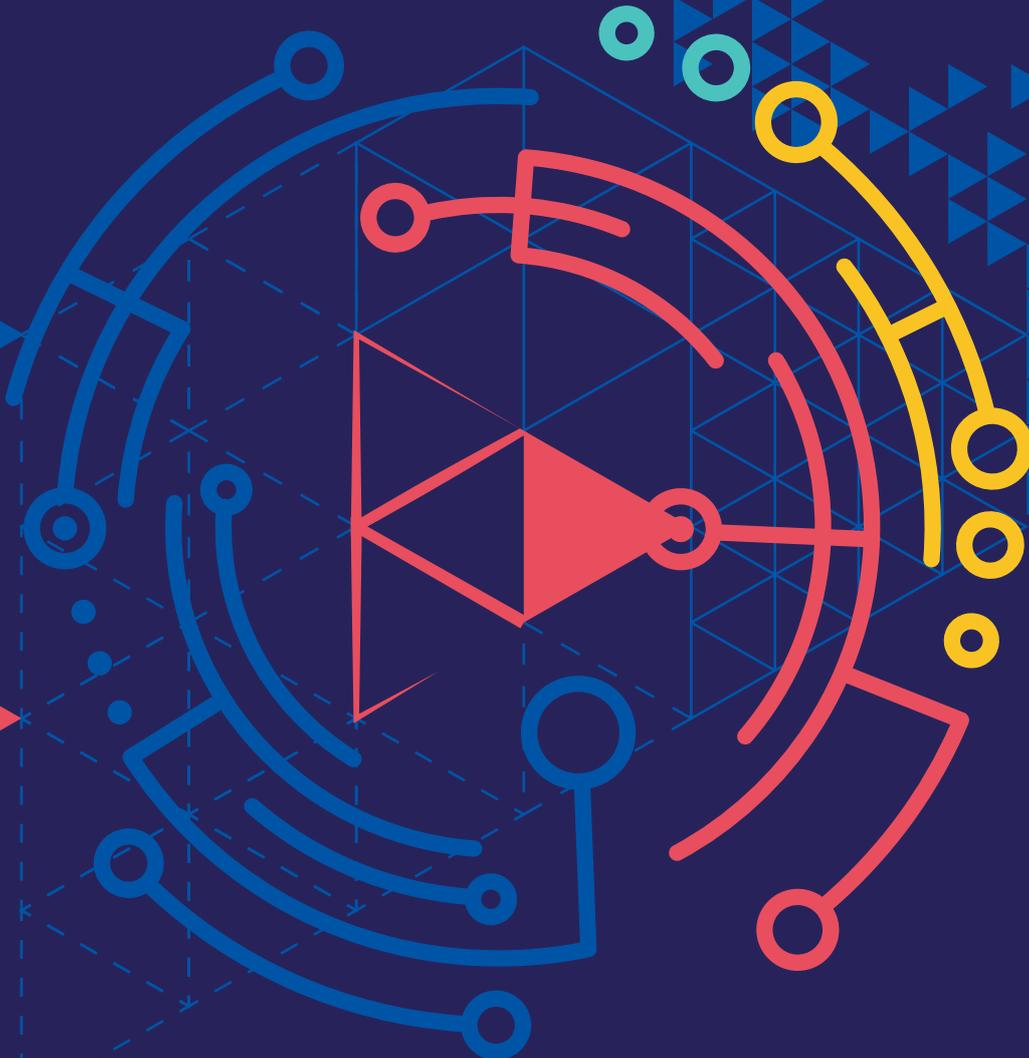




International  
Labour  
Organization

# ▶ E-formalization in Latin America: Accelerating in a region full of gaps

August 2022



ILO Regional Office  
for Latin America and the Caribbean

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First printing 2022

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E-formalization in Latin America: Accelerating in a region full of gaps. Lima: ILO / Regional Office for Latin America and the Caribbean, 2022. 28 p.

*Formalization, digitization, sustainable enterprises, innovation, Latin America.*

ISBN: 978-92-2-037565-5 (pdf web version)

*ILO cataloguing data*

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## ▶ Abstract

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There is considerable debate on how technologies are changing labour market features, but less attention is directed to how public policies may take advantage of information and communication technology (ICT) to ease the transition to formality. While discussions continue on what works for formalization, an increasing number of interventions using ICT to ease the transition to formalization have been emerging in Latin America but with a low profile. Most of them are isolated initiatives rather than part of an integrated strategy, but they demonstrate useful insights. These initiatives largely target intermediate or partial outcomes, such as registration or productivity improvements, rather than core informality indicators. Interestingly, the COVID-19 crisis has generated multiple innovations that could become part of a longer-term strategy in the region, especially for hard-to-reach groups such as informal workers or economic units.

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This paper was prepared by Juan Chacaltana (ILO Employment Policy Department), Claudia Ruiz (ILO Regional Office for Latin America and the Caribbean) and Evelyn Veza (external consultant of the ILO) for the International Labour Organization and the United Nations Economic and Social Commission for Asia and the Pacific's South-South Knowledge Sharing Forum on What Works in e-formalization for Asia and the Pacific, in May 2021. We thank the participants for their helpful comments. We also thank Javier Palacios, former Labour Ministry of Peru; Monica Recalde, Director of Social Protection in Paraguay, Maria Piedad Bayter Horta from the Department of Planning in Colombia, and Octavio Garcia from Concanaco-Servytur for the valuable information provided; and ILO specialists Sara Elder, Julio Pérez, Andrea Bolzon, Anita Amorin and Aguinaldo Maciente for their helpful comments and suggestions.

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 **Estimations on informality face a quantification challenge: The concept has been extensively debated with limited data.** In addition, the concept has multiple dimensions. The concept of “informal economy” includes “informal employment”, which is the best-known indicator. But it also includes “informal production” and “informal economic units”.

## ► 1. The e-angle in informal economies

### Informality in Latin American countries

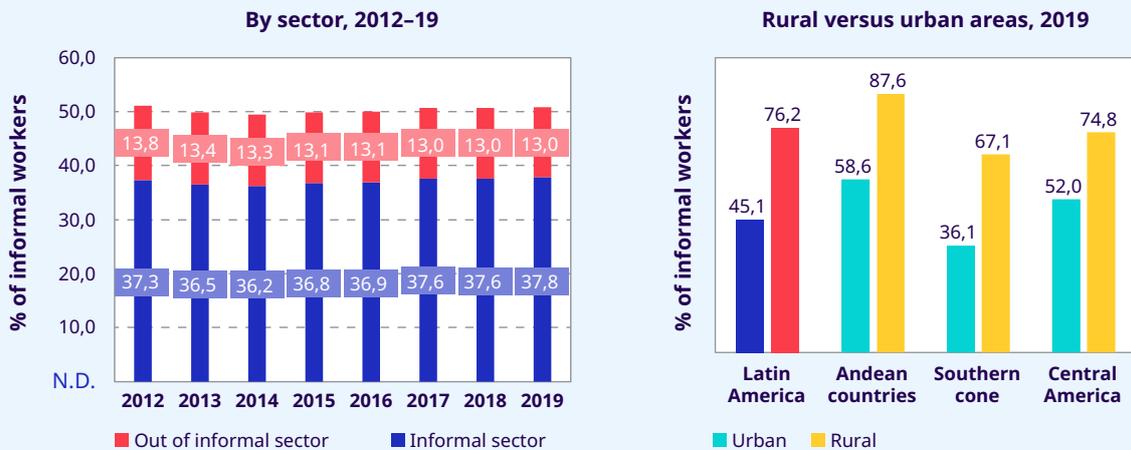
**Estimations on informality face a quantification challenge: The concept has been extensively debated<sup>1</sup> with limited data.** In addition, the concept has multiple dimensions. The concept of “informal economy” includes “informal employment”, which is the best-known indicator. But it also includes “informal production” and “informal economic units”.<sup>2</sup>

**Informality is a fact of great magnitude in Latin America.** From the production aspect, there are some general approximations. Medina and Schneider (2019) estimated that 34 per cent of GDP was informal in Latin America, measured as the “shadow economy”. And recent International Labour Organization (ILO) estimates indicate that 61 per cent of workers had informal employment (ILO 2018).

**Informality is also a phenomenon of great heterogeneity.** Most informal employment takes place in the informal sector, including unregistered companies, own-account workers or household operations. However, recent analysis (2020) found that almost a quarter of informal employment was outside the informal sector, in formal firms or households (figure 1, left panel). In rural areas of Latin America, informal employment was substantially higher than in urban contexts. The largest urban–rural gap was found in the southern cone countries of Brazil, Chile, Paraguay and Uruguay, where informal employment in rural areas was 1.85 times higher (figure 1, right panel).

