also be used to identify new ways of making these workers insurable against different risks, even with products that until recently could have been considered unfeasible for traditional institutions.

This paper focuses on identifying areas of opportunity to improve insurance schemes for self-employed workers in Latin America and the Caribbean. To this end, we analyze the path that these workers must follow in the specific contexts of Brazil, Colombia, Chile, Mexico and Peru. Unlike traditional salaried workers, where employers are the ones who register their workers for social security and pay the corresponding contributions, self-employed workers must carry out similar processes autonomously, which becomes a barrier to their insurance. There are also other elements that influence non-compliance with current schemes, including cognitive biases, institutional structure, insurance costs and low oversight. The first part of the document includes a general description of the situation of self-employed workers in the region, using data from household and employment surveys for the elaboration of indicators. These data make it possible to measure the conditions that characterize self-employed workers: elevated informality of work, high unemployment rates, low productivity and low insurance coverage. The second part presents the specific institutional aspects that the current regulations establish so that self-employed workers can be insured in the systems in force in each country. For this purpose, “service plans” were developed, which is a methodology to visually represent the services, taking into account the complexity of their activities, interfaces and tasks (visible and not) for users. This allows the identification of the most contentious aspects that impede assurance, including contextual barriers, behavioral biases that hinder their adoption and procedural challenges. In the first case, the analysis characterizes the institutional, technological, financial, fiscal, regulatory and procedural challenges that countries must face to improve social security systems. These become more evident when incorporating new forms of work and the state’s capacity to collect taxes. For the second case, we use some concepts of behavioral economics to identify possible cognitive biases in accessing and remaining in social security systems. The latter include decision paralysis, discomfort factors, complex decisions, intention-action gap and overoptimism.

This report reinforces the work that the Digital Social Security Lab is carrying out to diagnose and promote alternatives that encourage the effective insurance of workers, particularly the self-employed. The results obtained so far suggest that it is possible to use recent advances in technology and behavioral economics to design effective interventions to increase the savings of self-employed workers. New technologies can become an ally in increasing coverage levels, as they can be reduced with the implementation of automatic electronic mechanisms.² However, the benefits offered by technology may be limited by the scope of labor regulation. The diversity and flexibility implied by self-employed work require definitions and products that are not considered in most systems. The high rotation in different jobs, the irregularity in days and schedules to generate income make the traditional approach, which is almost identical to that of salaried workers, but making contributions individually, difficult to comply with. This makes it necessary to look for new alternatives to ensure that these workers are insured, thereby, improving their lives.

2. See Azuara et al. (2021): "[Ahorro sin barreras: Lecciones de las intervenciones del Laboratorio de Ahorro para el Retiro](#)".

II Self-employed workers in Latin America

Self-employed workers between the ages of 15 and 64 represent, on average, a quarter of the region’s employed population. In 2022, the labor force in Latin America was almost 188 million people, according to data from the IDB’s Labor Markets and Social Security Information System (SIMS). As shown in table 1, when analyzed by occupational category, 138 million (73.5%) were salaried workers and 50 million (26.5%) were self-employed.

TABLE 1 WORKERS BY OCCUPATIONAL CATEGORY (MILLIONS, 2022)

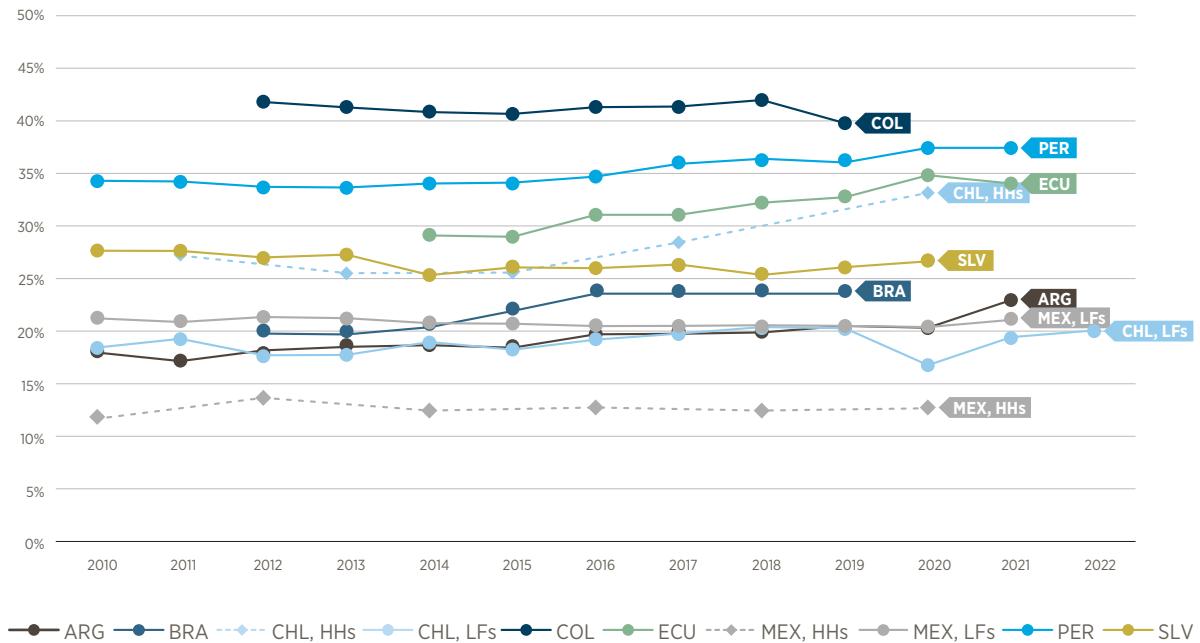
	SALARIED EMPLOYEES AND SELF-EMPLOYED	SALARIED EMPLOYEES			SELF-EMPLOYED		
	All	All	Formal	Informal	All	Formal	Informal
ARG	11.10	8.45	5.77	2.69	2.64	S/I	S/I
BRA	82.27	61.21	48.53	12.69	21.06	6.74	14.31
CHL	6.84	5.18	4.52	0.66	1.66	0.55	1.11
COL	18.66	10.27	6.96	3.31	8.39	1.08	7.31
ECU	6.31	3.71	1.93	1.77	2.61	0.40	2.21
MEX	47.33	40.33	17.34	22.99	7.01	0.03	6.97
PER	13.07	7.33	2.90	4.43	5.74	0.02	5.72
SLV	2.29	1.62	0.72	0.90	0.67	0.01	0.67
TOTAL	187.87	138.09	88.66	49.43	49.78	8.84	38.30
%	100%	73.5%			26.5%		

Source: IDB’s Information System on Labor Markets and Social Security (SIMS).
 In the case of Chile and Mexico, employment surveys were used.

Note: The percentage of self-employed may vary according to the data source used (SIMS or employment surveys) and the definition at the base of the measurement.

There is great heterogeneity in the distribution of occupational categories at the regional and country levels. Chart 1 shows these differences: the proportion of self-employed workers ranges from 21% in Mexico to 40% in Colombia. In between, approximately 23% of workers are self-employed in Argentina, Brazil and Chile, while this percentage increases in Peru (38%) and Ecuador (34%).

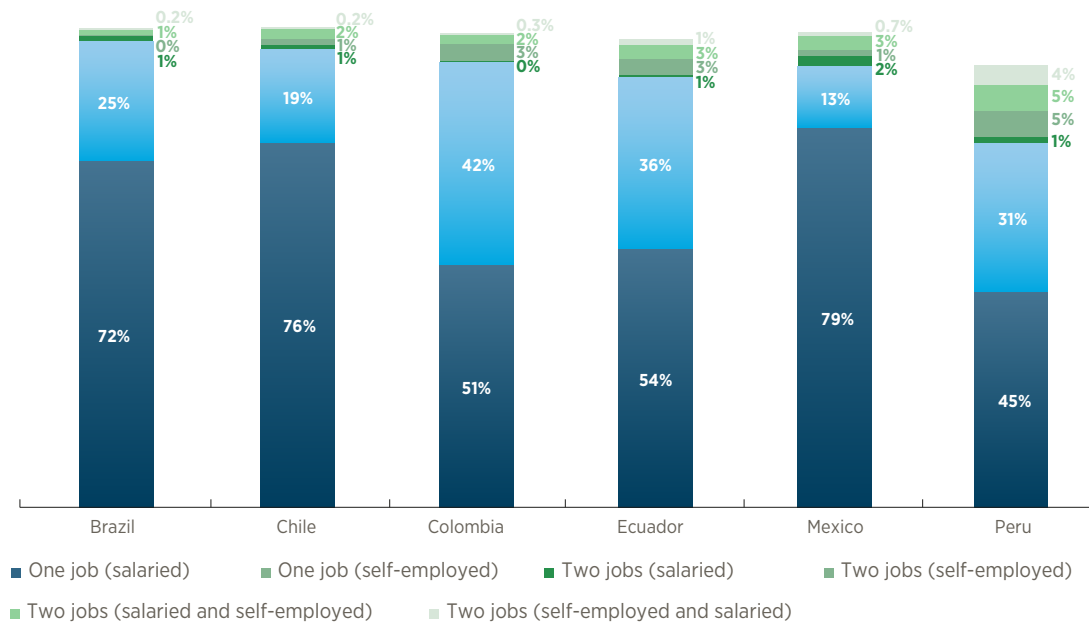
CHART 1 PROPORTION OF SELF-EMPLOYED WORKERS IN RELATION TO TOTAL SALARIED WORKERS AND SELF-EMPLOYED WORKERS



Source: IDB's Information System on Labor Markets and Social Security (SIMS), except for Chile and Mexico, where employment surveys were used.

The vast majority of workers in the region have only one job, including the self-employed. In Brazil, Chile, Colombia, Ecuador and Mexico more than 90% of workers report having only one (1) job, and in Peru the percentage decreases considerably (24% compared to the average of the previous countries). Among those who report having more than one job, 2% report having a salaried job as their main job and a self-employed job as a secondary job; 1.4% report having two salaried jobs; and the same percentage reports having two self-employed jobs. Chart 2 shows all of these distributions by country.

CHART 2 NUMBER OF JOBS REPORTED BY THE LABOR FORCE SELECTED COUNTRIES (CIRCA 2021)

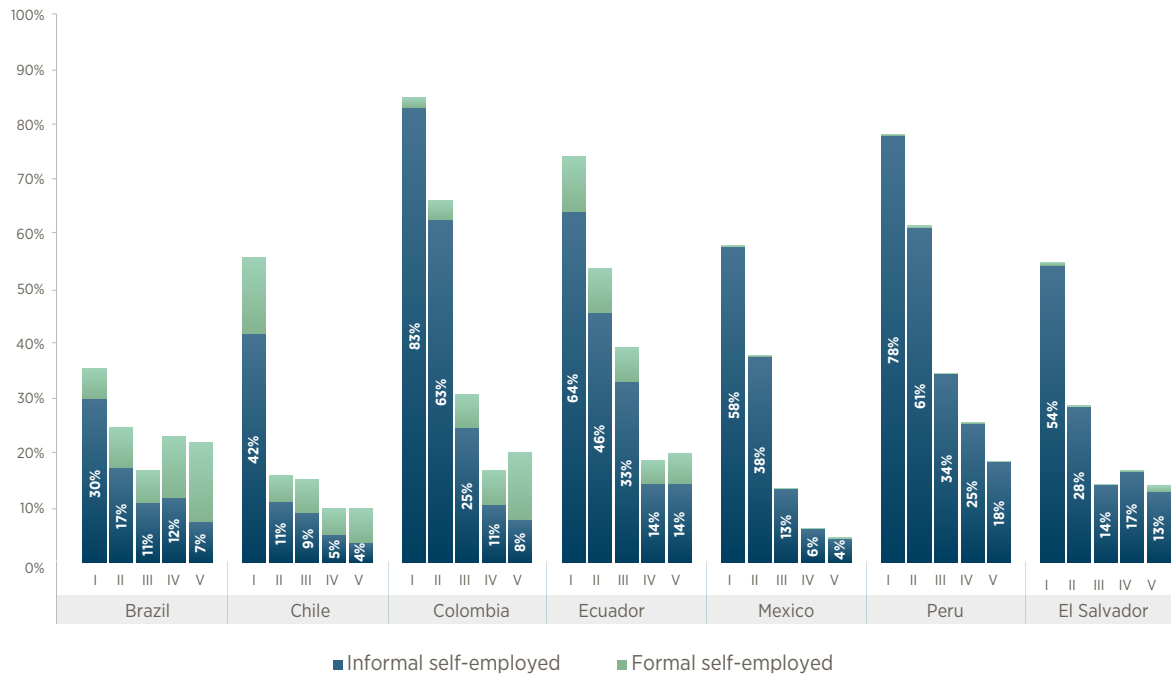


Source: IDB's Information System on Labor Markets and Social Security (SIMS), except for Chile and Mexico, where employment surveys were used.

The majority of self-employed workers are not covered by social security and are considered informal, including those workers with higher incomes. Most social security systems have focused on creating mechanisms to insure salaried workers with a design that gives the role to formal employers and employees who deduct their share from payroll. This results in lower levels of coverage, as even higher-income workers are not insured. Chart 3 shows the distribution of self-employed workers according to the income quintile to which they belong.

As can be seen, in most countries, the highest percentage of self-employed workers belong to the lowest income quintiles. In Mexico, Peru and El Salvador, less than 1% of self-employed workers are formal, while in Brazil, Chile, Colombia and Ecuador, this percentage increases slightly. In the latter cases, the level of formality of self-employed workers belonging to the highest income decile is higher than the level of informality, which shows an institutional effort to incorporate this type of worker into insurance systems.

CHART 3 SELF-EMPLOYED WORKERS BY FORMALITY AND LABOR INCOME QUINTILE OF SALARIED AND SELF-EMPLOYED WORKERS (CIRCA 2021)



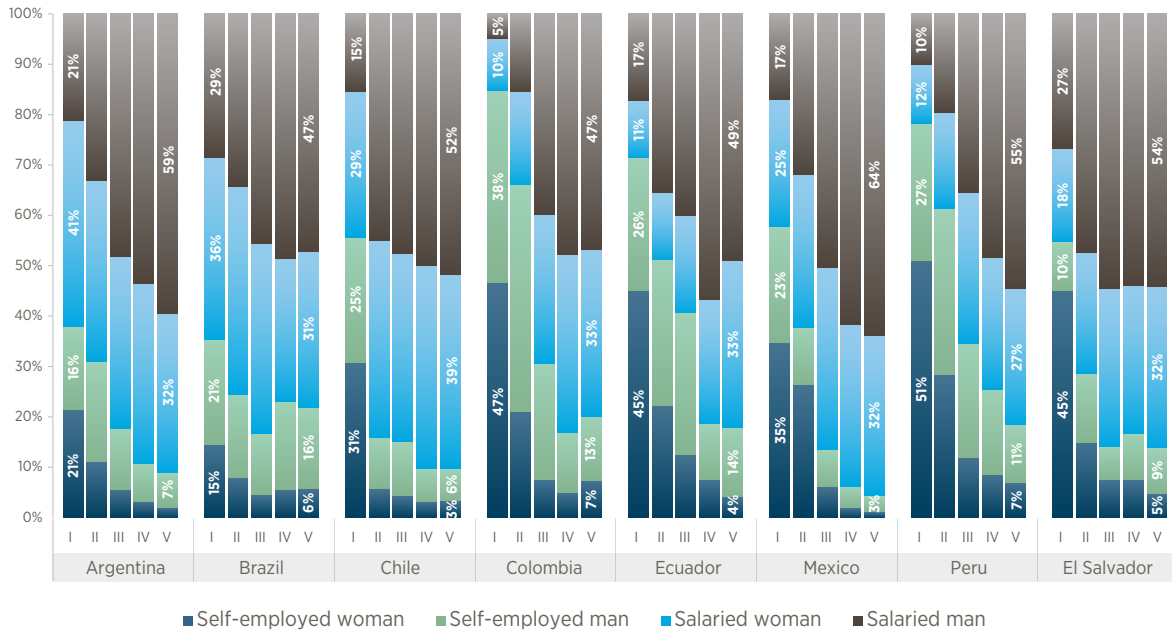
Source: IDB's Information System on Labor Markets and Social Security (SIMS), except for Chile and Mexico, where employment surveys were used.

