



International
Labour
Organization

▶▶ e-formalization – country case study

▶ Is e-formalization possible in Peru?

Pablo Lavado



► Is e-formalization possible in Peru?

Pablo Lavado¹

¹ Professor at the Universidad del Pacifico. The author would like to thank Maritere Miranda for her assistance.

Copyright © International Labour Organization 2022
First published 2022

Publications of the International Labour Organization (ILO) enjoy copyright under Protocol 2 of the Universal Copyright Convention. Nevertheless, short excerpts from them may be reproduced without authorization, on condition that the source is indicated. For rights of reproduction or translation, application should be made to ILO Publishing (Rights and Licensing), International Labour Office, CH-1211 Geneva 22, Switzerland, or by email: rights@ilo.org. The ILO welcomes such applications.

Libraries, institutions and other users registered with a reproduction rights organization may make copies in accordance with the licences issued to them for this purpose. Visit www.ifrro.org to find the reproduction rights organization in your country.

Is e-formalization possible in Peru?

Peru: ILO/ILO Office for the Andean Countries, 2022. 34 pp.

ISBN: 9789220394618 (print version)

ISBN: 9789220394625 (web version pdf)

Also available in [Spanish]: *¿Es posible la e-formalización en el Perú?*, ISBN: 9789220381182 (print)
ISBN: 9789220381199 (web pdf)

The designations employed in ILO publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the ILO concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.

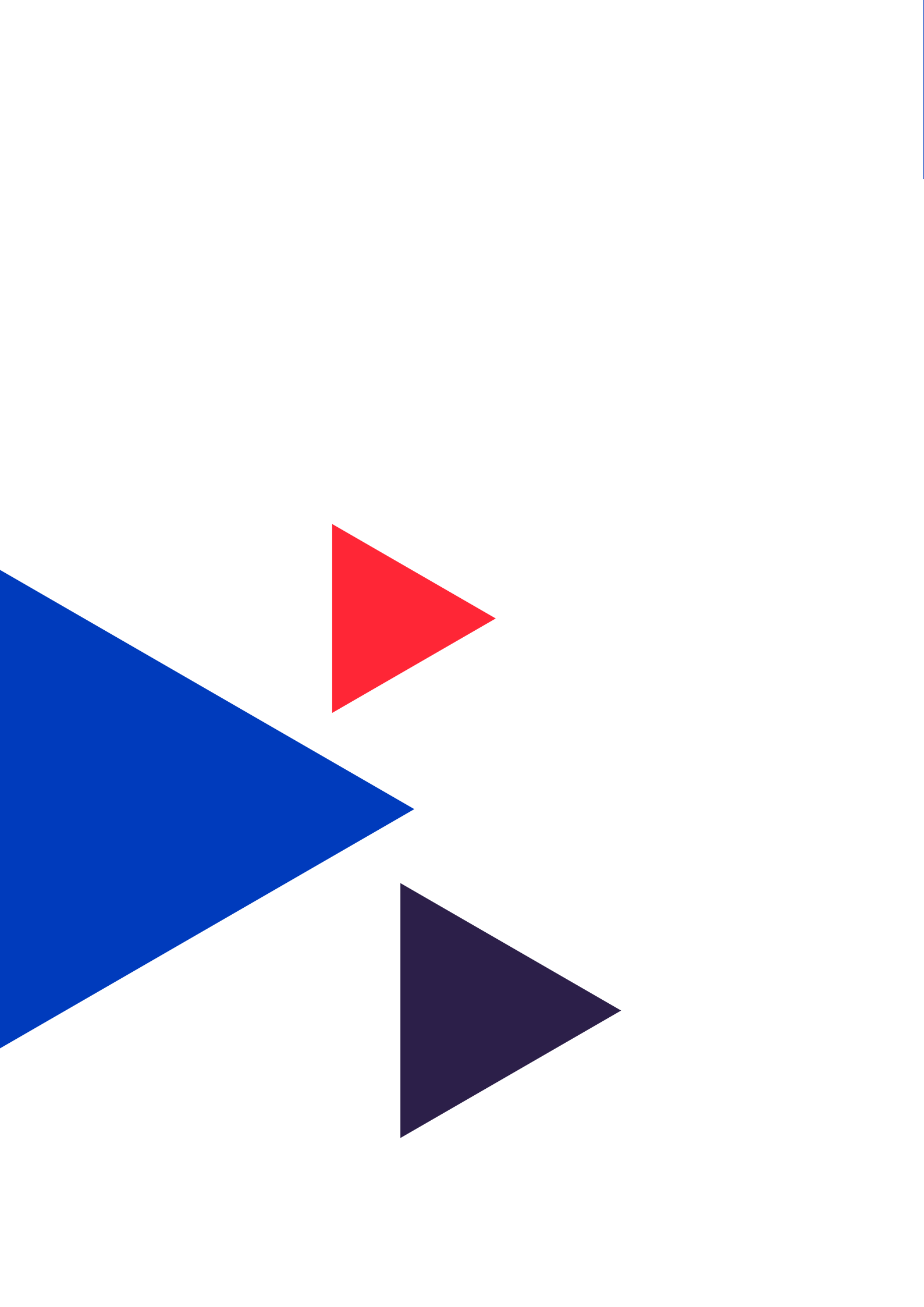
The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by the ILO of the opinions expressed in them.

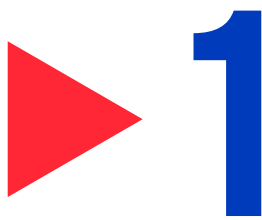
Reference to names of firms and commercial products and processes does not imply their endorsement by the ILO, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

Information on ILO publications and digital products can be found at: www.ilo.org/publns.