1 Kanbur (2009) argued that “everybody has their own definition”. According to ILO Recommendation No. 204 concerning the Transition from the Informal to the Formal Economy, “the term ‘informal economy’ refers to economic activities by workers and economic units that are – in law or in practice – not covered or partially covered by formal arrangements”. This means that informality is not only found in informal settings but it takes place in the formal economy where compliance is weakly enforced.

2 The concept of informality has evolved from the “informal sector” to the “informal economy”. ILO (2003) indicates that “informal employment” may occur in the informal sector and in the formal sector as well.

► **Figure 1. Informal employment in Latin America (percentage)**

**Note:** Latin America includes Argentina (urban only), Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Dominican Republic and Uruguay.

**Source:** Sistema de Información y Análisis Laboral de América Latina y el Caribe database (accessed May 2020) and ILO 2020a.

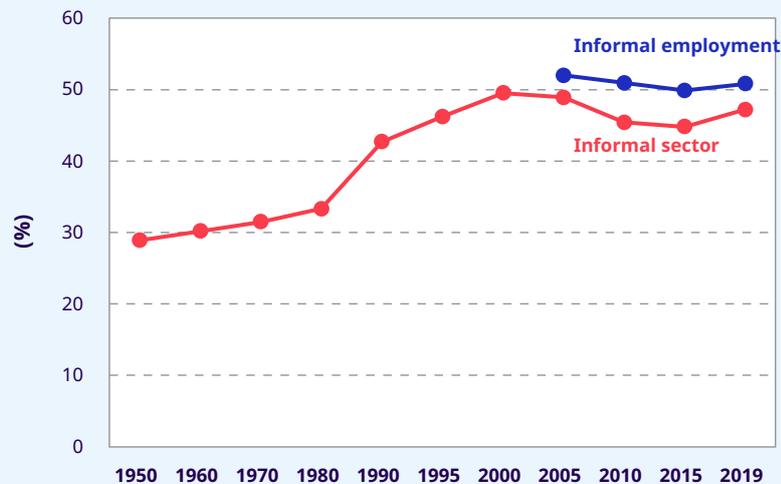
►► For decades, there has been extensive discussion on the definition and drivers of informality. Only recently has the discourse on formalization policies intensified.

## Drivers of formalization (pathways to formality)

**For decades, there has been extensive discussion on the definition and drivers of informality. Only recently has the discourse on formalization policies intensified.** In 2015, the ILO adopted Recommendation No. 204 concerning the Transition from the Informal to the Formal Economy, a milestone that summarizes the current international consensus and identifies three major drivers for the transition to formality: (i) creation of formal jobs and businesses; (ii) policies to facilitate the transition from the informal to the formal economy; and (iii) policies to prevent the transition from the formal to the informal economy.

**In Latin America, the region's experienced a formalization episode between the mid-2000s and the mid-2010s (figure 2) motivated a series of studies seeking to understand the drivers.** The experience of the ILO's Programme for the Promotion of Formalization in Latin America and the Caribbean,<sup>3</sup> which studied formalization episodes in the region, revealed that countries tend to move along some common pathways to formality. These are: productivity enhancement; improvement and simplification of regulations; generation of incentives; and improvement of enforcement. The ILO experience, including evidence from impact evaluation studies, shows that these components work better together than apart. For that reason, the ILO advocates an integrated and coordinated approach for the transition to formality.

<sup>3</sup> Starting in 2013, this ILO programme supported tripartite members to consolidate policies and strategies to ease the transition to formality in Latin America and the Caribbean.

► **Figure 2.** Informal employment in Latin America, 1950–2019 (percentage)

**Source:** Authors' elaboration based on ILO 2020a and Sistema de Información y Análisis Laboral de América Latina y el Caribe database (accessed May 2021).

**A remarkable aspect and supported by empirical evidence is that although informal employment rates differ by country, much like income levels, a significant common feature is the coexistence of productivity differentials.** Stagnant productivity over time and the employment distribution by enterprise size illustrate this fact. In the Latin America analysis, output per worker remained almost stable in two decades, and employment was biased to small business. Indeed, enterprises with fewer than ten workers accounted for 70 per cent of employment, while enterprises with more than 50 workers accounted for 15.3 per cent (Chacaltana and Leung 2020; Salazar-Xirinachis and Chacaltana 2018).

## The role of technology in promoting formality

**The long-standing debate on the transition to informality has largely revolved around technology.** According to Hart (2001), who first used the term “informality” back in the 1970s, “the differential rate of application of machines to production has been the single greatest indicator of uneven development in the global economy”. In Latin America, Pinto (1965) introduced the idea that the unequal pace of technology adoption by sector and enterprise size generates a heterogeneous productive structure and helps explain informality in the region.

**In contrast, technology nowadays comes in the form of information and communication technologies (ICT), robotics or artificial intelligence and is being incorporated differently by countries and productive units.** In addition to the “new forms of work”, the literature speaks of a risk of further technological polarization that could enhance the forces towards “informalization”. In a sense, the digital divide can be linked to heterogeneous economies that combine low- and high-productivity sectors across micro to large enterprise size, socioeconomic deprivations among the poorest households and underinvestment in digital infrastructure and connectivity (ECLAC and ILO 2019; Salazar-Xirinachis and Chacaltana 2018).

**In general, emphasis is placed on the way productive agents are incorporating new technologies and their labour market effects.** The pathways to formalization have a close connection with the impact of technologies on employment, wages, returns and labour conditions. ICT integration into an economy takes place by transforming economic agents – enterprises and workers – and revisiting their interactions. For example, transactions, intermediation platforms, e-transactions and digital wallets have lowered the barriers to participation in economic activities by amplifying exchange markets. Productivity gains come from different angles, such as expansion of access to financial services, promotion and exchange activities with customers beyond traditional markets, distribution of labour and business opportunities, corporate training and self-learning. These benefits allow enterprises and self-employed workers to manage the costs associated with formalization.

Less attention has been given to the way in which new technologies influence the public sector, particularly in policymaking. This is the case despite many governments already having embarked on e-government strategies with different levels of progress. The use of ICT could help governments deliver services to citizens and business more effectively and efficiently.

According to Chacaltana et al. (2018), the application of these e-government strategies to formalization could become a definition of “e-formality”. Thus, e-formality does not mean to substitute or replace the traditional drivers of formalization agreed upon in Recommendation No. 204 by international consensus. Rather, it aims at facilitating the implementation of those drivers or pathways. It could be a complement to boost the effectiveness of what governments are already doing. Although there is much emphasis on registration, it can be considered as one of the first steps towards formalization and better jobs.

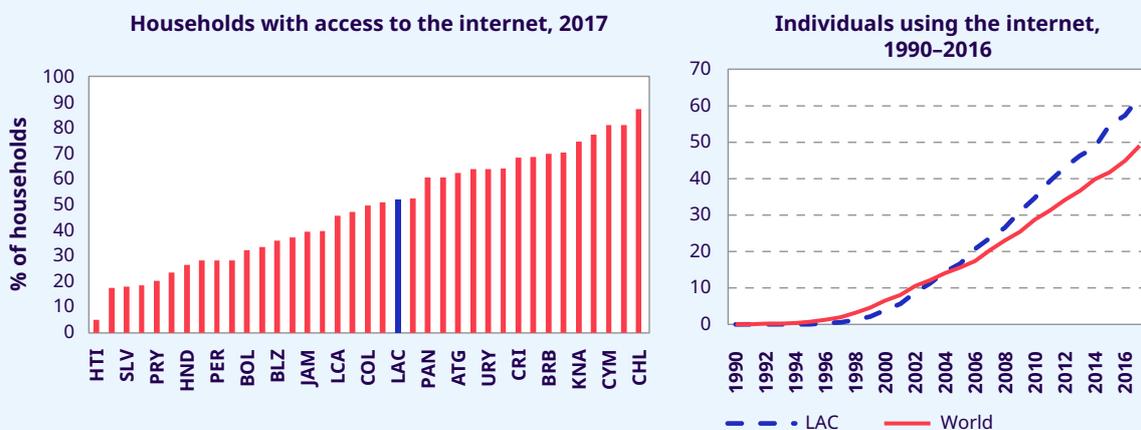
## ► 2. E-formalization enablers

The progressive appropriation of ICT by governments, enterprises and the general population makes economic activities taking place in informal settings visible and identifiable while leveraging productivity. Reachability, quality and extended use of technologies open channels through which ICT can register underreported transactions and economic relationships and expand them. The state of these enablers in Latin America suggests that bridging several gaps is a prudent step to shorten the ladder to e-formalization.