Note: Monetary and non-monetary labor income from the main occupation is considered. The employed population that does not report income is not considered in the analysis.

Women have lower levels of income and higher levels of informality compared to men.

As shown in chart 4, the relationship between the level of informal self-employment is similar to the distribution by gender in Colombia, Ecuador, Mexico, Peru, and El Salvador. Similarly, it is evident that the proportion of self-employed women decreases the higher the labor income quintile.

CHART 4 SELF-EMPLOYED WORKERS BY GENDER AND LABOR INCOME QUINTILE (CIRCA 2021)



Source: IDB's Information System on Labor Markets and Social Security (SIMS), except for Chile and Mexico, where employment surveys were used.

Note: Monetary and non-monetary labor income from the main occupation is considered. The employed population that does not report income is not considered in the analysis.

III New forms of employment: can we consider them self-employment?

Self-employment is the way in which many workers can combine their work and family obligations. The flexibility offered by this categorization is greater than that of salaried work, since in many cases it can define days, hours and places of work. This flexibility allows small companies to rely on freelancers to perform temporary, seasonal or part-time work at lower cost and often with better service to their customers. Examples are accounting, marketing or courier services.

The emergence of the platform economy has made the definition of the type of employment relationship more complex. In this business model, technology facilitates the provision of services in a simple and low-cost way for both those who demand and those who offer them. In addition, they lower the barriers to entry for workers who want to start working compared to those who enter a job after a traditional application, interview and employment contract process. In many cases, once a person meets the requirements to register on a platform, he or she can spend as much time as desired in that activity and on the schedule that best suits his or her needs. This flexibility makes platforms an attractive way to generate income for many people, even with no or little experience in an industry or in the country. Hall and Krueger (2018) showed that less than one-fifth of those using transportation platforms in the United States had worked in this industry. For Latin America, Azuara et. al. (2019) showed that only 10% of those who generate income with Uber had previously worked as cab drivers.

The ease of use offered by platforms is a key element for those who decide to participate in them. Lack of information and limited employment alternatives were common until a few years ago, although variations in the labor composition show that this has begun to change. Existing research has mostly focused on transportation platforms, but this technological option can be expanded to several sectors and, therefore, it is essential to have tools for its analysis.

The characteristics of platform employment are not contemplated in the labor regulations in force in most countries. In some cases, this lack of definitions has been remedied by standardizing them to self-employment work. However, there are many challenges associated with making insurance schemes compatible with this type of work, such as

tax collection mechanisms and making progress in improving measurement tools for better public policies. For the rest of the analysis in this document, platform workers are considered to be self-employed.

III.A Estimates using official data

Lack of information is perhaps one of the main problems when dealing with self-employment using new technologies, such as employment platforms, mostly for transportation and delivery. Latin America and the Caribbean is no exception, as the information available is very limited. The irruption of technology to allow people to allocate their time individually and without time conditions generates a measurement challenge. In most countries there is no such classification of employment, so there is no certainty about its real size.

Household surveys have been used in several countries to approximate the size of platform-generated jobs. However, these contain measurement errors in both the number and hours workers spend generating income. For example, for the case of the United States, Bracha and Burke (2021) show that even when millions of people use platforms to supplement their income, they do not do so on a permanent basis. This generates an underestimation of the total income generated in the aggregate, as people do not consider it as part of their permanent income.

In Latin America, Brazil, Chile, Costa Rica and Mexico have made progress in consolidating their measurement instruments. Thus, while Brazil's IBGE and Mexico's INEGI are exploring alternatives, Chile has taken the first steps to introduce employment dimensions on platforms in the INE (period 2018-2022). On the other hand, Costa Rica has incorporated a battery of questions regarding telework and Panama has included questions on the use of web platforms. There is, however, a problem of representativeness, since most platform activity is concentrated in the transportation, transfers and home deliveries sector. This represents a methodological challenge for statistical representativeness, since informal employment in these sectors is very high (58%) and many of the people who report working in this sector have other occupations.

The classification of occupations along with other demographic characteristics captured in household surveys are an alternative way to approximate the size of this type of work. Efforts have been directed at understanding the characteristics of occupations most relevant to the labor markets in which the platforms participate. For this purpose,

the occupational classifications that various household surveys carry out on members active in the labor market are used. For this purpose, the classifications of related occupations are used for each platform and through additional questions an estimate can be made of the total number of people using a platform who are considered self-employed.

In Chile, 2% of the total employed population works on digital service platforms. Since 2020, the National Employment Survey (ENE) in Chile has incorporated dimensions to measure platform work both as a primary and secondary activity. The results obtained to date have been considered experimental statistics, while waiting for the survey to be consolidated and the measurement to be refined in order to include them in the official statistics. However, the last rolling quarter AMJ 2022 showed that approximately 205,740 people (2.3% of the national total) use this occupational alternative. On the other hand, the implementation of Law 21.431, which regulates the hiring of digital service platforms in Chile, exposes a challenge in occupational accreditation and its measurement. Under the current regulation, platform work covers only a subset of transportation and deliveries. However, there are other industries that must be defined to achieve a better measurement of these occupations.

II.B Measuring employment on platforms

Given this lack of information, there are complementary tools that allow estimating the size and characteristics of self-employed work on platforms. For example, for the case of the United States, the Pew Research Center has tracked the total number of people who have completed tasks through applications or platforms that allow them to control their own schedule. According to the latest data available for August 2021, 16% of Americans had ever earned money working on platforms.³ In the case of Latin America, there is no regional or country-level survey that allows for a similar diagnosis.

The IDB is seeking to support governments in Latin America and the Caribbean to measure the size of the gig economy in their workforce. The lack of statistical guidelines from governments in the region for the collection, analysis and monitoring of platform labor is a gap that the Digital Social Security Lab seeks to fill through the design and testing of proposals for public and private surveys in the region. So far, multiple surveys have been conducted among workers in several countries active on different platforms. These data are very valuable, as they provide insight into the profile and aspirations of the people em-

3. See "State of Gig Work in 2021." Available at: <https://www.pewresearch.org/internet/2021/12/08/the-state-of-gig-work-in-2021/>.

ployed in this sector.⁴ Alternatively, general surveys allow us to approximate the number of workers working with platforms. However, the cost of these measurements is high. In this regard, the IDB conducted a survey in Mexico City and its metropolitan area, which estimates that the total number of people who have used a platform to obtain income is 3%, which would represent almost 300,000 workers.⁵

Complementary sources of information show that the population using platforms is very heterogeneous, although there are two elements that are highly valued by those who use them: flexibility and income. In the first case, most of the available studies, including surveys conducted by the IDB in different countries, show that digital platforms are a highly valued option for those who use them to generate income, given the flexibility that traditional work does not offer. This implies that workers with very different characteristics and labor trajectories decide to use them, which translates into difficulty in defining unique or uniform actions to establish available insurance mechanisms. In the second case, the ease of generating income without the need for experience in the sector is highly valued. The ease with which platforms can initiate activities and obtain income for different services provided is highly valued by their users. Both elements are key to understanding the needs, incentives and behavior of users, so any regulation must take them into account.

4. Multiple surveys have been conducted, including [Uber](#), [Didi](#) and [Beat](#) drivers, as well as Rappi and Didi Food delivery drivers.

5. See Plataformas Digitales en la Ciudad de México y su zona conurbada. IDB (2023).

III.C The participation of women in digital service platforms

The labor participation of women using digital platforms has great potential to grow.

There is evidence that several occupations are segregated by gender due to institutional or social barriers (Dolado, Felgueroso and Jimeno, 2003; Borrowman and Klasen, 2020). In a segregated occupation, a high percentage of workers of the same gender is observed, which may be related to the labor bonding process.

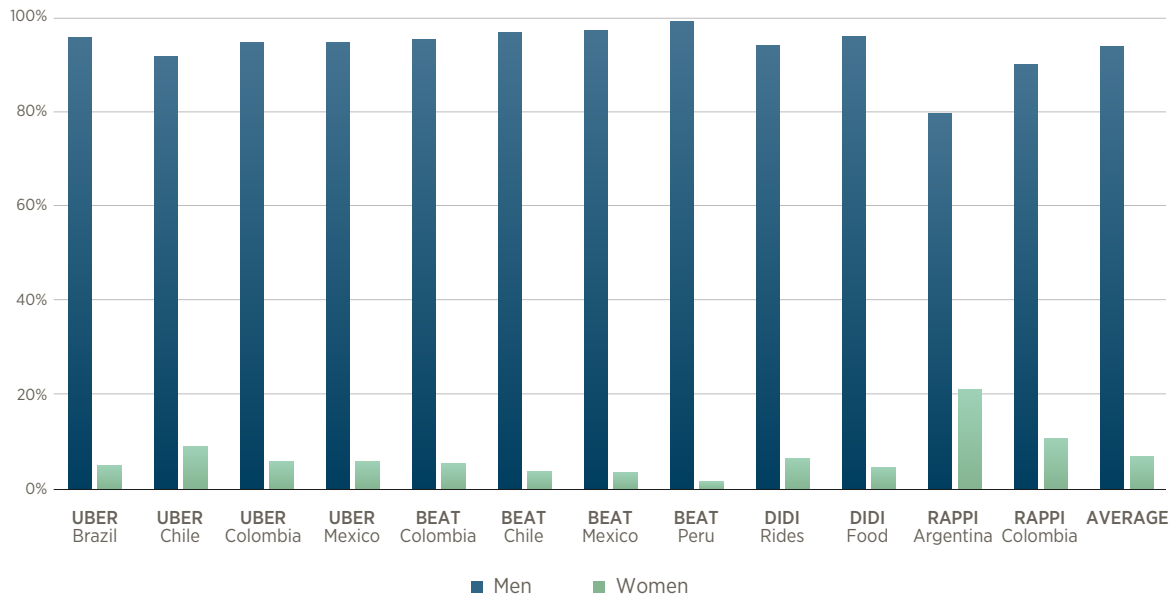
There is little disaggregated information on platform employment trends in Latin America and the Caribbean, although the data collected by the IDB show significant gender biases in different occupations.

The employment and household surveys available for the region do not include questions for the classification of employment in digital platforms, so it is difficult to know the total employment generated and its breakdown by gender. In this context, the surveys conducted by the Digital Social Security Lab provide some elements for this discussion.

The gender bias at the industry level is much more pronounced in transportation and delivery platforms.

Mobility and delivery platforms in Latin America have the highest visibility and most people use them as an occupational alternative. As with other types of platforms, the IDB has been able to collect information on most of the transportation platforms in the region. By agreement with most of the main companies, surveys have been conducted in different countries, which show that this activity has a gender bias. The vast majority of drivers and delivery drivers working in mobility and delivery platforms are men. In almost all cases, women who participate in these sectors represent less than 10% of the total.

CHART 5 PARTICIPATION BY GENDER IN TRANSPORTATION PLATFORMS IN LATIN AMERICA AND THE CARIBBEAN

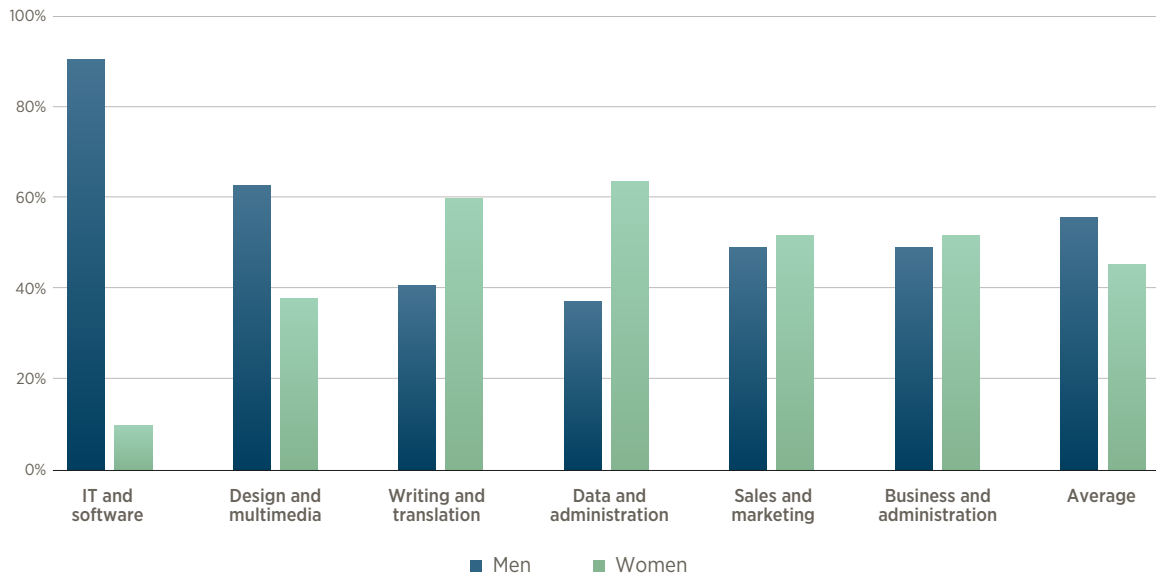


Source: Surveys of drivers and delivery drivers, IDB. As of October 2022.

Note: Beat closed operations in Latin America in December 2022.

However, female participation in platforms aimed at other industries is higher. The survey of people who offer their specialized freelance work through the Workana platform shows a higher female participation. This company is a leader in freelance work at regional level. The survey was conducted in conjunction with the World Bank during July 2022 to 3,702 freelancers of the company to know their socio-demographic profile, work history, as well as their motivations to join the platform and financial and social security health. The results indicated that 45% of the users were women. However, this proportion varies according to the various activities that can be performed on the platform. For example, in tasks related to information technology, the proportion of women drops to only 10%, while in tasks related to writing and translation, it rises to 59%.

CHART 6 PARTICIPATION BY GENDER AND INDUSTRY IN WORKANA

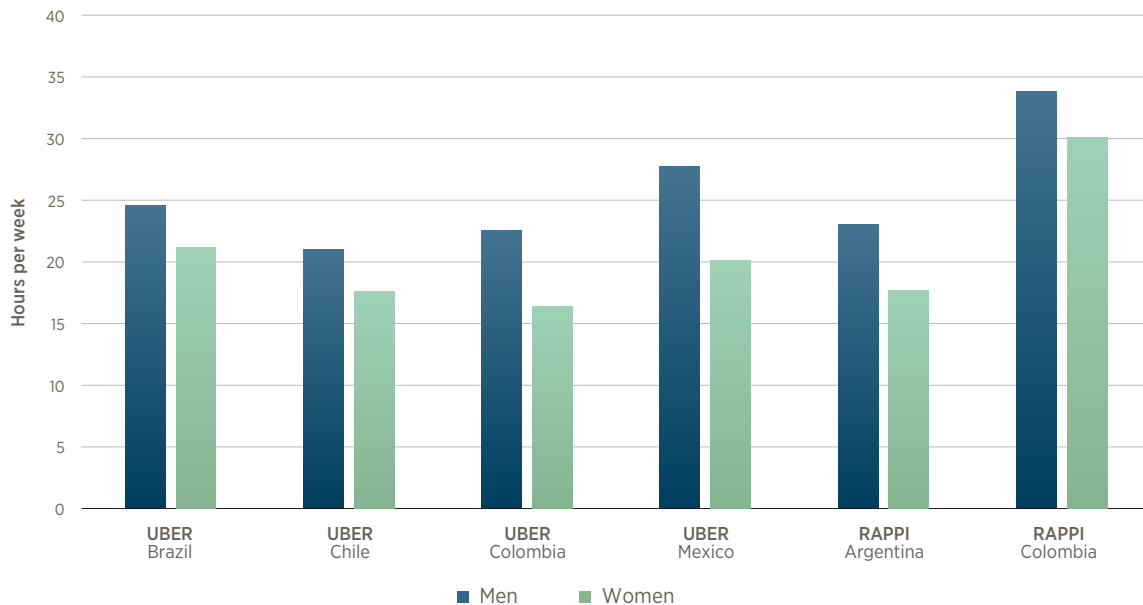


Source: IDB-Workana 2022 Survey.