### Digital transformation

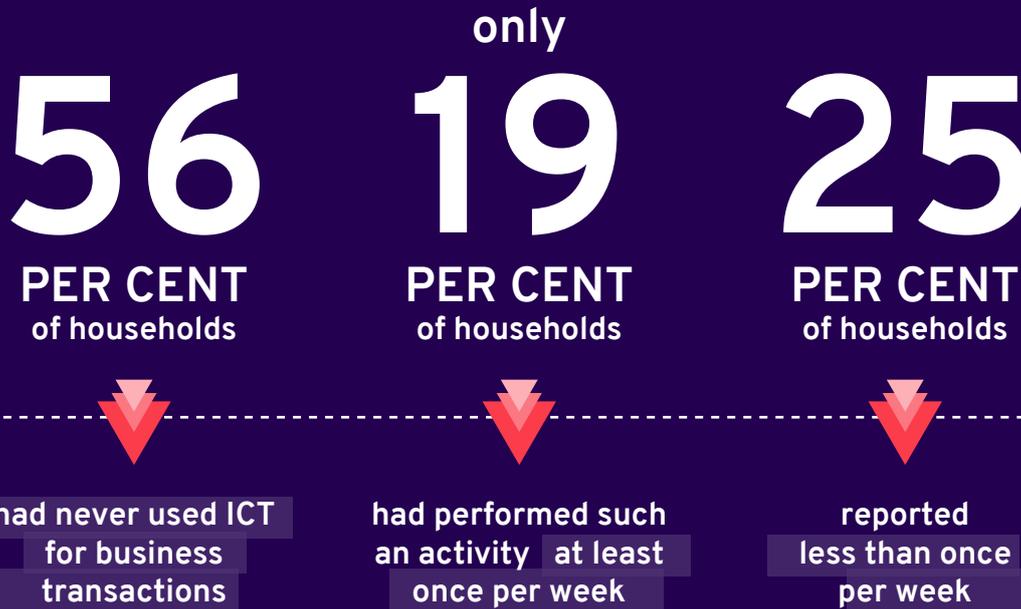
The first enabler is digital transformation. A simple way of assessing this is to look at the proportion of individuals or households using the internet. Although there have been improvements, especially since 2005, latest data indicate that around half of Latin American households on average do not have access to the internet. Many Central American and some Caribbean countries were significantly below this regional average in 2017. Cuba, El Salvador, Haiti and Nicaragua had the lowest access to the internet, at only 5–18 per cent of households. At the opposite end, 70–87 per cent of households in the southern cone countries of Argentina and Chile and in many Caribbean countries, such as the Cayman Islands, Trinidad and Tobago, Saint Kitts and Nevis, the Bahamas and Barbados, had access to the internet (figure 3).

► **Figure 3.** Access to internet in Latin American countries and globally, latest data (percentage)



Source: Economic Commission for Latin America and the Caribbean, [www.eclac.org/tic/flash/](http://www.eclac.org/tic/flash/) (accessed January 2021) and International Communication Union database (accessed May 2021).

## Internet use for business transactions is quite limited within the population\*



\*Estimations for a pool of countries that includes Chile, Ecuador, Mexico and Peru.

**Digital divides also prevail within countries by place of residence and income level.** Rural areas have a lower percentage of users than urban areas (OECD et al. 2020). Even in countries in which internet access is high, the gap between the richest and the poorest households is 40–60 percentage points. Around 85 per cent of households are regular internet users in the richest quintiles of Uruguay and Colombia, while 40 per cent and 20 per cent are regular users in the poorest quintiles, respectively (ECLAC 2020).

**For those households with access to the internet, connection quality and device acquisition are heterogeneous by country.** The average broadband download speed in 2021 ranged from 12.8 mbps in Venezuela to 171 mbps in Chile.<sup>4</sup> The use of high-speed broadband connections for businesses doubled from 2015 to 2017 in Colombia (OECD et al. 2020). The speed of connection becomes a barrier to engagement in some activities, like teleworking, use of apps and/or to perform transactions. This also applies to the availability of suitable devices and updated operating systems. Latin America represented 10 per cent of the global smartphone market in 2019, but smartphone penetration varied significantly by country. Chile and Argentina had the greatest access, at 71 per cent and 66 per cent, respectively, in 2019, while Paraguay and Peru had 43 per cent and 42 per cent, respectively.<sup>5</sup>

**Internet use for business transactions is quite limited within the population.** Estimations for a pool of countries that includes Chile, Ecuador, Mexico and Peru indicate that 56 per cent of households had never used ICT for business transactions. And only 19 per cent of households had performed such an activity at least once per week, and 25 per cent of households reported less than once per week. The usage estimations reflected different patterns by gender: Men were more likely than women to use ICT for business transactions (OECD 2020).

4 CEPALSTAT, <https://statistics.cepal.org/portal/cepalstat/> (accessed 11 January 2022).

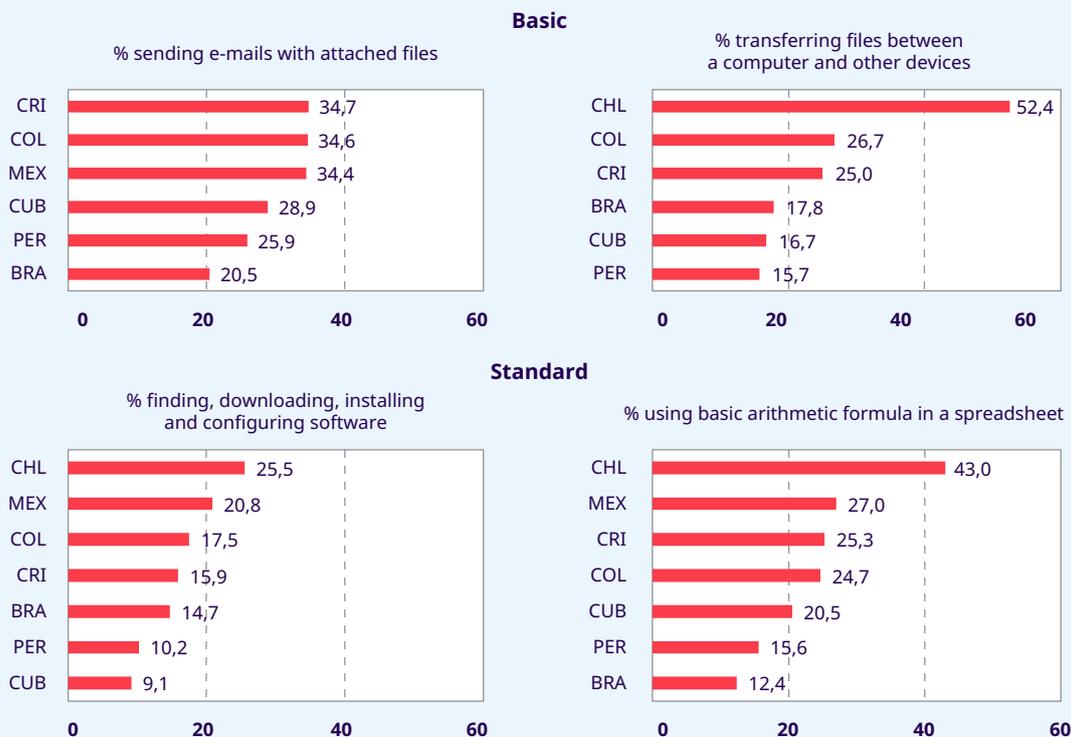
5 See CounterPoint database (accessed 2020).

**From an enterprise perspective, e-commerce development is more common for “business to business” than for “business to customers”.** In 2018, 64 per cent of enterprises in Brazil and 40 per cent in Colombia placed orders online. But only 26 per cent and 21 per cent of them, respectively, received orders through the computer. Regarding digital interfaces, 65 per cent of surveyed enterprises in Brazil and 67 per cent in Colombia had a website or homepage. Conversely, enterprises using the internet to interact with public authorities reached higher levels in 2019: at 79 per cent in Brazil and 85 per cent in Colombia (OECD.Stat).<sup>6</sup>

**ICT skills are far from universal in many Latin American countries, reinforcing barriers to uptake and effective use.** Basic knowledge for device use appears scant among youths and the adult population. The proportion able to send e-mails with attached files ranged from 20 per cent in Brazil to 35 per cent in Costa Rica. The skill of transferring files between devices covers half of the youth and adults in Chile, but this prevalence was significantly lower in other countries. It fell by half in the next two ranking countries of Colombia and Costa Rica (figure 4, upper panel).

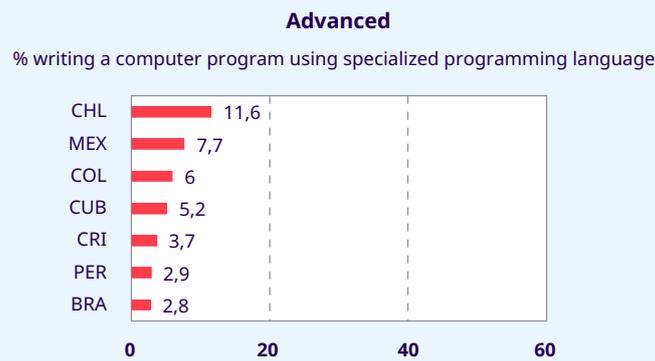
**The coverage of standard and advanced skills is even lower.** At most, a quarter of youths and adults could find, download, install and configure software in latest data (figure 4). Ability to perform basic arithmetic operations in a spreadsheet was low, with the exception of Chile. For instance, in Brazil, only 12.4 per cent of youths and adults had the ability to perform basic arithmetic calculations on a spreadsheet, and 14.7 per cent was able to find, download, install and configure software (figure 4, middle panel). Advanced digital skills were difficult to find in the population. The percentage of youths and adults with coding skills was even more scarce, at less than 3 per cent in Peru and Brazil. Although also at a low level, Chile shows better performance than the other countries, at 11.6 per cent of youth and adults.

► **Figure 4. Digital skills among youths and adults, by complexity and selected countries, circa 2018 (percentage)**



► Continues...

6 Percentages correspond to businesses with ten or more employees.

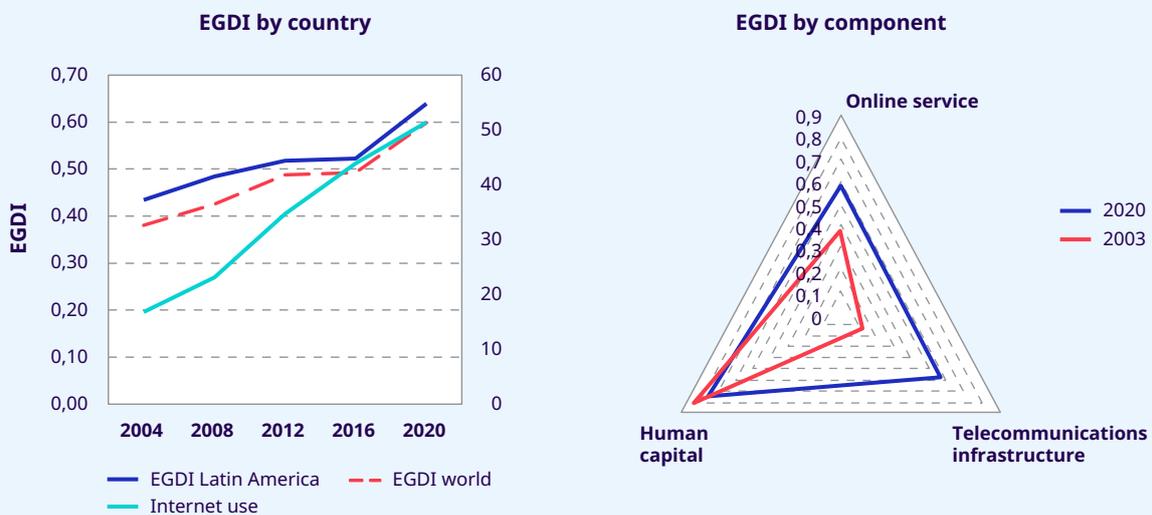


**Note:** 2019 data for Cuba; 2018 for Brazil, Colombia, Costa Rica, Mexico and Peru; 2017 for Chile.  
**Source:** International Communication Union, ICT Skills database, updated March 2020 (accessed 5 January 2021).

## Digital transformation of government: e-government

**Government readiness to use ICT in public service delivery has made progress in the Americas, particularly in Latin American countries (figure 5).** Until 2015, the digital transformation of the labour market was occurring at a faster speed than the digital transformation of policymaking, as measured by the E-Government Development Index. Since 2015, progress has been significant for the world and particularly for Latin America. By 2019, most countries had surpassed the “high” and “very high” threshold on the Index (over 0.5). Around half of the countries was beyond the global average (0.6).

► **Figure 5.** E-government progress in Latin America, according to the E-Government Development Index (EGDI), 2003–20 (percentage)



**Source:** DESA 2020.

**Latin America, however, lags the top performers, Canada and the United States.** In terms of Index components, telecommunications and infrastructure in Latin America experienced the greatest jump in performance: The figure was nearly five times higher in 2020 than in 2003 (figure 5). Progress in online service reflects the increasing information available online, the existence of data and channels and the ability to do it from a website.<sup>7</sup>

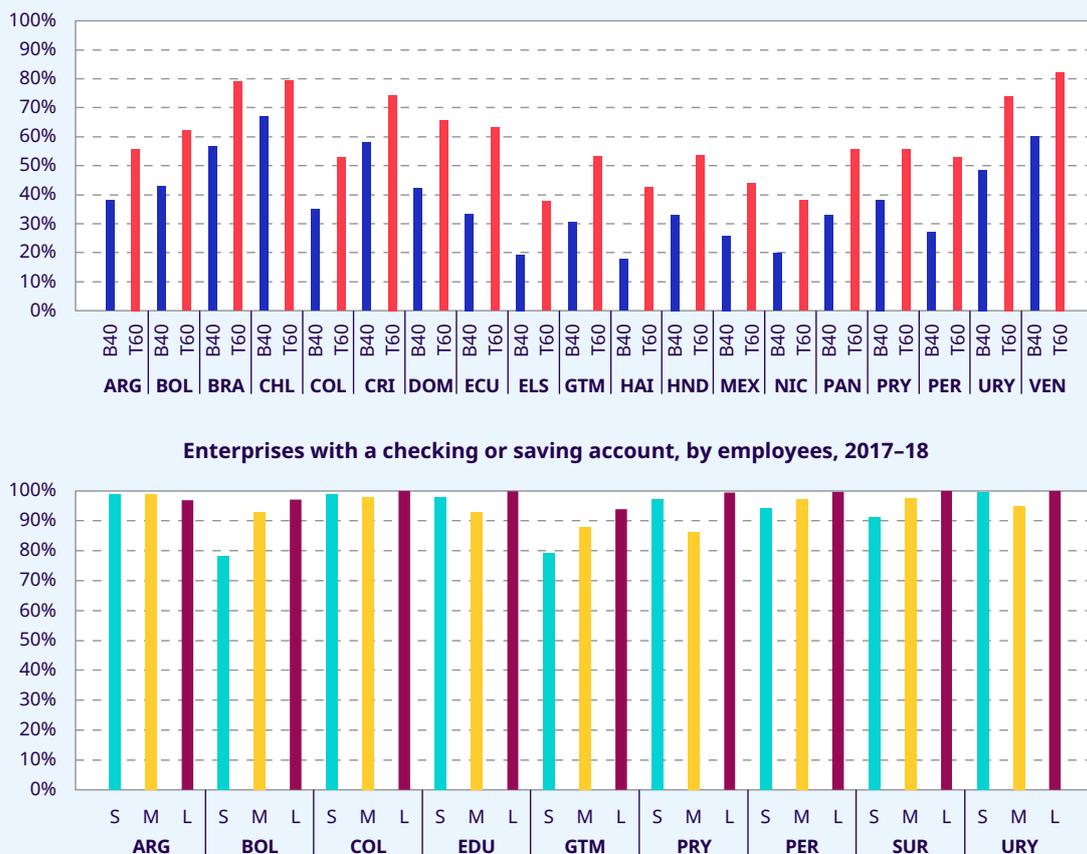
7 The survey collected information on national portals, e-services and e-participation across ministries, including employment.