Hours worked and income

The time spent working on platforms is less than the working hours established in formal jobs. Transport platform workers work an average of 24 hours per week. In surveys conducted by the IDB with different platforms, it has been found that those who use transportation platforms to generate income do not use them with the same duration as most regulations establish. For example, in the case of Uber and according to its administrative records, more than half use the platform for less than 10 hours per week; 38% use it between 10 and 30 hours; and 9% more than 30 hours per week. There are significant differences between countries. For example, Mexican drivers who quit their jobs after joining the platform were online, on average, 27 hours per week, while those who kept their jobs did so for 16 hours per week. Similarly, Chilean Uber drivers in the first group used the platform 19 hours per week, and in the second group, only 10 hours per week. In the case of Rappi, the average is higher, although the duration is still less than a formal working day. Chart 7 shows the data obtained from the administrative records of these companies for both men and women. It should be noted that, in all cases, women dedicate on average fewer hours to this activity.

CHART 7 AVERAGE HOURS ONLINE FOR DRIVERS AND DELIVERY DRIVERS

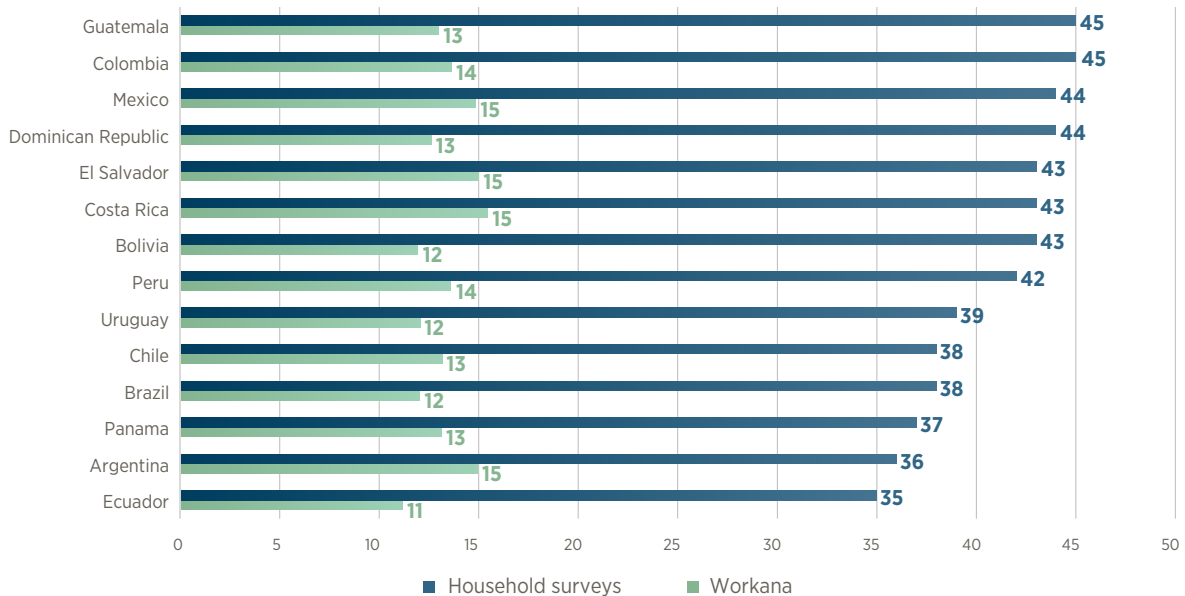


Source: Surveys of drivers and delivery drivers. IDB.

In the case of freelance platforms, the people who use them work, on average, only 33% of the time that workers dedicate to their total working hours. The information collected in the case of Workana includes hours worked. Respondents were classified into three categories, so the average value of each category was taken to have a timely estimate.⁶ Chart 8 shows that, at the national level of the countries where this survey was conducted, workers report an average of 40.9 hours of work, while freelancers report 13.3 hours of work. Here, too, there are gender differences. On average, women work 89% of the time reported by men. In the case of differences by industry, we find that in design and multimedia there is a similar number of hours. In contrast, in writing and translation, women work 85% of the time compared to men.

6. This can generate a measurement bias, since not having the point value means a loss of granularity in the measurement.

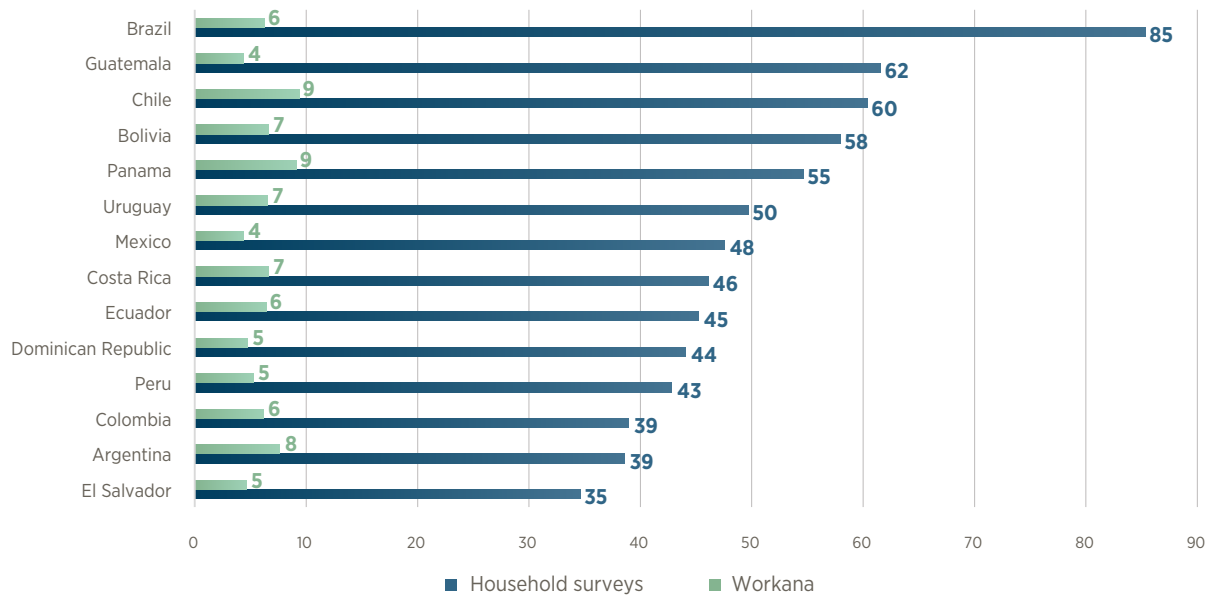
CHART 8 AVERAGE WORKING HOURS BY COUNTRY. WORKANA VS. NATIONAL



Source: Household surveys and Workana Survey (IDB).

This difference in hours worked is offset by the average income received by those who use the platform. One hour of work on Workana generates income equivalent to 8.4 hours in a traditional job. In the case of income, for each Workana interviewee, the level of weekly income was obtained. This value was divided by the number of hours to obtain the average value. To know the equivalence of this income compared to the income received in each country, we estimated the average hourly income reported by average formal workers. This comparison shows that freelancers receive 8.4 times more per hour of work compared to formal workers. In other words, the effort required to earn the same level of income is substantially less.

CHART 9 AVERAGE INCOME PER HOUR OF WORK. WORKANA VS. NATIONAL



Source: Household surveys and Workana Survey (IDB).

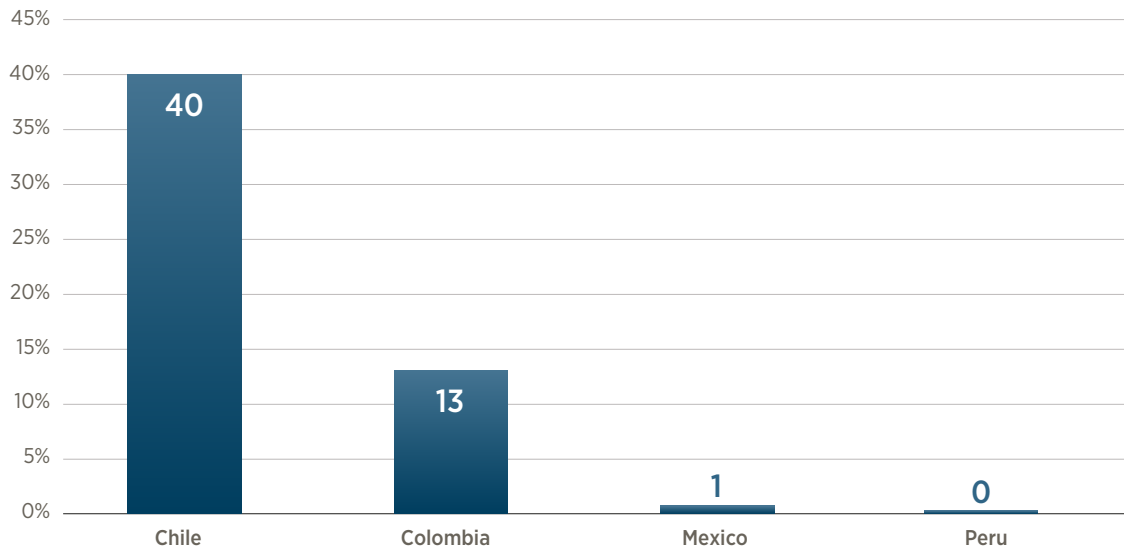
These differences in participation, hours worked and income represent a major challenge. Moving forward, it is important to identify how to achieve permanent and more balanced technology adoption. While Latin America lags behind other regions in the use and exploitation of digital platforms, recent technological adoption is an opportunity to achieve greater intensive and extensive participation in different industries. In particular, potential access for women is key, as platforms offer the flexibility that traditional jobs lack. However, the differences observed in the available data show that specific measures are needed to enable inclusive access to opportunities. This includes more information, improved access to ICTs and gender-sensitive digital literacy.

IV Self-employment insurance: challenges and biases

Insurance for self-employed workers is one of the main challenges in Latin America, both in terms of coverage and contributions. In recent years, the percentage enrollment has grown considerably in some countries in the region. However, the entry of workers into the social security system has not necessarily translated into contributions. In other words, the nominal expansion of the system does not necessarily translate into more resources and better financing of the services provided. Effective pension, health and occupational accident insurance is a challenge for self-employed workers, most of whom are informal. For example, self-employed workers and self-styled micro-entrepreneurs (*microempreendedor individual*, or MEI) in Brazil have experienced sustained growth over the last few years. Between 2015 and 2012, the total number of people registered as MEI increased by 57%, from 3.2 million to 4.9 million. Despite this increase in enrollment, workers' social security contributions remain low. Social security coverage reaches only 32% of own-account workers who can be considered self-employed. In the case of the MEI program, coverage is 100%, since the government covers the cost of contributions.

In all the countries analyzed, the highest coverage among the self-employed barely reaches 40% and in some cases is almost nil. Chart 10 shows the disparity in the contribution and corresponding social security coverage made by the self-employed in Chile, Colombia, Mexico and Peru. Chile has a significant percentage of self-employed contributors (40%), Colombia is in second place with only 13%, while in Peru and Mexico the percentage is less than 1%.

CHART 10 SELF-EMPLOYED WORKERS PAYING SOCIAL SECURITY CONTRIBUTIONS
 (AS % OF TOTAL SELF-EMPLOYED WORKERS)



Source: IDB's Information System on Labor Markets and Social Security (SIMS).

IV.A Factors affecting the low levels of formality of self-employed

There is no universal definition of labor informality, since the concept refers to different institutional, labor and business elements. For each of them, informality is associated with a failure to comply with particular rules or conditions. In the first case, the concept is associated with the lack of institutions for labor protection due to both the precariousness of the businesses where people find employment and the government's weakness in enforcing labor rules. This translates into low levels of compliance in the payment of taxes and contributions to health and pension systems. On the workers' side, informality is associated with low productivity, low job and income security, as well as lack of protection against different risks that are generally covered by social security. Finally, in the case of companies, it is related to low production levels, low productive scale, little or no adoption of productive processes, and non-compliance with legal requirements.⁷

7. See: Author (2007), Betcherman (2012), Bosch et al. (2012a), Bosch et al. (2012b), Djankov and Ramalho (2009), Eslava et al. (2004), Heckman and Pages (2004) Kugler (2004), McKenzie (2017).

The literature on the analysis of informality focuses on salaried work, with less emphasis on self-employment. Self-employment includes a wide range of occupations, ranging from lawyers, designers, programmers or economists, to agricultural producers and traders. In all these cases, the vast majority are not subject to labor and social security regulations, so their informality is less clear than in the salaried case. However, the self-employed are not covered for various risks, so for practical purposes they should be considered as such. In other words, they have similar characteristics to the traditional analysis of informality (low productivity, non-compliance with tax regimes and low social security coverage).

The lack of insurance for the self-employed is multi-causal. As described in the [Retirement Savings Laboratory](#) report, the reasons for the lack of insurance can be grouped into demand barriers, supply barriers and general environmental conditions.⁸ In the first case, the factors at the individual level that inhibit the insurance of individual workers are directly linked to their sources of income and behavioral factors. A good proportion of self-employed workers do not generate sufficient income to pay social security contributions. One of the challenges of contributing to social security could be associated with the clear perception barrier of not having enough income to be able to make monthly contributions to insurance schemes. However, most of the self-employed do not keep records of income and expenses, which prevents proper planning. Another element to consider is that people tend to underestimate the risk and consequences of drastic health problems, which could be cushioned by comprehensive health insurance. Likewise, workers may underestimate the need to build up pension savings to cover their spending needs in old age due to present biases. That is, there may be overconfidence in facing any risk situation that can be covered by an insurance product. This is directly linked to the illusion bias of maintaining control of income, being that the probabilities of variation are substantially higher compared to salaried workers. In other words, there is a certain level of optimism about the situation at any given time. Finally, there is a gregarious element, where the majority of the self-employed are not insured, so they imitate the majority behavior. There is also a lack of knowledge about how to access insurance schemes and their importance, which is considered part of financial education.

The supply-side obstacles to insurance refer to those that limit the coverage of risks by the self-employed. In particular, social security was developed taking the relationship between employers and workers as a unique case. Periodically, the former make contributions, either paid in full by them or in combination with deductions from the workers' income, to obtain coverage for traditional health, labor and aging risks, of which few em-

8. See Azuara et al. (2021). Savings without barriers: Lessons from the interventions of the Retirement Savings Laboratory.

ployees are aware. In other words, insurance has not focused on developing products for the self-employed or independent workers, even though they are an important fraction of the labor force. This, together with poor financial planning, means that self-employed workers do not see the benefits of obtaining coverage, as they consider it excessively expensive and with few benefits.

Environmental obstacles refer to deficiencies in the enrollment and contribution processes for insurance schemes. Similar to supply-side biases, the current systems contain design deficiencies that discourage enrollment and payment of contributions on a regular basis.⁹ Workers could face procedural frictions that would determine their access and permanence in the social security system due to the complexity of the choice, factors that make compliance with obligations onerous, or create cognitive overload.

Reducing all biases and obstacles simultaneously is very complicated, but steps can be taken to increase the level of insurance coverage. Each of the obstacles to effective insurance for the self-employed can be addressed with different tools and new products. However, for the second case, there are many challenges in the insurance systems of each country, since schemes and processes must be modified, which becomes very complicated. In addition, there is no solid evidence regarding the effectiveness of these products, which reduces the interest of authorities in using them.

Optimization of existing systems. Efforts are generally focused on technological improvements in access, with little use by workers. There are three factors that explain low usability. The first is that potential stakeholders receive little information about how the solutions work, so in practice very few people use them. Bias about the complexity of the processes required to acquire insurance is a predominant factor preventing greater adoption. The second element is the lack of regulation and technical capacity to implement these mechanisms. In most countries, self-employed workers are not required to make contributions to obtain health and pension services. In other words, the levels of oversight for this workforce are very limited. This brings us to the third factor: the lack of interoperability of the systems with the tax collection and payment system. In most countries, these three elements operate independently, with the result that workers have no incentive to acquire effective insurance. All of these elements stem from when insurance systems were designed, where it was easier to achieve higher levels through employers. However, today's technological advances allow direct contact with each individual at a reduced cost. All of the above requires a complete review of the current processes, which are shown in the following section.