Although governments provide services through online interfaces, it does not follow that these services are accessible by the whole population. Latin America ranks second in the world regarding the proportion of countries (at 84 per cent) that offer online services to vulnerable populations. But the digital gaps challenge the universality of e-services. Workers and enterprises in the informal economy are among those with limited infrastructure and skills to deal with the streamlined government digital services.

## Financial inclusion

Access to the financial system represents a springboard for the transition to formal settings. The transformation of informal economic activities dominated by cash into registered activities generates a credit history that is useful for requesting financing as well as new ties to join formal chains. Among individuals in Latin America, an average of 55 per cent had a bank account, and half of them performed banking transactions online in a 2017 survey (figure 6). This share goes up or down according to countries' income levels and to adults' position in the income distribution (by country). Differentials between the bottom 40 and the top 60 per cent ranged from 30 per cent in Ecuador to 12 per cent in Chile (figure 6, upper panel). On the business side, having a bank account varied according to enterprise size. While it was universal across countries for large enterprises in 2017–18, more than 20 per cent of small businesses in Bolivia and Guatemala reported no bank use (figure 6, bottom panel).

► **Figure 6.** Financial inclusion in Latin America, 2017–18 and individual and enterprise data on having a bank account, 2017 (percentage)



**Note:** S=small (5–19 employees), M=medium (20–99 employees) and L=large (100+ employees); B40=poorest 40 per cent and T60=richest 60 per cent.

**Source:** World Bank Enterprise Survey 2017–18 and World Bank Global Findex 2017 (both databases accessed 7 January 2021).

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## ▀▀ Coping mechanisms to deal with the pandemic have implied a deep transformation of how economic agents interact through ICT. [...]

This has included working remotely, forcing buyers and sellers to go digital, streamlining online processes of government benefits and public services and turning cash payments into digital transactions.

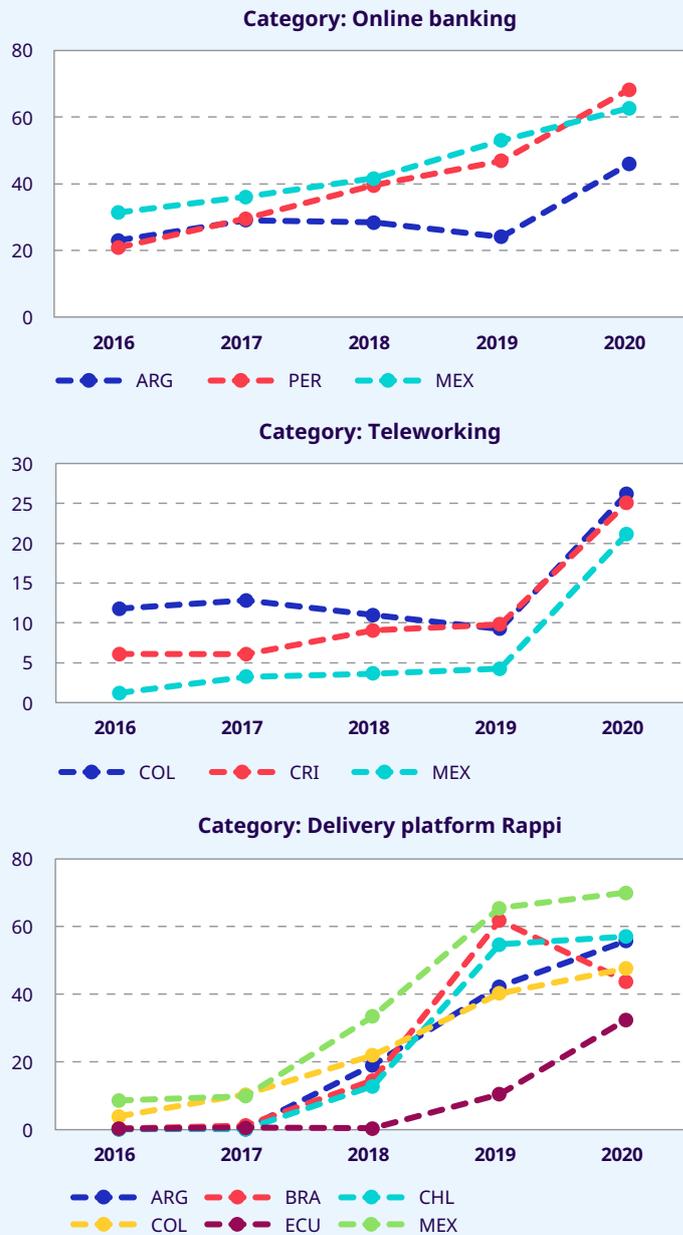
**The spread of financial technology, fintech (digital payments), with lower supply costs and new approaches to assess clients has been one of the drivers of financial inclusion.** Fintech has eased digital onboarding to make financial transactions through biometric identity verification, immediate account approval, virtual card deployment and electronic signatures. Thus, digital payments connect enterprises and entrepreneurs with banks but also with suppliers, workers and customers in an easy and affordable way (Klapper, Miller and Hess 2019). Individuals without a bank account find that digital wallets offer the chance to transfer funds, including remittances, and to shop online without a credit or debit card. Digital payment measures represent more than one third of the Latin America initiatives to foster financial inclusion (AT&Kearney and VISA 2018).

## COVID-19 pandemic reshaping the landscape

**Coping mechanisms to deal with the pandemic have implied a deep transformation of how economic agents interact through ICT.** Strategies in reaction to the massive lockdowns and other restrictions have involved substitution of face-to-face encounters for varied ICT-laden initiatives. This has included working remotely, forcing buyers and sellers to go digital, streamlining online processes of government benefits and public services and turning cash payments into digital transactions.

**From the beginning of the pandemic, some services reached the highest popularity score.** Online banking, for instance, has reached high popularity according to Google Trends in Argentina, Mexico and Peru (figure 7). Teleworking has followed a similar pattern, with popularity peaks during lockdown periods that persisted once situations opened up in Colombia and Costa Rica. The popularity of the delivery platform *Rappi* increased sharply during the pandemic in most countries, and it seems to have maintained that popularity in Ecuador and Peru over time. In some countries, online usage decreased as lockdowns lifted. This was the case in Argentina with online banking and service delivery popularity and in Colombia with delivery as of August 2020, when lockdowns were relaxed. After its lockdown restrictions lifted at the end of July 2020, Chile experienced a decrease in the popularity of service delivery. Brazil and México had popularity peaks in service delivery and teleworking, respectively, that dropped when their lockdowns lifted.

► **Figure 7.** Going digital during the pandemic, according to Google Trends 2016–20, by selected countries (percentage)



**Note:** ARG=Argentina; BRA=Brazil; CHL=Chile; COL=Colombia; CRI=Costa Rica; ECU=Ecuador; MEX=Mexico; and PER=Peru.  
**Source:** Google Trends, annual averages.

**There is evidence of growing remote work during lockdowns.** In Chile, teleworking increased by four times: 5 per cent of workers worked from home before the pandemic, but that prevalence jumped to 20.3 per cent from April to June 2020. Data collected in other countries during the emergency period also reflect peaks: 23.5 per cent in Mexico and 19.3 per cent in Uruguay by April; 13.3 per cent by May in Brazil; and 14 per cent during the second quarter in Costa Rica (ILO 2020a). These figures are in line with tele-workability indexes for the region, which point out that less than a third of workers could perform remotely (Brussevich, Dabla-orris and Khalid 2020; Delaporte and Peña 2020).

**In line with the unprecedented worldwide trend, Latin America experienced a sharp growth in e-commerce during 2020.** Estimations put e-commerce customers increasing by 30 per cent, or 52 million online customers. The largest increase in the share of e-commerce customers was in Mexico, at

In line with the unprecedented worldwide trend, **Latin America experienced a sharp growth in e-commerce during 2020.**

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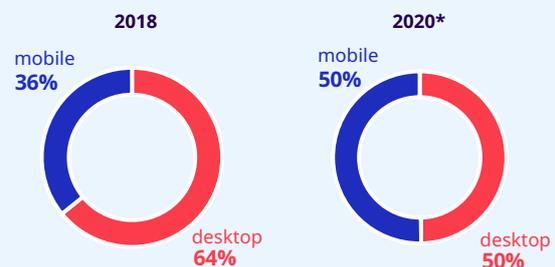
around an estimated 14 percentage points by the end 2020. The rise in the share of mobile devices in the e-commerce market is another 2020 hallmark (figure 8). Surpassing the world average increase (at 16.5 per cent), e-commerce sales in retail businesses increased by 19.4 per cent in Latin America (Reddy and Morelix 2020).