9. The cases of Mexico and Peru are good examples, as it is estimated that less than 25% of the total keep basic records of their income and expenses. World Bank, Global Findex (2021).

IV.B Service plan: the path to insurance for the self-employed

The service blueprint is a tool to graphically show the processes and activities that an individual must follow to complete the current insurance process. We use this tool to identify all the requirements that self-employed workers in various countries must follow to become insured with the existing tools and systems. The map describes the path that a self-employed worker must follow to become socially insured in Brazil, Chile, Colombia, Mexico and Peru. We also include elements of behavioral economics to detect the most contentious aspects of the encounter with social security systems, weighing the points of contact and the complexity of tasks, systems and interfaces.¹⁰ In terms of structure, the proposed service plan is composed of three stages of analysis, which are illustratively presented as rows. The separations between the stages are understood as lines of visibility, which are responsible for delineating the activities happening at the frontstage, where users tangibly view the service, and the back office or backstage, which is out of sight or knowledge of users (Kim, Lee, & Cha, 2017). For this paper, tasks have been incorporated as internal actions necessary for the functionality of the activities performed by the user in the frontstage.

¹⁰ The frontstage is composed of a user journey as a visual and sequential diagram that allows a linear understanding of the experience that a user lives when interacting with one or more services. In this study, the user journey will allow analyzing the user's behavior from his or her point of view and from a multidimensional perspective (Lemon and Verhoef, 2016). Similarly, it identifies the processes and activities that occur in parallel, and the friction points that can arise in an effort to improve the experience. The line of activities refers to the actions directly performed by the worker in each of the phases of the process that lead him/her to be part of the social security system in Chile. These activities are supported and complemented by the user journey, a visual resource that connects with the line of activities through numbered actions. From the activities, the rest of the operations of the interaction and visibility line are triggered. The intermediate stage between frontstage and backstage is called "interfaces", which is preceded by the interaction line. This segment will allow the identification and analysis of devices, objects, systems or spaces with which the user interacts to execute particular services or processes. To improve understanding, the reader is advised to consider the interface as the means that allows the user, through the execution of activities - sequential or not - to access the analyzed service. Finally, the backstage is presented as a segment that will allow readers to understand how after the line of sight, there is a complex system that requires tools and infrastructure to provide utility and a good user experience (Polaine, Løvlie and Reason, 2013).

Despite the heterogeneity of insurance systems, several of them have included many technological advances, but the worker is responsible for everything from enrollment to contributions. This limits their scope. In each of the cases, the interfaces that allow self-employed workers to meet with the insurance systems were analyzed. This includes the devices, objects or spaces that allow the various activities to be carried out. The analysis shows a significant penetration of digitalization in the various processes, although with major challenges in terms of integration, usability and coverage. The information collected from internal processes, which are not necessarily visible to the worker (the so-called backstage), is very limited, so that it is not possible to provide individualized follow-up for the fulfillment of obligations. This is reflected in problems to acquire insurance, since workers must reproduce their information and there is no way that processes can be used to encourage them to do so.

From a behavioral economics perspective, paralysis due to the decision process is the main reason that prevents greater coverage and regular contributions. The intention-action gap becomes even stronger when the total responsibility for the insurance process is transferred to the self-employed worker, with a high burden of information and parallel processes. There are also two behavioral elements that reinforce this low balance. These include optimism and inconsistency over time. The motivations of the self-employed to set aside an amount for social security are limited. There are measures that can be implemented to reduce these behavioral biases. For each country¹¹ there is a specific section and some suggestions that can be implemented to lessen their effects.

A Brazil

The Brazilian insurance scheme for informal workers focuses on entrepreneurs and the self-employed, within the Individual Micro-Entrepreneur (MEI) program. Due to the universal coverage of the health system, the coverage of other benefits is focused on pensions and uses the concept of the Individual Micro-Entrepreneur (MEI) portal. This scheme also includes those professional services in an informal manner. Likewise, self-employed workers, who may have up to a maximum of one dependent employee, have access to social security by registering in the MEI program. The social contribution corresponds to 5% of the minimum wage and entitles the worker to receive a retirement benefit equiv-

11. The information considered for the case study analysis had a cut-off date of December 2022.

alent to the minimum wage. Likewise, the MEI self-employed worker must have a formal registration as a company.

The scheme has fiscal sustainability problems, as the benefits provided do not correspond to the contributions. The MEI contribution rate is low compared to the benefits provided, resulting in a large actuarial deficit. A large proportion of self-employed workers are not registered in the MEI program and only 40% of workers registered in MEI contribute to social security. A strategic use of this program by workers and even some employers - i.e. false self-employed- is possible. Also, a new pension scheme has been implemented in 2023, which is in its first stage. Both elements should be studied in detail to verify their efficiency and proper functioning, which is not the objective of this paper.

i. Benefits

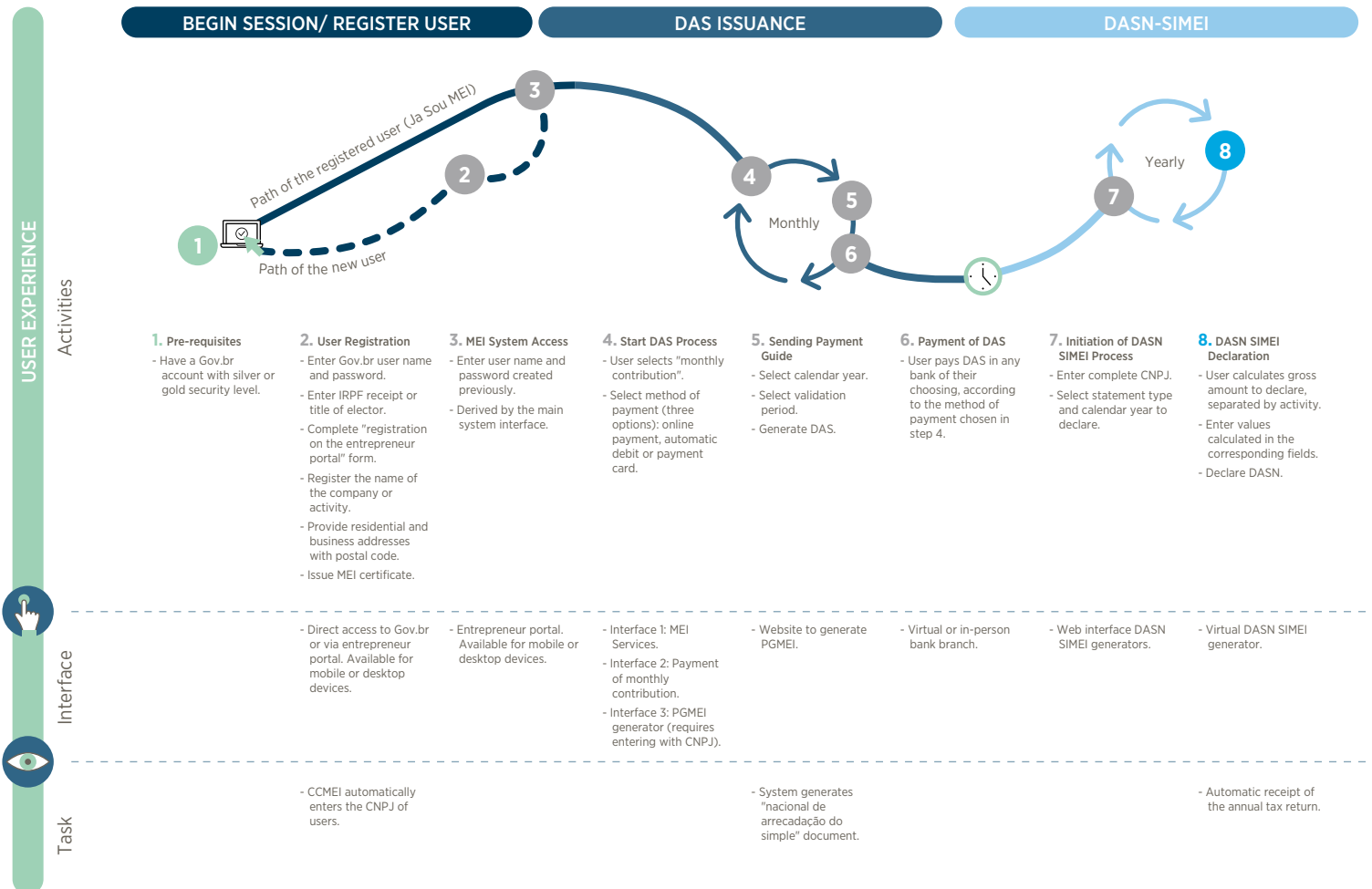
The MEI worker also obtains a tax registration number (CNPJ) that entitles him/her to all the benefits granted to formal companies in Brazil, such as access to credit and the judicial system. In addition to the social contribution, the MEI self-employed are taxed under a simplified system and at reduced rates.

ii. Processes

Figure 1 shows the 8 stages of the underwriting process. This includes the points of contact through virtual interfaces, with the exception of the DAS payment, which provides a face-to-face alternative.

- a. Pre-registration and access (activities 1, 2 and 3),
- b. Payment. Processing and payment of the collection document-DAS (activities 4, 5 and 6).
- c. Annual statement for individual micro-entrepreneurs DASN-SIMEI (activities 7 and 8).

FIGURE 1 BRAZIL SERVICE MAP



iii. Friction points that can be improved

According to what was shown in the service plan, the Brazilian system has at least three points of friction or opportunities for improvement.

- 1. Information.** In order to obtain the benefits of this scheme it is essential to visit the site <https://www.gov.br/empresas-e-negocios/pt-br/empreendedor> and carry out the entire enrollment procedure. However, it is not entirely clear that workers are clear on how to get to the site. Given behavioral biases, this may prevent further social security coverage.

2. Eligibility and benefits. According to the information obtained:

- a.** Not all occupations are eligible for MEI and there is also an upper limit on annual gross income. Also, for lower income workers, having a voter ID and tax receipt number may be a barrier to entry.
- b.** For low-income self-employed workers, the social assistance program (BPC) provides a benefit equivalent to their retirement pension (minimum wage), which may be considered an undervalued benefit, despite its low cost. In particular, higher-income workers may view such a benefit as marginal.

3. Double registration. The obligation to formally register as a company for self-employed workers in reality is a limitation to a significant share of self-employed workers. A recent report by the Comitê de Monitoramento de Avaliação de Políticas Públicas (CMAP) argues that this may introduce some friction in the registration process if self-employed workers are only interested in social security protection. Therefore, CMAP (2022) recommends the Simplified Individual Taxpayer Plan as a possible improvement in coverage for low-income self-employed workers.

B Chile

Chile's legal framework for self-employment is one of the most comprehensive in the region. In 2019, Law 21.133 was enacted, which aims to modify labor regulations for the incorporation of self-employed workers into social protection regimes. Said law focuses on ensuring that the self-employed make contributions to the social security system to access the protection tools available to the social security system, maintaining the fiscal balance between benefits and contributions. Specifically, rules were established to incorporate self-employed workers into the health and pension social protection systems.

The law obliges all workers who issue fee slips for five or more minimum monthly incomes in the calendar year, and who are under 55 years of age in the case of men and under 50 years of age in the case of women, to contribute to the system. The taxable base on which the contributions for the different social security systems are calculated is 80% of the gross annual income (Article 3, Law 21.133 of 2019).

The obligation to pay contributions for all regimes is annual, which materializes in the annual tax return in April of each year, charged to the withholdings of the previous year. This payment provides coverage for all pension systems between July of the year of payment and June of the following year. However, the law also contemplates two contribution options:

- a. Full coverage:** workers are covered 100% from day one, by making full contributions to all social security systems, according to the amounts defined by law.¹²
- b. Partial coverage:** this is the temporary possibility granted by law for self-employed workers to make progressive contributions to the system. Under this coverage, the value of the contribution increases every year, until full contribution is achieved in 2028.

i. Benefits

The main achievement of Law 21,133 is to establish the mandatory contribution for self-employed workers who issue fee slips, which gives them access to all social security benefits and ensures them the same protection that dependent workers have. This mandatory payment began in the 2019 income operation, receiving social security coverage as of July

12. Description based on information provided by Chile Atiende. See <https://www.chileatiende.gob.cl/fichas/12016-cotizacion-de-trabajadores-que-emiten-boletas-de-honorarios#:~:text=Cobertura%20total%3A%20el%20trabajador%20o,destinar%C3%A1%20al%20pago%20de%20pensión%20de%20pensiones>.

of the same year. The new regulation proposed by Law 21.133 is described below, differentiating each of the components of the social security system for self-employed workers.

a. Pensions. Self-employed workers can now contribute to the pension system to cover the contingencies inherent to this system, such as old age, disability and death. Like dependent workers, self-employed workers will be able to access the pension when they reach the defined age (60 for women and 65 for men). In this sense, they will have equal access to the different pension types currently provided by the system (Article 1, Law 21,133). As already mentioned, the value of the contribution is assumed entirely by the worker and its value will depend on the coverage type selected.

b. Health. Fee employees who contribute to the health care system are entitled to the benefits and medical licenses offered by this system, which include medical consultations, examinations, medical procedures, rehabilitation, among others. They are also entitled to receive economic benefits such as a subsidy for incapacity to work in the event of an illness that prevents them from working. The value of the contributions is defined according to the type of coverage selected (Article 1, Law 21.133).

c. Occupational accidents and illnesses. The coverage of the occupational accident and illness insurance for self-employed workers allows them to receive health care for occupational accidents or illnesses, with benefits such as medical care, hospitalization, medicines, among others. They may also receive economic benefits such as compensation for occupational accidents or illnesses, disability pension or survivor's pension. Contributions to this system must be paid in full by self-employed workers (Article 2, Law 21,133).

d. Insurance for dependent children. Self-employed workers who contribute are also entitled to the benefits provided for in the SANNA Law, which entitles parents to leave with a work incapacity subsidy in the case of children between 1 and 18 years of age who suffer from cancer or who have lived through or are awaiting an organ transplant, which presupposes a difficulty for the parents to perform their work (Article 4, Law 21,133).

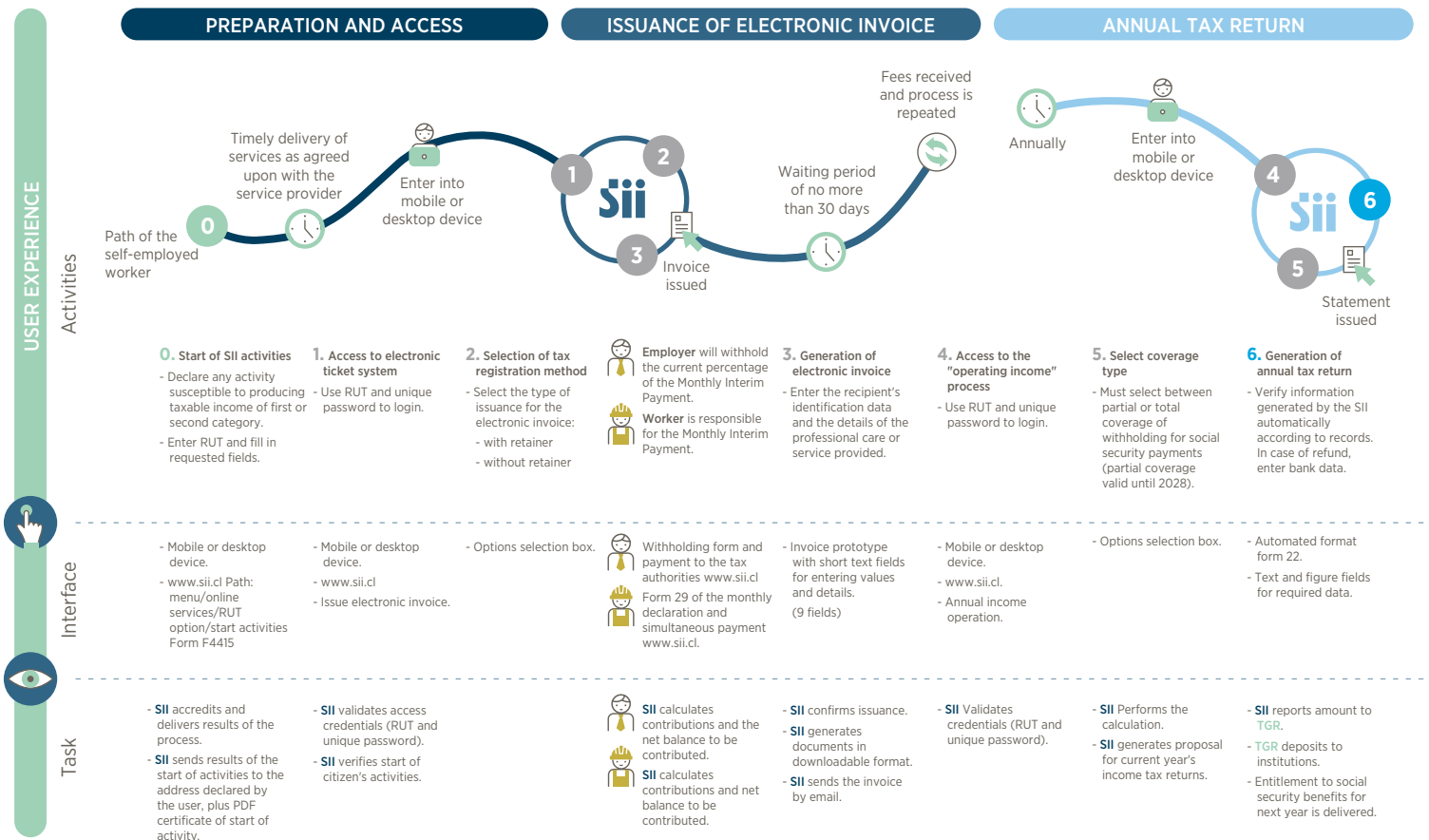
ii. Processes

In Chile, access to and contribution to social security for fee-paid workers requires at least 7 activities. Figure 2 shows these activities, which can be grouped into three categories.

- a. Preparation and access to the Internal Revenue Service online (activities 0 and 1).
- b. Issuance of an electronic ballot (activities 2 and 3).
- c. Annual income tax return (activities 4, 5 and 6).

With the January 2021 entry into force of the Tax Modernization Law, the web interface of the Internal Revenue Service is the only means for document issuance. This type of interface extends from the login, through the issuance of the assessment to the annual income tax return. Contributions are made through withholding when generating the tax return or autonomously through the IRS. With the annual income tax return, social security coverage is enabled for the coming year.

FIGURE 2. CHILE SERVICE MAP



iii. Friction points that can be improved

As shown in the service plan, the Chilean system has at least two points of friction or opportunities for improvement.

- 1. Tax payment and present bias.** A particularity of the Chilean system is that it allows the issuance of electronic tax documents without tax withholding. This implies that the worker is responsible for the payment of his social security at a later date and through the platform of the Internal Revenue Service. This represents a greater liquidity opportunity in the short term and with it a greater probability of the bias for the present, even though in the future the worker will be obliged to pay the taxes calculated on the amount of the issued invoice. In operational terms, issuing a receipt without withholding implies that the worker must face the Monthly Declaration and Simultaneous Payment of Form 29, which can become an additional factor of discomfort in the face of the contribution.
- 2. Suboptimal choice of coverage.** At the time of filing the annual income tax return to qualify for social security for the coming year, self-employed workers would face the dilemma of choosing between partial or full coverage of their social security. Although this is a transitory measure until reaching 100% in 2028, a partial coverage implies a lower tax burden for the worker and also more restricted access to the services provided by Chilean social security, particularly to the coverage of the Work Incapacity Subsidy or SIL (payment associated with medical leave).

Faced with this, some self-employed workers may minimize health risks due to overconfidence or an optimistic bias, and choose partial social security coverage. However, this provisional mechanism can be considered as a starting point for discussing the flexibility of social security contribution mechanisms, with the challenge of seeking mechanisms with lower contribution percentages that do not sacrifice aspects of worker protection.

C Colombia

Colombian social security has three main components, each of which has different regimes. The social security system is made up of three components: pensions, health and employment risks, which are described in this section.

For health, Colombia has the General System of Social Security in Health to provide access to the service to the entire population, at all levels of care. It is operated by the Health Promoting Entities (EPS) and the service is provided by the Health Service Provider Institutions (IPS), both institutions can be public or private. Similarly, in the area of pensions there are two regimes, defined according to people's ability to pay.

- a. Contributory regime.** Membership is provided through contributions made to the system, which may be paid exclusively by the contributing worker or shared between the worker and the employer, which depends on the worker's status as independent or dependent. The payment capacity is measured by the possibility of generating monthly income equivalent to or higher than the Current Minimum Legal Monthly Wage.
- b. Subsidized Regime.** Its purpose is to finance health care for people with lower incomes who are not able to pay contributions in order to integrate them into the health system. It is financed by fiscal contributions from the nation, departments, districts and municipalities.

The pension system is composed of two regimes, which coexist but are mutually exclusive:

- a. Medium Premium Solidarity Regime.** Public regime operated by Colpensiones (Colombian Pension Administrator). Members do not contribute to an individual savings account, but to a common savings fund. When the requirements to obtain an old age pension are met (1,300 weeks of contributions and age of 62 for men and 57 for women),
- b. Individual Solidarity Savings System.** This regime is operated by the Pension Fund Administrators (private). Members contribute in an individual savings account that is not shared with other members and when they retire they can obtain a life annuity or a programmed withdrawal or a programmed withdrawal with deferred life annuity.

The General System of Labor Risks is the set of public and private entities aimed at assisting workers from the effects of diseases and accidents that may occur on occasion of or as a consequence of the work they perform. This system is financed through mandatory contributions, determined by income level and risk classification, and the Labor Risk Administrators (ARL) are the entities responsible for the enrollment, registration and collection of their contributions.

i. Benefits

Colombian legislation regarding social security for self-employed workers has evolved and provides for benefits similar to those of salaried workers. The difference between the social security system for dependent and self-employed workers lies in the amount of the contribution and the employer-employee relationship. Self-employed workers maintain the obligation to be linked to the different social security systems provided, but all contributions are assumed in their entirety by the worker.¹³ For pensions, 16% is contributed; for health, 12.5% is contributed; and for labor risks, 0.5% is contributed. The contribution base for self-employed workers must be based on the income declared to the entity to which they are affiliated, corresponding to the income actually received. For greater clarity, the information is summarized in the following table:

TABLE 2 SOCIAL SECURITY CONTRIBUTIONS IN COLOMBIA

INSURANCE	DEPENDENT WORK			SELF-EMPLOYMENT
	EMPLOYER	WORKER	TOTAL	
Pensions	12%	4%	16%	16%
Health	8.5%	4%	12.5%	12.5%
Occupational hazards	0.5%		0.5%	0.5
Compensation funds	4%		4%	Opcional
TOTAL	25%	8%	33%	29%

Source: Prepared by the authors based on information from the Ministry of Labor.

¹³ The contribution must be calculated on 40% of the monthly income received, which is called the Base Contribution Income. It is on this value that self-employed workers contribute to the different systems as follows: Pension system: contribution of 16% assumed entirely by the worker.

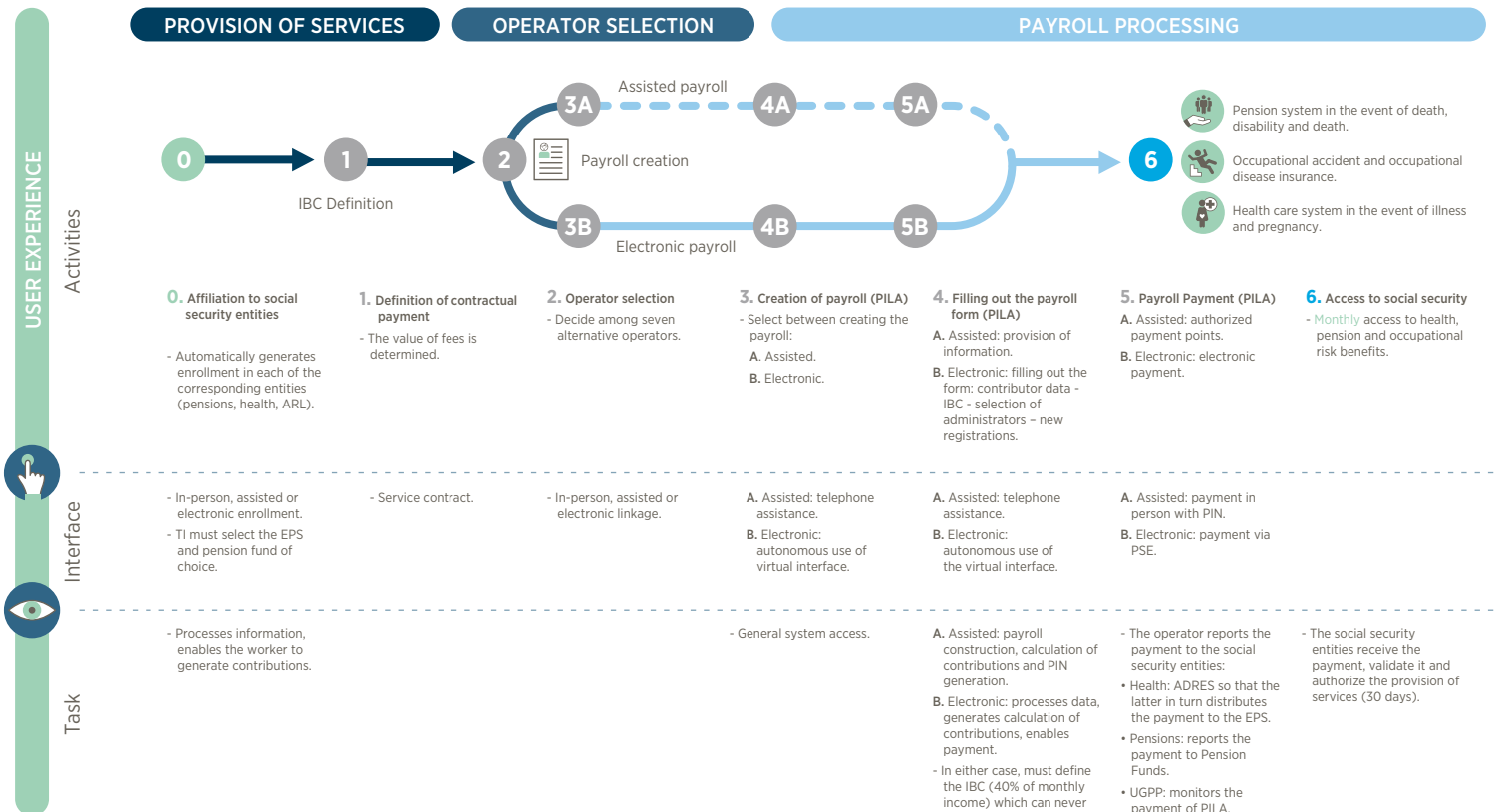
ii. Processes

In Colombia, access to social security for self-employed workers requires at least seven activities. As shown in figure 3, there are seven key processes that enable the right to social security for one (1) month for self-employed workers. They can be grouped as follows:

- a. Provision of services as self-employed workers (activity 0 and 1),
- b. Operator selection (activity 2),
- c. Processing of the Integrated Contribution Settlement Form (activities 3, 4, 5 and 6).

The system adapts its contact points according to the workers' access possibilities, enabling virtual, assisted and in-person interfaces. The virtual procedure has a web interface for autonomous use, as well as a web interface for autonomous use with telephone support.

FIGURE 3 COLOMBIA SERVICE MAP



iii. Friction points that can be improved

The Colombian system has at least four points of friction that may be affecting the enrollment of self-employed workers, as shown in the service plan. These are:

- 1. Enrollment.** Decision paralysis and choice complexity are behavioral problems that could frequently manifest themselves in the first step of enrollment to the Colombian system, which implies an autonomous exercise of the worker to choose the most appropriate options to ensure health and old age from a range of alternatives.
- 2. Selection of technological operator.** Workers would face friction when choosing social security technological operators. The Colombian system requires workers to prove that they have made social security contributions in order to receive the fees derived from the provision of services as self-employed workers. In this scenario, the worker may be motivated to procrastinate and postpone the registration process until the last minute or simply keep their services in the informal sector, generating an intention-action gap.
- 3. Technological capability and worker interaction.** Operators' technological platforms differ in ease of use and user support capacity. Therefore, any difficulty faced by a self-employed worker in selecting an operator and using its technological platform will have a negative effect on the probability of entering and remaining in the formal labor market. The existence of independent platforms for each insurance institution and technological operator is generally complex and with low levels of integration.
- 4. Payroll and payments.** The processing and payment of the payroll is key to understanding the incentives and disincentives of the system to remain in the process. The procedure requires selecting between different types of payrolls and declaring the type of contributor generating the claim. These decision points would tend to create choice complexity and cognitive overload. Additionally, the monthly social security contribution cycle is positioned as a friction in itself. The monthly contribution of a self-employed worker through a technological operator with the procedural challenges already seen would result in the recurrence of cognitive obstacles (cognitive overload, discomfort factors and limited attention problems).

D Mexico

The legal definition of self-employed worker does not exist in Mexico. The current regulatory framework in Mexico refers to only one type of worker, either through an employment relationship with the government or with a private employer. In other words, the regulation does not refer to and does not define a self-employed worker.

The National Institute of Statistics and Geography (INEGI), an autonomous agency responsible for regulating and coordinating the National System of Information, Statistics and Geography, provides a definition for classifying work. During the National Survey of Occupation and Employment, INEGI defined the self-employed worker as a person who works in his or her own business, in which he or she does not depend on a boss or superior. They are divided into two groups: employers and self-employed workers. Self-employed workers have their own tools or means of production and seek their raw materials and customers; they own the good or product they produce or sell; they decide how and where to promote their products and services, facing the economic risk of losing or gaining. This definition is also applicable to the group known as the self-employed.

Social security also refers to this type of work, without having a clear definition. The purpose of the Mexican Social Security Institute (IMSS) is to organize and administer social security in order to guarantee workers the right to health, medical assistance, protection of the means of subsistence and the social services necessary for individual and collective well-being, as well as granting of a pension which, if applicable and subject to compliance with legal requirements, will be guaranteed by the State. The IMSS distinguishes a permanent worker from a temporary worker, including a farm worker.¹⁴

The IMSS Law does not identify a definition of self-employed workers, even though it makes reference to them in several articles. For example, it defines two types of regimes: mandatory and voluntary. However, the second case refers to individuals who voluntarily join the mandatory regime. This law establishes that workers in family industries and self-employed workers, such as professionals, small businessmen, artisans and other non-salaried workers may be insured under the mandatory regime. For this purpose, an agreement will be made and may be made individually or as a group at the written request of the interested party or parties. In the case of collective incorporation, each of the insured parties will be responsible for their obligations before the IMSS, but the

¹⁴. A permanent worker is a worker who has an employment relationship for an indefinite period of time. A temporary worker is a worker who has an employment relationship for a specific job or for a specific period of time under the terms of the Federal Labor Law.

corresponding contributions must be paid for sickness and maternity insurance and the corresponding contributions for disability and life insurance, as well as retirement and old age insurance.