► **Figure 8.** Changes in e-commerce during COVID-19 pandemic (percentage)

**Percentage of e-commerce customers 2020, in January and estimated by December**



**Devices share in the e-commerce market, 2020 versus 2018**



**Note:** \*Estimated. ARG=Argentina; BRA=Brazil; CHL=Chile; COL=Colombia; MEX=Mexico; PER=Peru.  
**Source:** Ebanx 2020.

**The public sector accelerated the adoption of e-interfaces after onset of the COVID-19 pandemic.** Enrolment in programmes offering mitigation subsidies has been mostly digital across countries. New initiatives to cover non-traditional target populations with social programmes have allowed the

identification of hard-to-reach populations, thus improving government records. ICT has thus helped to determine people missing in social security registries and to provide them with social benefits in an efficient manner. This registration step has been the first connection for many workers with a formal system.

**The situation affirms that reaching the informal population is feasible and that it can be achieved quickly using ICT.** In Argentina, for example, applications to payroll subsidies for enterprises affected by the lockdowns were made through the tax authority webpage and emergency benefits were paid directly into workers' bank accounts (in the Work and Production Emergency Allowances). In the case of informal workers and hard-to-reach populations, Argentina opened an online registry for applications for the family emergency income programme (Ingreso Familiar de Emergencia); that information was then cross-checked with administrative records to determine eligibility. With digital records, beneficiaries entitled to other social benefits were automatically included. Similarly, eligibility of applicants for the emergency programme (PyTyvõ 2.0) in Paraguay was done quickly online. And in Peru, access to the emergency responses for independent workers' bonus, workers' exemption from contributing to pension funds and payroll subsidies was done automatically through database cross-checks to determine the population not covered by social programmes.

**Additionally, some public subsidies included opening accounts or the use of digital wallets.** For instance, it took one week to develop an app that workers in Brazil could use to apply for the Coronavoucher emergency benefit, and it allowed users to open a bank account online. Registration for a lump sum pay-out for independent workers (Bono Independiente) in Peru was done via an official website, and the process entailed opening a Tunki digital wallet through the national bank and its security procedures. The second payment of that cash transfer provided greater financial inclusion: It was made through other digital wallets (BIM and Yape) that did not require having a bank account. In Colombia, beneficiaries of the poverty -alleviation programme, Ingreso Solidario, were able to choose between a traditional bank or a digital wallet (Nequi) to receive the benefits.

**Governments have established norms for ICT integration into economic activities.** Regulatory frameworks (from laws to guidelines) for teleworking surfaced in 19 countries after onset of the pandemic (Rubio et al. 2020). Most of the new initiatives on remote working were deployed without careful ex ante impact assessment on employment. In addition, intensity in the use of e-commerce and web platforms calls some existing norms into question. Digitizing stresses the relevance and imperative of regulation on privacy, use of personal data and cybersecurity protocols.

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▶▶ **The analysis of ICT initiatives covered policies contributing, even unintentionally, to the formalization ladder on several fronts.** According to the policy framework emerging from the global standard in Recommendation No. 204, heterogeneity in informal employment is connected to the fact that transitioning to the formal economy requires multiple interventions.

### ▶ 3. Initiatives up and running

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**The analysis of ICT initiatives covered policies contributing, even unintentionally, to the formalization ladder on several fronts.** According to the policy framework emerging from the global standard in Recommendation No. 204, heterogeneity in informal employment is connected to the fact

that transitioning to the formal economy requires multiple interventions. Although many ICT initiatives do not pursue formalization per se, they shorten the pathways towards promoting the creation of formal employment, supporting the transition from the informal to the formal economy, and preventing the transition from formal to informal settings.

**Following this framework, initiatives linked to e-formality in Latin America are categorized across four pathways that facilitate transition to formality: productivity, incentives, standards and enforcement. Many initiatives are grounded on more than one of these dimensions.** In the Latin America region, some ICT policies have lowered the cost of digitalization, financial inclusion and easing registration to boost productivity gains. Governments have deployed ICT solutions to offer immediate benefits for businesses or work registration, particularly for small enterprises and own-account workers. Digitalization and online setting of employment and tax duties have reinforced compliance in the formal sector. Regulatory changes have given room to the bigger role of ICT, establishing new rules for market players in both the digital and the financial arenas (figure 9).

**These e-approaches are still far from being able to quantify how existing efforts translate into impact on formalization.** Despite data collection being easier in the era of digital records and live monitoring, the data disclosure and systematization of the performance of these interventions are rarely disseminated at the sector level, and the knowledge gap is even wider on the links with formalization outcomes. More importantly, potential impacts are closely tied to how all these isolated initiatives work together.

**Based on the universe of e-policies implemented in the Latin American region, an illustrative set of them shows features for facilitating the transition to the formal economy.** These experiences, many of which combined different dimensions of formalization, were analysed in three groups according to the targeting. The first group involves e-solutions aiming at fostering formality in business units. The second group includes initiatives oriented to transaction registration. And the third group comprises measures to secure workers' transition to formality.

► **Figure 9.** E-formality initiatives in Latin America from an integrated approach angle



## Enterprises

### Business e-registration

Sooner or later, countries must develop e-registration services to ease the registration of start-up businesses. Advocates of ICT adoption in the public sector have not targeted areas related to taxes or employment but rather production and technology. In some countries, these attempts have been temporary and failed to establish themselves as a public policy for the resolution of intrastate bureaucracies and burdens on the productive sector.

Since 2012, Costa Rica has offered business registration through an online platform, CrearEmpresa, which brings different government agencies into a single window. It began as a component in the Digital Government Development initiative, which led to the adoption of technology by the public administration advocated by the Technical Secretariat of Digital Government starting in 2006. This agency, in association with the Ministry of Economy, Industry and Commerce, worked to streamline business registration and shorten the deadline, from 25 days to one day.<sup>8</sup> Similarly, Chile allowed full online registration in 2013 in its Tu Empresa en un día and reduced the average time to register from 27 days to 5.5 days. Most of the enterprises that have enrolled are micro and small-sized.<sup>9</sup> Guatemala has deployed e-registration as part of a National Competitiveness Programme since 2018, and enterprise and commerce owners can enrol online by submitting the required documentation and forms.<sup>10</sup>

One of the components of the Colombia strategy for recovery after onset of the COVID-19 pandemic has been the one-stop shop for business registration, Ventanilla Unica Empresarial, or VUE, launched in 2020.<sup>11</sup> The Ministry of Commerce, Manufacturing and Tourism led this initiative in partnership with chambers of commerce throughout the country. The platform concentrates all the procedures needed for business registration into one place, thus reducing the time needed to register for tax and social security compliance. The processes can now take from one hour to one day.

### Electronic tax filing and payments

Establishing transparency with friendly interfaces for tax accomplishment lowers the cost of registration for own-account workers and small businesses and facilitates detection of underreporting. There are experiences in which these platforms have been used to address the formalization of social programme beneficiaries seeking to formalize their activity after programme graduation. Latin America has been a leading region on e-invoicing (OECD et al. 2020). This process started in Chile (2003), followed by Mexico

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 Establishing transparency with friendly interfaces for tax accomplishment lowers the cost of registration for own-account workers and small businesses and facilitates detection of underreporting.

(2004), Brazil and Argentina (2006), Peru (2010), Ecuador and then Uruguay (2012). E-invoicing did not cover large taxpayers fully until many years after its introduction; and the majority of countries, with the exception of Brazil, included professionals as sellers (Barreix and Zambrano 2018). The possibility for tax collecting agencies to receive real-time information on transactions and getting data ready to use for cross-referencing tax filings are the main advantages of e-invoicing.

Argentina set up a simplified scheme, called Monotributo, for own-account workers to move their registration and sales or fees reporting online. After a decade of implementation, the system is gradually moving away from paper invoices to an electronic format. This requirement of e-invoices started with the tax categories associated with the highest income brackets and became mandatory for every income bracket as of 2019. Self-employed workers entitled to a subsidized Monotributo scheme remain exempt from providing e-invoices. In Paraguay, online enrolment to the RESIMPLE system for self-employed

8 See <https://crearempresa.go.cr>

9 Ministry of Economy, Promotion and Tourism – Bulletin RES-2016.

10 See <https://minegocio.gt>.

11 See [www.vue.gov.co](http://www.vue.gov.co).

persons and small business owners started in 2020, and the associated tax is paid on a quarterly basis through digital wallets, credit or debit cards or multiplatform payment networks. Presentation of affidavits is also done online at the end of each fiscal year. Although this regime started with paper invoices, it intends to operate only with digital invoices soon. After onset of the pandemic, the platform was used to formalize the beneficiaries of the emergency programme *Ptyvyõ 2.0* (box 1 ).