For voluntary incorporation, an option has been developed that is similar to that of salaried employees. Option 44 is the scheme that has been developed for those self-employed workers and professionals who do not have an employer to join the mandatory regime and contribute resources for their life and disability insurance. If you are a self-employed worker such as an artisan, small merchant or self-employed professional such as a lawyer or journalist and you want to have access to the health and pension system, it is possible to join voluntarily through this Option 44. The indispensable requirement to be registered in Option 44 is that the income obtained by the self-employed worker is only from individual work, without dependent employees.¹⁵ In other words, the main characteristic is that the activities of the self-employed workers and professionals are carried out in full independence of labor subordination, that they are performed on their own initiative and on their own account.

i. Benefits

The benefits obtained under the current scheme for self-employed workers are homologated to those of salaried workers. IMSS Option 44 as a self-employed worker establishes contributions for the granting of the following benefits:

- a. Medical services (sickness and maternity insurance) and IMSS hospital services. These will be destined for the self-employed worker and professional as well as for their economic dependents. This benefit will be provided as of the first day of the month following enrollment.
- b. Disability pension.
- c. Widow's, orphan's and parent's pension: the latter refers to when one of the parents is survived, the person who is economically dependent and living at the same address.
- d. Retirement, unemployment and old age pension as of age 65: as long as they have contributed the corresponding number of weeks and their rights are current. If the

¹⁵ Self-employed workers, such as those working in family industries, professionals, technicians, small merchants, artisans, transportation workers, and other wage earners who obtain their income through personal and independent work, without having dependent workers, are voluntarily incorporated into the mandatory regime.

worker contributes in Option 44, he/she will accumulate weeks of contributions for retirement.

- e. Assistance for funeral expenses of workers and self-employed professionals.

IMSS Option 44 is used to incorporate people who do not have an employer into the mandatory regime so that they can contribute resources for their disability and life insurance. The IMSS is implementing a flexible version of this option, although in general terms it has the same costs and services.

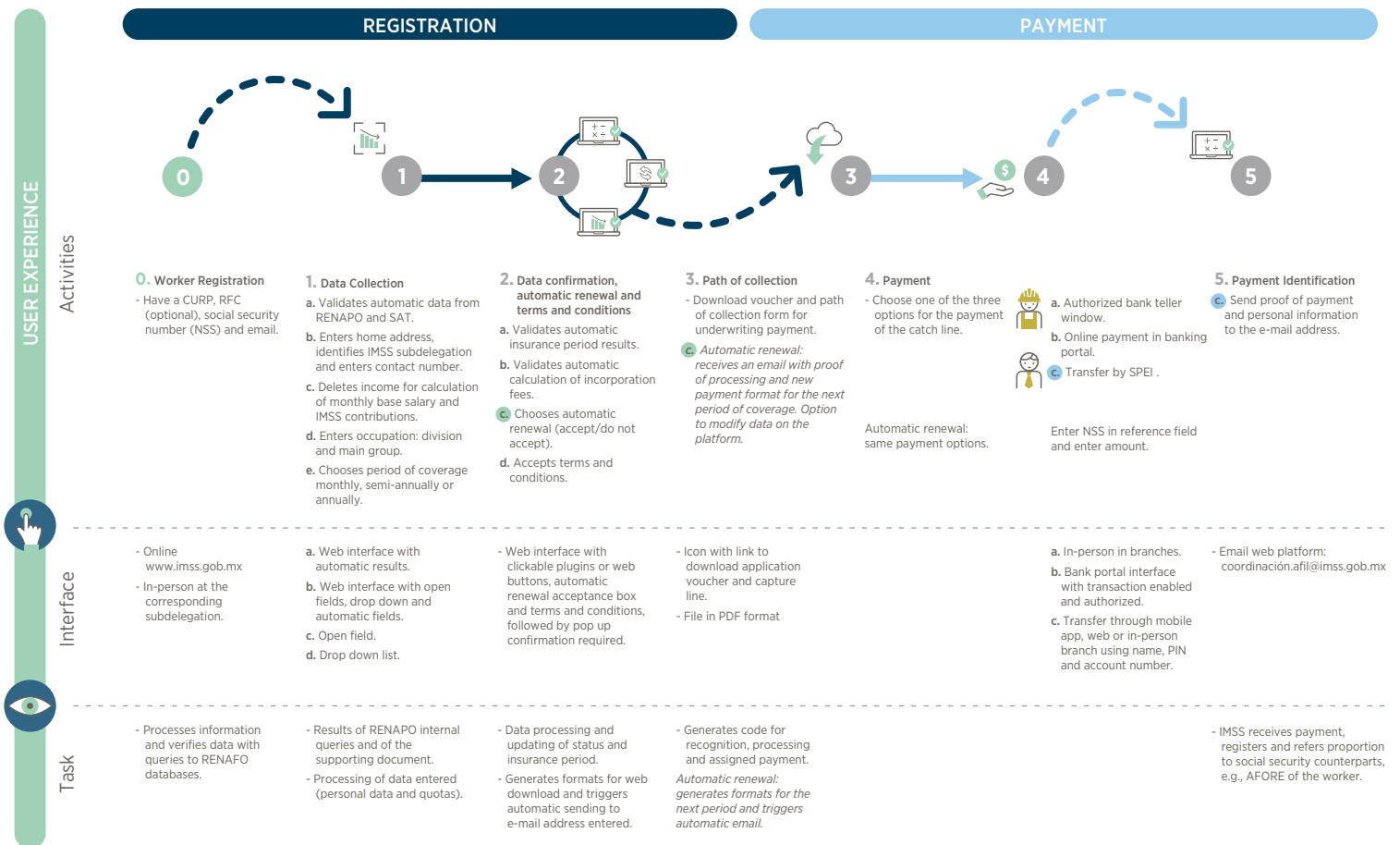
ii. Processes

The scheme implemented by the Mexican Social Security Institute (IMSS) for the insurance of self-employed workers includes seven activities. The inclusion of self-employed workers in social security through the voluntary scheme of access to the mandatory social security system is organized in two processes, as described in figure 4, which contains the IMSS service plan. These are:

- a. Registration (activities 0, 1 and 2)
- b. Social security payments (activities 3, 4 and 5).

Upon completion of the activities, the worker guarantees access to five social security insurance policies for coverage periods of 1, 6 or 12 months, requiring iteration of the procedure on a monthly, semi-annual or annual basis to ensure continuity in the system.

FIGURE 4 MEXICO SERVICE MAP



iii. Friction points that can be improved

The level of insurance coverage of self-employed workers in Mexico is almost nil, making it essential to improve existing processes. The mobilization and incorporation of this labor force into security schemes represents a public policy challenge, but there are procedural aspects that can be subjected to cost-effective adjustments to improve access and permanence in social security in the short term. In this sense, the analysis shows four moments of greatest friction for the self-employed: registration, periodic renewal, income estimation and payment of contributions.

- 1. Registration.** The analysis identifies that the registration process for incorporation into the voluntary scheme depends on obtaining prior data: the Unique Population Registry Code (CURP) and the Social Security Number (NSS). Optionally, the Federal Taxpayers' Registry (RFC) code is requested. The role of the NSS is to allow the system to have a record of insured workers. For those self-employed workers who are applying for the NSS for the first time, additional steps must be completed prior to activity 0 of the registration and incorporation process. Unlike obtaining the CURP code, the IMSS self-employed workers microsite does not offer direct links to obtain the NSS for the first time or for those who have stopped contributing for a long time, there is no link to find the previously assigned NSS, which could cause the abandonment of the digital version of the process or discourage incorporation into the scheme in its entirety. Likewise, linking the registration and incorporation system to two or three validation channels could lead to a bias due to an overload of information for the worker, especially for those who previously worked in informal jobs and do not have an NSS.
- 2. Periodic renewal.** The process of incorporation into the social security scheme has been established on a monthly, semi-annual or annual basis, with the option of automatic periodic renewal. Strictly speaking, the registration and initial incorporation stages seek to obtain the worker's personal data, generate direct validation and gather declarative information. Although during the registration and first incorporation activities the process allows activating the automatic renewal for the subsequent coverage period, if the automatic process is not successfully completed backstage, the worker could lose the incentive of prolonged permanence in the scheme due to the need to carry out the process manually to guarantee the continuity of coverage. If a self-employed worker who activates the automatic monthly renewal for January 2023 coverage does not receive in his/her e-mail the processing voucher and payment format or capture line in the days indicated by the system (first 5 days of the month prior to the expiration of the coverage), he/she will have to enter the platform and perform activities 0, 2 and 3 again. This could prove to be a major friction factor for those who opt for monthly coverage. Finally, given the high transfer of responsibilities and complexity of the interactions, the need for workers to ensure social security benefits under this scheme in fixed terms (monthly, semi-annually or annually), without the option to make modifications or adjustments at intermediate times (for example, every three or eight months), is a friction in itself.
- 3. Estimation of income and base monthly salary.** The analysis of the process also shows that the incorporation could encourage an optimism bias and a bias to the present when the calculation of base salary and the value of the social security con-

tribution is made on the monthly income declared by the worker. This presents a window for workers to declare a lower income than the real one in order to reduce the final amount of the contribution. If the automatic renewal option is chosen, the worker has a possibility of modifying the declared income, and a window may appear again to declare lower income in order to reduce the contribution in extended periods. Opting for semi-annual or annual coverage would also imply full payment in one or two installments prior to the start of the coverage, without the possibility of making adjustments in the face of natural variations in the income received by the self-employed worker, resulting in estimates that could differ from the worker's real income in extended periods of coverage, for example, in an annual coverage.

4. Payment of contributions. In the process of validating and processing payment via electronic transfer through the Interbank Electronic Payment System (SPEI), the self-employed worker is required to send the transfer receipt via e-mail, adding another step for those who choose this option, which could result in unsuccessful incorporations to the social security system. Likewise, the IMSS microsite, as of December 2022, does not include a direct link to process the payment of the contribution in all the affiliated banks, but only allows it through a financial institution, which could be a negative factor by incorporating additional steps in the completion of the process. Finally, in the event of any payment option chosen by the self-employed worker, there is no automatic confirmation of his/her incorporation and start of coverage; the worker must request a proof of validity of rights separately to obtain such information.

Once the incorporation process is completed, in order to make use of the insurance, additional activities are required that the worker must perform on his/her own account and which are not indicated in the incorporation process. It should be noted that the IMSS has made three means of contact (telephone, chat and e-mail) available to workers to resolve doubts and provide real-time support for the process. In addition, having updated information on the advantages of the online process on the microsite could help more self-employed workers decide to voluntarily join the social security system in Mexico.

E Peru

Peruvian authorities have specific definitions for self-employed workers. The National Superintendence of Customs and Tax Administration (Sunat) defines a self-employed worker as any person who renders services in a personal and individual manner, without a subordinate relationship, and performs activities such as the exercise of a profession, art, science or trade; company director, trustee, mandatary, business manager, executor and similar activities, as well as the allowances received by the councilors of the municipalities or regional councilor and the workers in the role of administrative services contracting (CAS). Sunat defines fourth category income as income obtained from the independent exercise of a profession or trade, without being subordinated to another person or entity.

The National Institute of Statistics and Informatics (INEI), in its National Household Survey (Enaho) includes in its definition of self-employed worker the self-employed worker and the employer. In the first case, the self-employed worker refers to the person who operates his/her own business or who exercises a trade or profession on his/her own account and who does not have paid workers under his/her charge. Likewise, within its definition of self-employed worker, the Enaho includes persons who operate their own business, or company, or who exercise a trade or profession on their own account and have one or more paid workers under their charge.

i. Benefits

Peru has generated a series of institutions and programs to increase access to social security for its workers. The high informality of the Peruvian labor market, wage level of the jobs, perspective on risks and behavioral barriers are the conditions for accessing effective insurance, especially health and pensions, in Peru today.

Health. The self-employed in Peru currently have four main options for accessing health insurance; the first two alternatives are within the public health system:

- a. Potential Health Insurance.** This health insurance is provided by EsSalud, which is a decentralized public agency attached to the Ministry of Labor and Employment Promotion, which seeks to provide its policyholders with prevention, promotion, rehabilitation, economic benefits and social benefits that correspond to the Social Security Health System. For the self-employed there is optional insurance, which is available to any person residing in Peru, whether national or foreign, without age limit, as long as they are not enrolled in the Seguro Integral de Salud (SIS). This insurance is mainly intended to cover the self-employed and their dependents.

- b. Comprehensive Health Insurance (SIS).** The Seguro Integral de Salud is a public agency of the Ministry of Health that provides another option of access to health insurance for the self-employed. This contributory insurance is intended to serve the public with a relative ability to pay, but with limited resources that do not allow them to purchase private health insurance. The SIS offers five insurance plans: i) SIS Gratuito; ii) SIS para todos; iii) SIS Emprendedor; iv) SIS Independientes; and v) SIS Microempresas. The SIS Gratuito plan provides care free of charge to people living in poverty or extreme poverty. Similarly, SIS Para Todos allows all persons living in Peru who do not have health insurance and are unable to pay to receive free care.¹⁶ Self-employed workers have the possibility of accessing Comprehensive Health Insurance through the SIS Emprendedor plan or the SIS Independiente plan. In the case of the SIS Emprendedor plan, any worker who makes three monthly payments to Sunat in categories 1 or 2 of the New Simplified Single Regime (NRUS) will be automatically enrolled free of charge; that is, those workers whose income does not exceed 8,000 soles per month (US\$2,053) or 96,000 soles per year (US\$24,637). Under this tax regime the worker is not required to file an annual tax return, as he/she only has to make a single monthly payment between 20 soles (US\$5) and 50 soles (US\$13). The coverage of the SIS Emprendedor plan includes medicines, analyses, operations, hospitalization, emergency transfers, care for 1,400 types of illnesses, including the most common types of cancer, among other services. This insurance also includes a death benefit of up to 1,000 soles (US\$257).
- c. Private insurance.** Self-employed workers with a greater ability to pay can contract insurance directly with an insurance company. This type of insurance allows policyholders to seek care at specific health facilities and some offer the possibility of going to a doctor or facility of their choice and requesting reimbursement of expenses. The costs of private insurance vary depending on the coverage contracted and the insurance company. In general, it is estimated that the cost of insurance ranges from 100 to 700 soles per month (US\$26 and US\$180). Similar to the insurance described above, the monthly insurance payment (premium) may also vary according to the age of the insured.
- d. Specialized insurance.** Another alternative for the self-employed is to take out specialized insurance. This type of insurance provides complementary coverage for specific care such as the treatment of a specific type of cancer, or to cover only

16. On May 21, 2021, through emergency decree 046-2021, universal health coverage was established for all people who face emergency situations and are not insured, regardless of their employment category.

emergency cases or hospitalization. This insurance can be contracted in addition to EsSalud's +Salud insurance to acquire coverage for an illness or treatment not covered by EsSalud's insurance. This is not the case for the Seguro Integral de Salud, since in order to have the SIS one must not have any other type of insurance.

Pensions. Social security in terms of pensions in Peru operates under a parallel scheme in which two systems coexist: the National Pension System (SNP) and the Private Pension System (SPP). The following systems belong to the Public Pension System:

- a. National Pension System (SNP).** A system whose scope includes those workers who carry out an independent economic activity (optional insured). The minimum monthly contribution for these workers is 13% of the minimum living wage. The SNP provides benefits in favor of the worker: retirement and disability pensions; and in favor of the worker's survivors: widow's, orphan's, parent's and death benefits (amount granted when there are no pension beneficiaries). Pensions granted to self-employed workers who have contributed as optional insured persons are granted the same benefits as those granted to a mandatory insured person.
- b. Private Pension System (SPP).** An individual capitalization system where the contributions made by each person enrolled in the system are recorded in an Individual Capitalization Account (CIC), which increases with the successive contributions and the profitability generated by the fund's investments. Self-employed workers who choose to join this system are entitled to retirement, disability and survivors' benefits, and also to coverage of funeral expenses provided by the system to salaried workers. Peruvians working permanently or temporarily abroad may also join as self-employed. The CIC is financed by two types of contributions, one mandatory (10% of insurable remuneration) and the other voluntary.

ii. Processes

Pension and health coverage for the self-employed are done on an individual basis, so the processes must be accounted for separately. The difficulty and time it takes to gather the relevant information can form the perception that the process is very complex and difficult to complete when in reality most processes have few steps to complete. Additionally, the self-employed worker must complete several steps before beginning an enrolment process. For example, in order to enroll in the pension system, the self-employed worker must first decide whether to join the national system (SNP) or the private system (SPP). Once the decision process is over and having identified which health plan and pension

system he/she wants to join, the worker must carry out more than one process to complete the enrolment process and the process to make the corresponding contributions. To facilitate the analysis, we group the processes into two, as described in figure 5, which contains the service plan. These are:

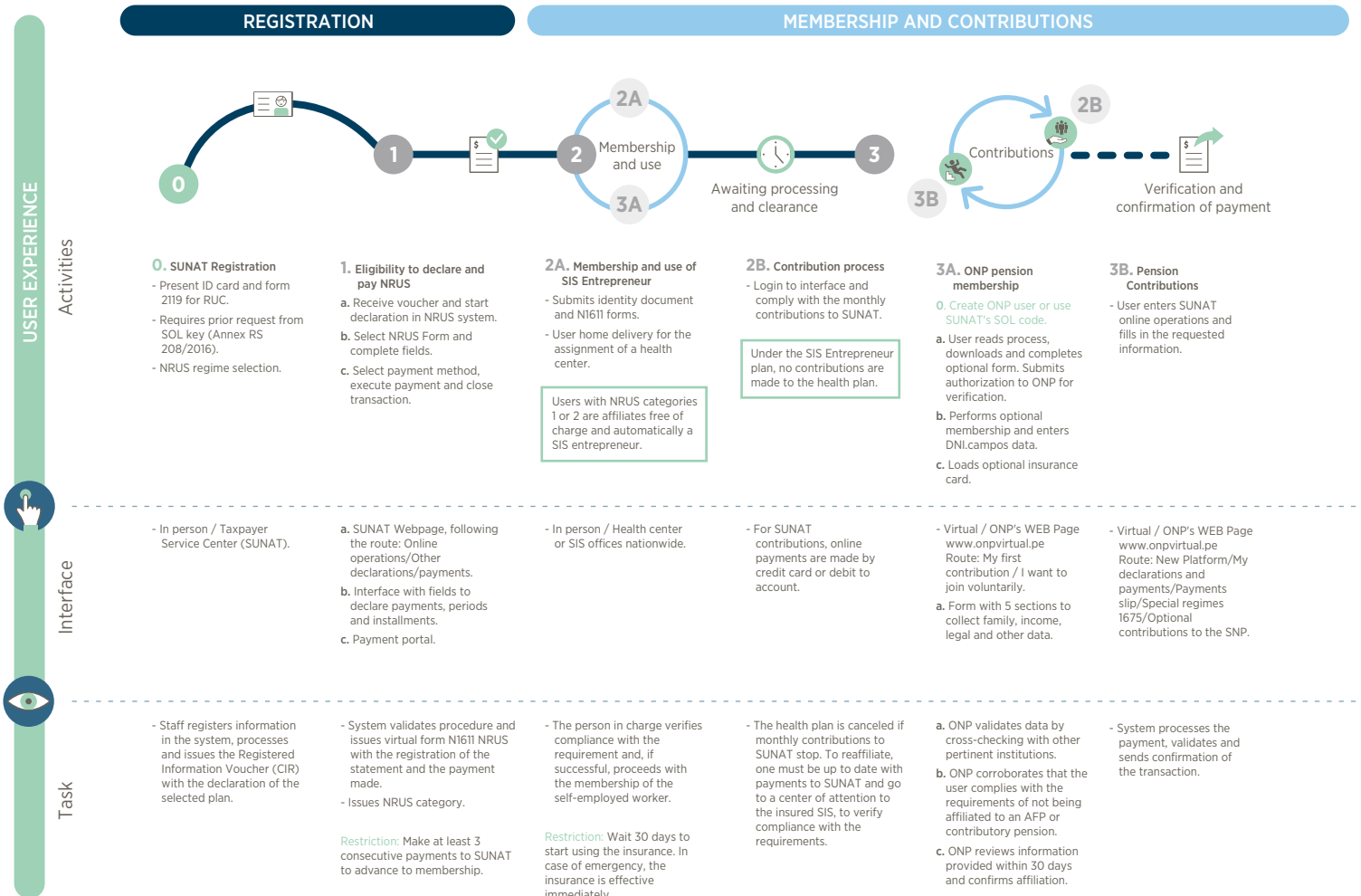
- a. Formalization (activities 0 and 1)
- b. Enrolment and contributions to the systems (activities 2a or 2b, 3a or 3b).

As described in figure 5, there is a coexistence of several systems. For this reason, some relevant clarifications are made for each type of insurance.

Health. The self-employed worker can access two health plans within the Integral Health System (SIS): SIS Emprendedor and SIS Independiente. Self-employed workers who fall into categories 1 or 2 of the NRUS are automatically enrolled free of charge to the SIS Emprendedor. Alternatively, the self-employed worker may opt for the SIS Independiente health plan, for which he/she is not required to be registered with the Sunat. To join the SIS Independiente, the worker must go to a SIS office and provide the required information in order to fill out a digital enrollment form. Subsequently, he/she can make the required monthly contributions at Banco de la Nación or virtually. Self-employed workers also have the possibility of accessing the optional insurance of +Salud, which is available to any person residing in Peru, whether national or foreign, without age limit, as long as they are not enrolled in the Seguro Integral de Salud (SIS).

Pensions. There are also two options. If the self-employed worker decides to join the public pension system, he/she can do it virtually on the ONP website. This process has few steps and the main task for the self-employed worker interested in enrolling to the ONP is to fill out an information form and upload it to the system to request enrollment. If the worker decides to join the private system, there is a simplified process that can be carried out quickly, easily and remotely. The self-employed worker must access the website of the AFP that has won the bidding process.

FIGURE 5 PERU SERVICE MAP



iii. Friction points that can be improved

The level of insurance coverage of self-employed workers in Peru is almost nil, so it is essential to improve existing processes. The mobilization and incorporation of this labor force into security schemes represent a public policy challenge, but there are procedural aspects that can be subjected to cost-effective adjustments to improve access and permanence in social security in the short term. In this sense, the analysis revealed four moments of greatest friction for the self-employed: registration, periodic renewal, income estimation and contribution payments.

- 1. Formalization.** The self-employed worker in Peru must complete three different processes independently to be formalized in the tax system: join the health plan – SIS Emprendedor, SIS Independiente or +Salud – and a pension plan – national system (SNP) or the private system (SPP). This represents an excessive burden for the worker, but it also becomes operationally redundant, since the processes run independently, without records or information being shared. Proof of this is that almost 90% of independent workers are not registered with SUNAT.
- 2. Registration and enrollment.** In Peru, the lack of coordination of the systems and the number of decisions to be made by the self-employed becomes a very important initial barrier. That is to say, the probability of facing so-called decision paralysis is very high given the complexity and amount of information required and received, which implies a greater demand of cognitive and specialized resources to reach a conclusion on these decisions. Workers, particularly the self-employed, do not have the necessary time to make the best decision, even if the schemes are very simple. Self-employed workers have to make multiple decisions, which do not occur in the case of salaried workers. For example: when and for how long to work each day, how to promote themselves, how to manage tax payments and invoicing, when and how to maintain work equipment and purchase necessary supplies, which health insurance provider best suits their needs, among other things. Having to make these work decisions on a daily basis makes it difficult for the self-employed to have the time, mental clarity and prioritize making other relevant, but perhaps not urgent, decisions, such as selecting a health or pension plan.
- 3. Fragmentation of processes.** The process is broken into different instances, requiring the self-employed worker to carry out parts of the process in different places (for example, with health plans for the SIS, he/she needs to download and fill out forms and then go to an office to carry out the procedure and finally go to a third location to make the payment). This increases the likelihood that the self-employed

worker will take longer to complete the process or that he/she will forget or even lose interest in completing the process.

- 4. Difficulties with automating contributions.** The possibility of automating payment for health plans is not evident, while the automation of pension payments is linked to the user's registration with Sunat for ONP payments and to a fixed monthly income in the case of AFP contributions.
- 5. Confusion and lack of information to obtain services.** Long waiting times to finalize processes (for example, 30 days to receive medical care with the SIS, 3 months to receive care with +Salud, 30 working days to be enrolled in the pension system with ONP) can generate a loss of motivation and interest in making contributions. At the same time, the long waiting time can lead to confusion about when to start making the corresponding contributions. Finally, there is no clear channel of attention in case of concerns or technical difficulties in following up on applications.

V How to improve self-employment insurance

The insurance level of the self-employed in Latin America is limited, reflecting a social security design that is not adapted to the reality of a significant share of its labor market. Most of the social security systems in the region are based on models in which there was a certain consensus on the value of the benefits granted, and where sociodemographic, institutional and fiscal characteristics facilitated compliance with the obligations. The processes of enrollment, payment and provision of services were designed fundamentally assuming a salaried relationship, where the main responsibility falls on employers, which is very efficient both in terms of costs and time compared to an approach based on the individual worker. However, the evolution of labor markets has not converged towards this model, as it is a segmented market, where a good number of economic entities do not have sufficient economic returns. As a result, a significant percentage of the population is not insured and is vulnerable to the risks of illness, accidents and aging. In other words, the direct link between social security systems and labor markets through the payment of contributions generates a lack of coverage against risks, since a large part of the labor force does not contribute on a regular basis.

Policies to increase and equalize opportunities for access to formal employment are considered the main tool for increasing social security coverage. However, the feasibility and scope of these measures may be limited, as many workers seek work arrangements other than salaried employment. Undoubtedly, the functioning of labor markets must be improved in the region to more efficiently allocate the skills of the labor force to productive entities and generate greater aggregate wealth for the benefit of society. This includes improving labor intermediation, promoting initiatives to support first-time employment, strengthening training for the insertion or reinsertion of adults into the labor market, promoting income support policies during unemployment, regulations and reduction of non-wage costs, and oversight.¹⁷ There are other, more far-reaching measures to improve the functioning of labor markets and social security systems, which require legislative reforms and budget reallocations. This could increase both the number of contributing workers and the total insured population and, consequently, the aggregate risks of the

17. Alaimo et al. (2019).

population could be better insured.¹⁸ Unfortunately, this type of reform may not have the desired scope for two reasons. First, a large part of the self-employed population has no interest in working as salaried employees. The results of several surveys of those who use platforms to generate income show that between 40% and 60% of the total who use them are not interested in traditional employment, so efforts are limited. Secondly, these reforms are very complex, with enormous political costs and implementation horizons of several years, the results of which are not immediately observable. This often makes them unattractive.

There are other types of reforms and administrative improvements to the current design of the system that could increase coverage of the self-employed in the short term. These include the inclusion of schemes for individual workers, the use of electronic elements and complementarity with other systems. The cases described in the service plans show the experience that workers have in achieving insurance coverage. In several cases it is shown that workers choose not to continue with the processes due to the low valuation of benefits in relation to costs (in several cases the total coverage must be paid in full), the duplication of procedures already carried out with other entities, as well as the complexity and recurrence of processes that become tedious. Table 3 shows a list of the processes identified at the service level that can be considered critical to improve the effective insurance of these workers. These include: electronic registration of the worker; automatic discounts by default; flexibility of coverage that includes alternatives of minimum and adjusted coverage at the individual level; complementarity with the coverage provided by other jobs; coordination with the tax system for compliance in the payment of contributions and taxes; tax incentives that can be obtained for being self-employed; and coordination with the financial system.

18. Azuara et al. (2021).

TABLE 3 CRITICAL PROCESSES FOR THE INSURANCE OF SELF-EMPLOYED WORKERS

Critical processes	Brazil	Chile	Colombia	Mexico	Peru
Electronic registration (mobile or computer)	X	X	X	X	*
Aggregation of revenues for tax and contribution calculations					
Automatic discounts for the payment of contributions**		X			
Coordination with the tax system to achieve coordinated tax payment and insurance		X			
Coordination of information with the financial system		X			
Flexibility of coverage by offering different insurance products	X		X		
Tax incentives	X		X		
Processes in force in each country	3	4	3	1	1

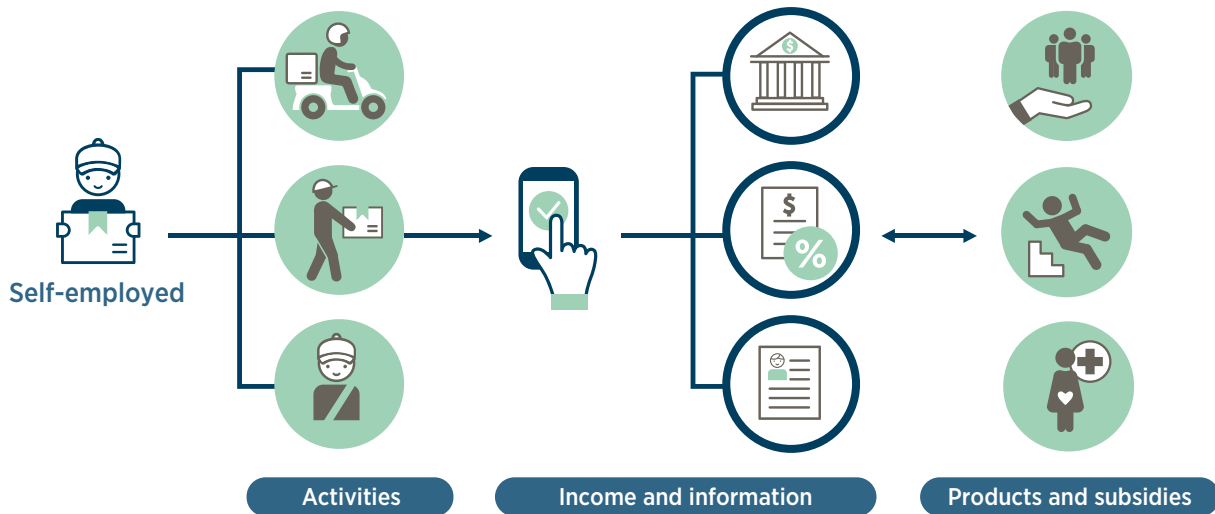
Source: Own preparation.

* Determined independently for health and pensions.

** Do not leave the recurrent responsibility to the worker.

Although there is no single solution, modification of the processes would make it possible to increase coverage of the self-employed segments of the population. Table 3 shows the existence of critical processes for each country where the service plan was drawn up. The case of Chile stands out, with 4 of the 7 processes identified, followed by Brazil with 3 and Colombia with 2, and Mexico and Peru each with one. Figure 6 shows a graphic description of each of these processes, which is explained below.

FIGURE 6 OPERATION OF CRITICAL PROCESSES



Source: Own elaboration based on service plans.

V.A Electronic registration

The first step to achieve effective insurance of workers is their electronic registration.

Incentive problems associated with accessing and contributing to social security systems in the region tend to be concentrated among low-income self-employed workers. A first challenge in the region is related to enrollment in the respective systems. The countries analyzed have tools for non-face-to-face registration with the systems, with a certain degree of ease. There is a wide variety of alternatives, although in most cases national identification tools are used to obtain a registration, either by means of an electronic application form on a website or through mobile applications. In this way, the worker is authenticated and the registration (permit) is processed in the system. However, in several cases the interfaces with other systems - national or tax identification - are not fully functional, which makes the enrollment processes, particularly for self-employed workers, complex. The construction of portals for registration is not in itself the solution to achieve effective insurance. Although it is a basic condition in the case of self-employment insurance, elements are required to facilitate the process.

V.B Revenue aggregation

Self-employed workers perform a wide range of activities, making income reporting a major challenge. The high valuation of flexibility represents a stumbling block for traditional labor schemes, so it is necessary to go beyond the definition. Income aggregation through interoperable electronic schemes can be an effective alternative. Self-employed workers are present in diverse economic branches including professional services (lawyers, doctors, engineers), retail, crafts, agriculture, transportation, personal services (care), among many others. They often vary their occupations on a regular basis depending on the alternatives available, so trying to identify their insurance through an employment relationship is very complex. They also place great value on flexibility in defining schedules, choice of projects and clients. This flexibility translates into low productivity and income instability, difficulties for business growth and financing opportunities, as well as lack of training. In other words, professional management is often not orderly, which translates into defaults in the payment of obligations and insurance. In this context, the traceability of income becomes fundamental, both to improve the added value of their activities, as well as to improve the payment of contributions. The implementation of technology for the calculation of total income is key, both for the self-employed and for their insurance. Better knowledge of the income generated in an orderly manner could facilitate better financial planning for the self-employed. This includes the use of digital tools that facilitate the recording and tracking of revenues, their frequency and timing of payments. As a result, it facilitates the basis from which insurance contributions and tax payments can be calculated.