► **Box 1. Providing subsidies and formalizing: *Ptyvyõ 2.0* Programme in Paraguay**

The subsidies programme *Ptyvyõ* has been part of the government response to the pandemic to alleviate the income shock suffered by informal workers in hotels, restaurants, tourism, services and commerce. Self-employed and dependent workers in small enterprises are included in the target population, in addition to workers in formal employment who were dismissed early in the pandemic when restrictions were first imposed. Law No. 6587 established that beneficiaries should register in the tax authority (Secretaría de Estado de Tributación) to qualify for the benefit. In this case, own-account programmes should enrol in RESIMPLE to become eligible.

Source: Law No. 6857.

## Digital records of employee registration

Keeping live digital records on employment relationships facilitates inspection and the detection of underreporting. Most government initiatives have a digital window for employers, but some also include an employee interface.

In Argentina, the labour inspectorate uses technology for improved efficiency as part of the formalization policy led by the Ministry of Labour. An agreement between the Ministry and the tax authority created the *Mi Simplificación* data set in 2006 to record employment relationships across enterprises. Based on this data set, the Ministry launched a strategy in 2011 to detect and penalize non-compliance of regulations. The possibility to carry out inspections using a tablet that reports real-time data has shortened the period between inspection and penalties, with reporting to the tax authority done automatically. As a result, the deadline to determine penalties has reduced from 40 days to just one day.

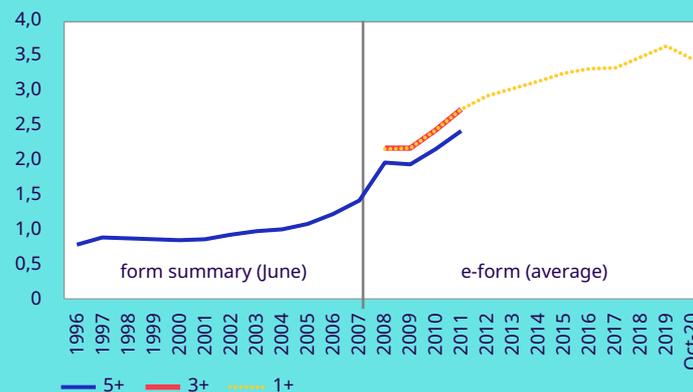
In Brazil, the digital accounting system to manage tax and labour requirements, *eSocial*, made it mandatory for enterprises to automatize and connect different processes to send information on employment and safety compliance in the workplace. This centralized registry makes it possible to set up inspection procedures and define penalties. In 2017, *eSocial* consolidated employment data for most enterprises, and the Ministry of Labour digitalized the former *Carteira de Trabalho* registry on workers' employment history and social security contributions. Thus, the new version of *Carteira* now connects to *eSocial* to simplify business registration and ease workers' accessibility to the information. According to official data, more than 303 million people have accessed the digital *Carteira de Trabalho* since January 2019. Possibly because of the COVID-19 pandemic, this digital document has seen a significant increase in new users, access and downloads. In 2020, there were more than 270 million visits. The document can be easily accessed or downloaded in Android and IOS versions, and there have been more than 24.2 million downloads already.<sup>12</sup>

In Peru, according to the e-payroll system established in 2007, enterprises must submit monthly reports on workers, pensioners and service providers to the tax authority through T-Registro. This registry collects labour and social security data. In addition, businesses must complete an e-form PLAME monthly report with the information required to submit payments. Implementation has meant an improvement in the coverage of formal employment in the private sector by the Ministry of Labour (box 2).

12 See [www.gov.br/pt-br/noticias/trabalho-e-previdencia/2021/02/carteira-de-trabalho-digital-ultrapassa-303-milhoes-de-acessos](http://www.gov.br/pt-br/noticias/trabalho-e-previdencia/2021/02/carteira-de-trabalho-digital-ultrapassa-303-milhoes-de-acessos).

▶ **Box 2. Digital records on labour relationships: e-payroll in Peru**

Before the e-form, only 26,000 enterprises reported payroll data each year. Once the e-form was established, around 200,000 enterprises reported information on their employees on a monthly basis. Formal employment has also increased, from 1.1 million in 2005 and 2.4 million workers in 2011 for enterprises with five or more workers. Reports on administrative records do not distinguish by enterprise size after 2011, but figures suggest this electronic registration process has continued growing.

**Private employment in forms and e-forms, by enterprise size, 1996–2020 (million workers)**

**Note:** Preliminary data for 2020.

**Source:** Diaz 2014 and information from the Ministry of Labour and Employment in Peru.

In Colombia, the e-form for social security contributions, Planilla Integrada de Liquidación de Aportes, or PILA, unified subsystems to simplify the compliance of social security payments and reduce the administrative cost. Workers and businesses can register their contributions to health and occupational hazards schemes through the e-form or with assistance of a telephone operator (and paid by e-transfer). Workers' registration to the e-form has been required for small businesses in informal settings that apply for benefits provided in the Formalization Law 2010. The cost of preparing the form with telephone assistance was eight times higher than the e-form in 2017 (Pino Castillo et al. 2019). The PILA has provided transparency to social security contributions (Segura Ponte 2019).

### Productivity enhancement

The formalization of own-account workers in small businesses is not simply a matter of inspection and sanctions for law infringement. Lack of access to ICT requires comprehensive support to transform them into users of digital solutions.

In Mexico, the Concanato Tablets initiative illustrates an avenue for accommodating comprehensive support. The simplified and transitory tax scheme, Regimen de Incorporación Fiscal, pursues the formalization of non-professional self-employed persons and small business owners whose earnings are less than an income threshold and are enrolled in the formalization initiative Crezcamos Juntos. As part of a package, it offers a subsidized tablet device during the registration process, called the Concanaco Tablet. This subsidized tablet includes free internet connection for one year and sales recording, e-commerce and e-invoicing software. It includes mobile point-of-sale capacity without a monthly charge nor minimum invoicing. Each person registering receives mentoring on how to take advantage of the programme to transition into formality. The initiative pursues formalization, facilitating both business management and tax accomplishment (box 3).

► **Box 3.** Boosting productivity and formalization: Concanaco Tablet in Mexico

**Background.** A partnership between the National Committee for Productivity, the tax authority, the Entrepreneur National Institute and the Confederation of National Chambers of Commerce, Services and Tourism gave birth to the Concanaco Tablet programme. The initiative focuses on increasing small and medium-sized enterprise productivity through ICT adoption.

**What is a Concanaco Tablet?** It is an IT-based tablet device for small and medium-sized enterprises that entrepreneurs can easily upload the goods and services that they sell. It also includes a modality for the sale of airtime to customers, which is an important way to increase business turnover. It includes a point-of-sales terminal (Terminal Punto de Venta, or TPV) and internet connection, which is offered free of charge during the first year. The point-of-sale enables entrepreneurs to accept payments via credit and debit card (although cash payments are also possible), create electronic records of their sales, issue formal invoices and track their inventories. The use of these tablets makes it easier for entrepreneurs to sell their goods and services, enables them to sell new products (such as airtime) and facilitates invoicing, stock management, bookkeeping and tax declarations.

**Results:** The project reached 15,086 enterprises registered within a special tax scheme for small and medium-sized enterprises (Régimen de Incorporación Fiscal). The project has verified that 89 per cent of the beneficiaries made tax declarations. Formalization results relate mainly to an increase in business registration and tax declaration. Although the tablet facilitates the formalization of workers, it does not ensure registration at the tax office and the social security office, both of which take place through separate processes.

**Source:** Interviews with Octavio García, Vice-President Labour Affairs, Concanaco Servytur.

## Economic transactions

Accelerating the adoption of technologies brings about the chance to record economic transactions that take place off the books. In the pursuit of formalization, it is a kind of shortcut for unreported interactions not reachable by the enforcement of tax or labour rules.