V.C Automatic discounts for the payment of contributions

The region faces challenges in terms of contributions, which could be improved with automatic deductions from people's total income through the financial system. The automatic deduction of social security contributions or to cover insurance schemes has proven to be one of the most effective tools to achieve timely coverage, since it eliminates one of the most complicated pitfalls of schemes where the responsibility for compliance is left to the worker himself/herself. The literature shows that this type of discount effectively inhibits three strong behavioral barriers: aversion to the losses involved in the payment of contributions, lack of attention to the fulfillment of obligations, and breaking the inertia of not being insured. In the case of salaried workers, this effort is centralized on the part

of employers, who are legally obliged to make the corresponding discounts to workers to complement their own contributions. Thus, loss aversion is lower for salaried workers, while the self-employed must make their own payments, which means becoming aware of the cost of insurance. Given this behavior, automatic deductions from workers' total income are very effective, since workers do not count them in their monthly budget and they are not taken as a loss, since they are not deposited in the worker's bank account.¹⁹ Likewise, attention to the fulfillment of insurance obligations is reduced to a minimum and finally having coverage becomes the frame of reference.²⁰

V.D Coordination with the tax system: taxes and insurance

Taxation is perhaps one of the main problems for the insurance of self-employed workers. The complementarity of tax payment and insurance obligations is a major pending issue in several countries. Available data show that self-employed workers in general have lower levels of social security coverage and contributions, but are also less likely to be subject to taxation. For this situation to improve, a comprehensive approach that addresses both legal and administrative aspects as well as socioeconomic factors that improve compliance is essential. This includes the use and exchange of information between different government entities and agencies to reduce the chances of non-compliance. Sharing data between tax authorities, social security entities and other relevant institutions, for example, the financial system or insurance companies, can allow for better detection of irregularities and more effective control of tax compliance. In other words, the establishment of sanctions and dissuasive measures to comply with tax obligations may have a limited scope if they are not based on complete information on workers' income. In other words, in order to effectively improve the coverage of self-employed workers, it is necessary to strengthen control mechanisms and, at the same time, create and adopt legal measures to identify and support those who, although they could do so, are not insured. The weakness in the control schemes is largely due to the lack of technological penetration for the fulfillment of obligations in an integral manner, using the income generated by all the workers' sources. There are some cases with better performance that are trying to achieve higher contributions. For example, tax modernization that digitizes the issuance

19. Mandrian (2004), Azuara et al. (2021).

20. An example of how automatic discounts could improve the current situation is the Colombian case, where members of the subsidized regime have little incentive to migrate to the contributory regime due to the contributions of the latter's labor income and the lengthy processes of re-enrollment in the subsidized regime in key instances.

of tax receipts in the Chilean case is a very important effort that facilitates the collection of social security contributions. In short, the challenge to achieve an improvement in the insurance scheme and the control of self-employment is to find a technological formula so that self-employed workers have the incentives to pay their obligations.

V.E Coordination of information with the financial system

The verification of income for audit and payment of contributions is a critical element of coverage. This can be done with the traceability of payments, not necessarily through traditional banks. One of the aspects that technology has changed is the cost of payment traceability through its digitalization with traditional instruments such as cards, but also through electronic transfers via cell phones. This aspect becomes valuable when rethinking ways not only of incentives but also of collecting contributions, both fiscal and for the payment of insurance coverage. Traditional and new financial institutions (banks, fintechs, platforms) have a large amount of financial information on self-employed workers, which can be used to verify the income declared and, based on this, determine the corresponding tax and contribution payments for insurance coverage. However, technology alone is not the solution. As mentioned in the previous section, for it to be effective it is necessary to improve the coordination of the financial system and the payment of taxes for self-employed workers. This includes the definition of information exchange mechanisms between financial institutions, tax authorities and those responsible for insurance through the implementation of interoperable technologies and common standards in each system. In other words, there must be mechanisms to access individual information in a secure and confidential manner, in order to have certainty and, consequently, a more effective control.

V.F Coverage flexibility: underwriting products

Making insurance plans and mechanisms more flexible in Latin America is a key challenge in the face of social security systems designed to protect people with formal employment status. Levy (2018) documents that a salaried worker is one who performs tasks established by the employer at a determined place and time, for which he/she receives a salary, which is not necessarily linked to the total produced by the worker. Additionally, the salaried worker is entitled to a package of social security benefits, which are pre-established by the authorities. The financing of these benefits is determined by the authorities,

and the payment is a function of the wages paid to the workers. To determine this cost, estimates are made of average premiums calculated from the distributions of the insured population. In other words, the traditional social security formula was designed in an environment where the individualized calculation of insurance was excessively complicated and costly, so that schemes facilitate compliance, although for dependent workers the cost is not attractive. In other words, the characteristics of the current system provide coverage at standardized and mismatched costs to low-income or self-employed workers with volatility in their effective income. An alternative to this situation is to identify cost-effective schemes for self-employed workers with limited coverage, but which cover them against the risk of health problems or accidents, and which generate incentives to eventually have full coverage. This means establishing new insurance products that converge with traditional coverage. Some countries have developed some efforts in this direction. For example, Colombia's Periodic Economic Benefits Program (BEPS) allows workers with low incomes, even below the minimum wage, to save voluntarily and in a flexible manner, covering the need for savings options that are not feasible in traditional social security, since the latter requires contributions starting at a minimum wage. Along the same lines, Brazil presents a variety of plans with the purpose of including self-employed workers, who can participate in the system and receive benefits, with the exception of unemployment insurance.

V.G Tax incentives

In addition to improving auditing, the insurance of self-employed workers can be made more attractive through a series of tax incentives that minimize distortions in labor decision-making. The use of tax incentives is a controversial issue, since in many cases they are granted without knowing the changes in employment decisions by workers to achieve the greatest benefit (strategic behavior). In the case of the self-employed, tax schemes need to be designed to avoid creating incentives to remain in low taxation schemes and reduce the potential of economic activities. That is to say, before establishing lower contribution rates for insurance, the necessary comparisons should be made with payments to salaried workers and establishing mechanisms for similar treatment. This can also be done through temporary tax exemptions or support for insurance on a temporary basis. For the latter, it is necessary to have historical information on income, contributions and payments. In other words, to be certain that the benefit is temporary and that eventually a non-differentiated treatment will be given. In particular, achieving initial coverage for health or pensions may be the way to identify each person so that he or she will eventually

make the full contributions. The set of incentives must be accompanied by control and follow-up measures to avoid abuses and ensure adequate compliance.

There is a positive relationship between the number of critical processes covered and the level of insurance of self-employed workers. Several of the processes described in this section exist in various countries, to varying degrees. Their existence coincides with lower levels of informality, as described in Figure 9 in the first part of the document, with Chile being the country with the highest number of processes (9) and the highest percentage of coverage (40%). In contrast, Peru and Mexico only have one of these processes and their level of coverage is close to zero. This suggests that it is possible to improve self-employment insurance through concrete measures that are relatively simple to implement compared to radical modifications of insurance and social security systems. In other words, there is a group of measures that can be implemented within the existing institutional frameworks and that would result in higher levels of insurance. However, what is important is the complementarity of the measures in order to close the discretionary power of workers to comply with them, while maintaining incentives to comply. To achieve this, behavioral tools and technological and financial innovation can be used to ensure that more people can become insured. These measures, implemented in a coordinated manner, can have additional benefits, because with better records, it is more feasible that other institutions, for example, banks, pension fund managers, Fintech companies can serve this group, at a relatively low cost.

V.H Product and process innovation for self-employment insurance

The effective insurance of self-employment in each country can be improved through greater labor income transparency. There is a great opportunity to develop improvements to existing processes and products based on their digital transformation.

The previous sections show areas of opportunity that exist to ensure that more people can be covered for different risks. A critical aspect of this is to put the individual at the center - not companies - and configure products and processes so that income can be traceable, there are fair contributions and, where appropriate, better use of fiscal resources. Likewise, the ease of achieving interoperability of insurance schemes with financial and tax systems. To this end, it is essential to digitalize transactions, control income and traceability of operations in the labor market. Phenomena such as the platform economy or gig economy are recent experiences that demonstrate that, as long as labor institu-

tions fail to adapt to paradigm shifts, their chances of success in effectively attracting and securing a workforce that generates income through them will be lower. Digitalization has incorporated new elements that are highly valued by employees, intermediaries and workers: lower operating costs, efficiency in operating cycles, labor flexibility and adaptability. Innovation, on the other hand, acts as a vehicle for transforming adaptation gaps into concrete solutions. Innovating in social security products and processes is a cost-effective alternative to structural reform efforts that seem to require long decision-making periods without ensuring concrete results.

VI Conclusions

Technology is changing the world of work, opening up new opportunities to improve the functioning of labor institutions in Latin America and the Caribbean, particularly for the self-employed. There is some prevalence of the negative effects of technology adoption on the labor market. However, its accelerated adoption can open up benefits for millions of people, which can translate into productivity improvements, sustained and inclusive growth. Thanks to new technologies, it is much easier and less costly to find service providers and service demanders, which translates into greater value generation in an economy. In fact, thousands of people in the region are considered workers who already generate higher incomes, which would not be the case in the absence of recent technological advances. However, improvements could focus not only on the direct income obtained in the different activities, but also on the institutional mechanisms used to insure workers, generally through social security.

Traditional information for measuring labor markets needs to be adapted to better understand self-employment and new forms of employment, as their dynamism is often not captured. Estimates based on household surveys in each country show that around 50 million workers can be considered self-employed in Latin America and the Caribbean, which represents a quarter of the total. These percentages have remained stable since 2010, and it is very likely that with the acceleration of technological adoption this percentage will even increase. The proportion of self-employed workers is higher in the first income deciles, although lower at the level of formality. In other words, the majority of self-employed workers are considered informal, since they do not make the corresponding contributions to social security and, therefore, are not covered by existing insurance mechanisms. These percentages do not show the dynamics of self-employment, since some of these workers regularly move in and out of a subordinate relationship. This dynamic is even clearer for workers using digital platforms. According to data collected by the IDB with different platforms, between 60% and 80% of the total number of people who generate income in this industry do not take it as a permanent alternative. In other words, it is very likely that as more industries use flexible collaboration schemes, more people will use them as an occupational alternative. However, these data are approximate and better measurements are needed to understand the labor dynamics of self-employed workers in general, and of those who use platforms in particular.

Self-employment trends, the emergence of platforms in different sectors, as well as the ravages of the pandemic, show the urgent need to improve existing insurance schemes. Self-employment is seen as a better option by many workers. This means that the current design of most insurance systems that are linked to employment does not respond in the best way to the needs and characteristics of the self-employed, as the main model is designed for salaried workers. Social security is linked to traditional work and, in general, is designed for a single employer. As a result, the level of insurance for the self-employed is significantly lower than for salaried workers in all countries. In other words, self-employment does not comply with the traditional paradigm for access to social security, which does not change with the establishment of voluntary electronic access to some of the formal insurance schemes. For example, in Mexico, it is possible to contribute voluntarily to the pension system and carry out other procedures using the AforeMóvil application. In Colombia, the Periodic Economic Benefits Program (BEPS) allows Colombians to save for retirement voluntarily and in a flexible way, meeting the need for savings options for people with low or volatile incomes. However, in both cases the levels of use are limited.

The systems with adjustments to the critical processes for insuring the self-employed have higher levels of insurance coverage. This document shows the path that self-employed workers must follow to use the mechanisms in force in Brazil, Chile, Colombia, Mexico and Peru. In each case we develop a service plan, documenting from the user's experience what steps must be followed to comply with the obligations established in the current regulations, both for social security and tax payments. In each scheme we document an important variation in terms of the complexity of each system and identify areas of opportunity in the critical points (friction points) of the route, both from the procedural part and from a behavioral economics perspective. Although there is no one-size-fits-all solution, we documented that there are specific processes that provide the necessary information to make it easier for workers to comply with their obligations. These include: registration, aggregation of income from various sources, automatic discounts, coordination with the financial system, flexible insurance schemes with new products and, finally, tax incentives.

The basis for greater insurance effectiveness is the traceability of individual income and the interoperability of bank and tax data. This information would provide certainty about the number and amounts needed to access a mechanism to protect against different risks, mainly health and aging. There is a positive relationship between the

number of processes developed in each country and their level of insurance. In other words, in countries where an institutional framework has been developed to serve the self-employed, the levels of compliance are higher. The starting point is recording each person's income from different sources, with which it is possible to consolidate the total obtained in each period. In order for this record to be used for different purposes, it is key to be able to use technology for traceability, which is more feasible through the use of payment system instruments, either in the banking system (i.e. bank cards) or in the payment system (through smartphones). In other words, one of the major benefits of the expansion in the use of electronic means of payment is the recording of income, which can be used both to determine tax and insurance contributions, or even some benefits.

In addition to modernizing revenue control, it is essential to rethink existing insurance products. Undoubtedly, the fundamental aspect for expanding insurance coverage is to have a solid contribution base that reflects the total income of individuals and that can be verifiable. However, self-employment can have important survival and volatility levels, as individuals often do not generate the necessary income to meet all their needs. This makes it essential to identify how to reduce the barriers to insurance that exist today in traditional systems. Three of them are identified in the document: the inclusion of automatic discounts; the creation of new insurance schemes and tax incentives. In the first case, the behavioral economics are clear. The cost of insurance is generally associated with a tax, which reduces the probability of payment. An automatic discount mechanism increases these probabilities, since individuals must comply with their contributions. However, the cost of many traditional schemes is relatively high and can represent a burden for the self-employed, even higher than for salaried workers. An alternative is to explore new schemes, where the levels of coverage and benefits are limited and thus the cost can be reduced. Finally, this cost can also be reduced by means of direct subsidies for these workers in the event that they do not cover sufficient income levels. In sum, these elements seek to adapt traditional schemes, which have proven to be ineffective.

In short, the labor flexibility of self-employment work is something that has been permanent in Latin America and the Caribbean and technology will make it an alternative valued by more workers. It is time to modernize insurance schemes to improve their lives, which will depend on the traceability of personal income. Effectively protecting the self-employed from health, illness and old age risks requires a rethinking of social insurance schemes to adapt them to the reality of the region's labor markets. Trends towards working careers with several transitions between sectors and types of employ-

ment will be increasingly frequent and, therefore, it is essential to identify solutions to prevent people from facing the risks of not being insured. Some of these solutions can be achieved by improving existing mechanisms, using technological tools. In other words, the transformation of work that we are experiencing raises the need to adapt social security systems to the needs of workers and not vice versa. We have the opportunity to test new products and processes that do not necessarily follow the traditional social security scheme. At the IDB's Digital Social Security Lab we are committed to finding evidence that allows for a more informed discussion on this topic and we will continue to collaborate with governments, the private sector and entrepreneurs to improve the lives of the self-employed.

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Annex

PRESENCE-ABSENCE SURVEY WORK ON DIGITAL PLATFORMS

Country	Survey	Application	Direct question about digital platforms
Argentina	Permanent Household Survey (EPH)	Quarterly	No
Bolivia	Continuous Employment Survey (ECE)	Quarterly	No
Brazil	National Continuous Household Sample Survey (PNADc)	Quarterly	No
Chile	National Employment Survey (ENE)	Quarterly	Yes
Chile	Supplementary Income Survey (ESI).	Annual	No
Colombia	Large Integrated Household Survey (GEIH)	Monthly	
Costa Rica	Continuous Employment Survey (ECE)	Quarterly	No
Mexico	National Occupation and Employment Survey (ENOE)	Quarterly	No
Mexico	Telephonic Occupation and Employment Survey (ETOE)	Quarterly	No
Mexico	National Occupation and Employment Survey New Edition (ENOEN)	Quarterly	No
Peru	Permanent Employment Survey (EPE)	Monthly	No
Uruguay	Continuous Household Survey (ECH)	Monthly	No