### Digital payments

Revising financial system regulations has allowed newcomers such as the fintech companies to extend their coverage of financial services and, consequently, transaction traceability. Regulations have introduced competitiveness and accessibility by promoting interoperability and detaching banking services from traditional incumbents. Uruguay, for example, provides tax incentives through the financial inclusion law to use digital payments for transactions, such as payroll, fees for professional services and tax payments, particularly for small businesses. Incentives include subsidies for the adoption of point-of-sale facilities for small businesses, interoperability expansion, lower tax-withholding requirements for electronic sales and reduction of ATM fees. Peru offers tax incentives in the form of sales tax for fintech development. However, unlike Uruguay, normative decisions in Peru are isolated and lack a regulatory framework on the fintech sector to offer a certain predictability to boost its development.

The Central Bank of Brazil established new rules for open banking in 2019. The regulations encouraged fintech start-ups by eliminating the former requirement to partner with traditional banks to run financial services. Mexico's 2018 law to regulate the fintech sector covers crowdfunding, cryptocurrency and digital wallets. Nevertheless, only one fintech company to date has obtained the licensing to operate.

### Work through digital platforms

The way to integrate digital platforms into the rules that govern formal transactions is far from resolved. The trade-off between job protection and business profitability challenges the emphasis that the

transition to formality might assume. In Chile, the project Mi Jefe es Una App is being debated currently in the Parliament to regulate workers in digital delivery platforms, such as Uber Eats or Rappi. The core issue is how to address precariousness in work conditions. Uber Law in 2020 set requirements linked to the quality-of-service provision for drivers working in transport platforms, including a professional driver's license and certain car features, as well as sales registration requiring invoices.

## Digital platforms and taxation

Detecting unreported transactions through tax incentives is an uncommon initiative in play in the region. Brazil has one of the few examples of an anti-tax-evasion programme, the Nota Fiscal Paulista operating in San Pablo. The tax agency launched a platform on which customers can register invoices of their purchases to qualify for benefits, like tax rebates, and monthly lottery prizes. The information is verified online to detect non-compliant businesses' sales reporting. This incentive nudges customers to request invoices when they shop, and evaluation outcomes reveal that it has worked (box 4).

### ▶ Box 4. Incentives for consumer auditing: Nota Fiscal Paulista in Brazil

**Background.** The city government of San Pablo created this programme in 2007 to discourage evasion of the state's value added tax. The programme offers monetary rewards to customers for demanding receipts and uploading them to the tax authority's website, thereby creating an online account associated with their social security number. This information is checked against digital records on receipts issued electronically that businesses report.

**Incentives.** When making a purchase, a customer can ask for the receipt and provide their social security number to include it in the receipt. By doing this, consumers receive a 30 per cent rebate on the value added tax collected for the purchase. For every \$50 in receipts submitted per month, the consumer receives a lottery ticket.

**Results.** Evidence points to changes in business-reporting behaviour:

- ▶ In a comparison of reported revenue from establishments selling mostly to final consumers with establishments selling to other businesses, reported revenue increased by at least 22 per cent over four years.
- ▶ Compliance was higher among businesses with many transactions, suggesting that collusion between them and customers is harder to sustain in these settings.
- ▶ Businesses reported 14 per cent more receipts and 6 per cent more revenue after receiving the first complaint from consumers.

Source: Naritomi 2015.

## Workers

### Workers' enrolment in social security schemes

Easing compliance of social security contributions for domestic work and small businesses through e-platforms has been one of the strategies to formalize high informality in work relationships. Uruguay developed an app, BPS Trabajo Doméstico,<sup>13</sup> for household employers to register their domestic workers and make social security payments. Similarly, household employers in Argentina register domestic

13 See [www.bps.gub.uy/10004/aplicaciones-moviles.html](http://www.bps.gub.uy/10004/aplicaciones-moviles.html)

workers, manage leave days and payments through the mobile app Casas Particulares.<sup>14</sup> Workers can also use this application to find their record of social security contributions.

### **Labour income and social benefit payments in the financial system**

Moving cash payments through the financial system has not been a trivial exercise in many countries. In Uruguay, as part of the Financial Inclusion Law of 2014, cash use was discouraged, with the aim of expanding transactions through the financial system. The Central Bank of Uruguay ruled that the mandatory payroll, independent workers' income and social programme benefits must be paid through bank accounts or digital wallets by 2017. Another feature of this regulation relies on workers' right to choose the financial institution to open a free account to thus promote competition and the development of the financial sector. Value added tax rebate is one of the incentives to encourage participation. Card use quadrupled and point-of-sale terminals were used seven times more often in the two-year period after implementation.<sup>15</sup>

### **Workers' voice in labour inspection**

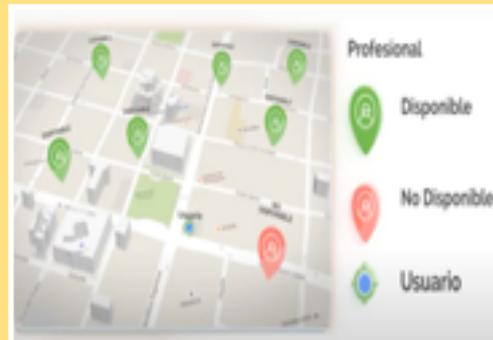
Collecting workers' complaints or information on job conditions using online applications has helped improve the labour inspection process. In Mexico, the Secretary of Labour and Social Security receives workers' complaints through the Centro de Mando system within the inspection process, protecting personal information to improve the supervision task. Workers complete mandatory fields in the e-form to expedite the process.

### **Connecting self-employed workers to government services**

Using business incentives early in the registration process has been another entry point. In Paraguay, the Consigo app, launched at the end of 2015, was used to register graduates of vocational training programmes (box 5). Despite having great success in big cities, the initiative was discontinued in 2018 after changes in government administration .

#### **► Box 5. Intermediation services for self-employed: Consigo in Paraguay**

The first phase of this app was the enrolment to offer such services as plumbing and electricity, with the advantage of signalling their training certification and georeferentiation to match services with costumers' location. Progressively, complementary services have been offered, such as registration in the tax agency, to provide invoices and access to bank accounts as well.



**Source: Ministry of Labour Paraguay.**

<sup>14</sup> See <https://casasparticulares.afip.gob.ar/default.aspx>

<sup>15</sup> FELABAN 2017.

▶▶ It is time the hidden side of e-transformation is debated openly. Governments and social partners could include privacy regulations, personal data protection and cyber security in policy delivery in Social Dialogue.

## ▶ 4. The road ahead

**E-formalization policies are making their way across Latin America despite the many pending challenges and persisting gaps in terms of infrastructure, knowledge and access to new technologies.** One of the drivers of this evolution has been the prioritizing of discussion and implementation of the formalization policies of previous decades. Formalization policies, however, generally remain separate from digitization policies, and many countries still lag in terms of digital transformation. Thus, the convergence of both formalization (or labour market) policies and digitalization policies portends enormous potential for the future.

**The COVID-19 pandemic has challenged Latin American countries to rethink how the public sector requires e-transformation to build resilience, particularly for informal workers.** The region faces multiple gaps to overcome that leave workers and businesses in informal settings at great disadvantage and thus preclude them from benefiting from ICT.

**In this context, the pandemic offers a springboard for further progress with an e-formalization agenda.** Investments in ICT infrastructure become more appealing, and informal workers, usually invisible in government records, have been identified and e-registered. These two angles of policy action offer an opportunity to relaunch the transition to informality strategy: taking advantage of ICT adoption while being cognizant of the remaining stumbling blocks.

**Even when ICT gaps are closed, e-formality will remain an additional tool to the policy set for addressing formalization.** E-formality cannot be developed in isolation but they should aim at facilitating the modernisation of traditional drivers or pathways to formality: productivity, incentives, norms and oversight.

**Taking into account that formalization is a higher stage than registration, ICT adoption helps to shorten the path by increasing productivity of the private sector as well as the public sector.** For instance, it lowers the costs to conjugate multiple information sources for formalization policies, such as labour inspection, transition support and protection of vulnerable workers. Big data solutions in coordination with machine learning shed light on the priorities and timing for efficiency in policy delivery.

**Deficits in generating evidence on formalization policies have fewer excuses to hide behind with digitization.** Thus, ICT adoption in the context of policymaking offers the chance to close this long-standing weakness.

**The sustainability of initiatives in the face of changing administrations is a recurring issue for Latin America.** Often, innovative and successful programmes are deactivated when a new administration takes power, dispersing accumulated knowledge and truncating the full learning circle.

**It is time the hidden side of e-transformation is debated openly.** Governments and social partners could include privacy regulations, personal data protection and cyber security in policy delivery in Social Dialogue. There is a need to broadly discuss these issues in order to transform them into suitable tools to facilitate the transition to formality.

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