Contents

▶ 1. Introduction	7
▶ 2. Formalization policies: A brief overview	9
▶ 3. Digital transformation and electronic government policies	11
▶ 4. Current status of the digital transformation in Peru	14
▶ 5. Some e-formalization initiatives in Peru	18
Increasing productivity	19
Simplifying procedures	21
Improving incentives	22
Improving monitoring/inspection	23
▶ Conclusions and recommendations	25
Public management	25
Connectivity	26
Digital skills of public officials	26
Facilitating processes for micro and small enterprises (MSEs)	26
Formalization policies	27
Improving policy implementation and monitoring	27
Coordination across sectors and between levels of government	27
Programmes for training and attracting digital talent in the public service	27
Investing in connectivity	28
Incentives and facilities for the adoption of technologies	28
Administrative simplification for MSEs	28
▶ Bibliography	30





Introduction

Informality is one of Peru's biggest structural problems, which was highlighted and made worse by the COVID-19 pandemic in 2020. Despite the significant economic growth experienced by Peru between 2004 and 2013 (with real annual economic growth rates of over 6 per cent), informality only fell from 80 per cent in 2004 to 72 per cent in 2019. However, after COVID-19, the informality rate rose again and reached 78 per cent (INEI 2021).

Several studies concur that informality in Peru is particularly high considering its status as a middle-income country. Indeed, some studies consider that informality should be around 20 percentage points lower given its per capita income level.

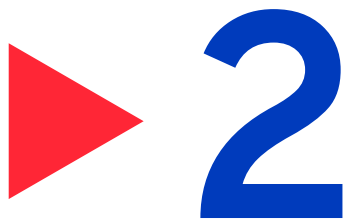
Different theoretical positions have attempted to explain informality for decades without reaching a consensus. However, the most recent studies now have empirical evidence and agree that there are many causes of informality and that it will therefore not be possible to reduce it with one measure alone. In fact, a number of policies have to be combined in order to reduce informality in a sustainable way.²

² Floridi, Afewerk and Wagner (2020) conducted a meta-analysis of policy interventions for: (i) costs; (ii) benefits; and (iii) compliance. The authors found that the interventions had a positive, but very small impact on the formalization of informal enterprises (0.044). Jessen and Kluge (2019), in another meta-study, suggest that tax incentives and labour inspection interventions, in particular, are more likely to generate significant impacts. Loayza (2018) gives details of the causes of informality, namely: (i) low labour and business productivity; (ii) high labour and non-labour costs; (iii) excessive and ineffective labour regulation; (iv) inefficient services provided by the State; and (v) a complex tax system. Salazar-Xirinachs and Chacaltana (2018) carried out an analysis of the formalization policies adopted by various countries in Latin America and the Caribbean, grouping them into four areas: (i) promoting productivity; (ii) regulatory work; (iii) establishing incentives; and (iv) strengthening oversight. The authors highlight the role of the economic situation in explaining the 2005–15 incidence of formalization in the region and the type of growth observed.

From a policy point of view, almost everything has been tried in the Peruvian case; from policies dealing with administrative simplification to development policies for micro and small enterprises (MSEs), tax incentives and labour regimes for small businesses or agriculture. As mentioned, there has also been a prolonged period of economic growth in recent times. In this document, we discuss a new opportunity for public policy: the use of technologies for formalization.³ Thus, e-formalization refers to the use of new technologies and digitalization in public initiatives, programmes and policies to facilitate the transition to formality. It is important to highlight that during COVID-19 the digital transformation and the adoption of new technologies have been stepped up, meaning that e-formalization appears to be a versatile and useful alternative in the current context.

So, the question is simple: Is it possible for the Peruvian public sector to take advantage of the digitalization boom, which has also been driven by COVID-19, to push formalization forward? To answer this, we will first analyse the formalization policies implemented, followed by reviewing the digitalization policies in place, and then describing some initiatives that could be called e-formalization. Lastly, we will propose a possible agenda for discussion to promote an intensive formalization process in the use of new technologies.

3 See Chacaltana, Leung and Lee (2018).



Formalization policies: A brief overview

In Peru, various programmes and regulatory changes have been implemented with a view to formalizing the economy. Between 2000 and 2020, the following were the key strategies:

Ley de Promoción Agraria, LPA (Agrarian Promotion Law). This law was enacted in 2000 to promote and strengthen the development of the agricultural and irrigation, agro-export and agro-industrial sectors, as well as to contribute to the competitiveness and development of these sectors' activities. It was repealed in 2020. According to some studies, it contributed – along with other factors such as significant economic growth and the rise in international prices of fresh produce – to improving the real income of salaried workers in the agricultural and agro-industrial sectors, as well as to a 2.2 percentage point increase in formality over a ten-year period.⁴

Régimen Especial de la Pequeña y Mediana Empresa (PYME) (Special Regime for Small and Medium Enterprises (SMEs)). The regime came into effect in 2003 with the aim of providing support measures to the micro and small business sector. This law includes a special labour regime for microenterprises, which drastically reduces labour costs for enterprises with up to ten workers. In 2008, this regime was extended through Legislative Decree No. 1086, which created an intermediate regime for small enterprises with ten to 100 workers. In 2013, it was extended again, removing the restriction on the number of workers and including a sales limit to determine the size of the business.⁵

4 Martínez (2021) maintains that the Agrarian Promotion Law had helped to create around 100,000 jobs per year. Castellares and Ghurra (2020) maintain that the Agrarian Promotion Law had a 52 per cent impact on the average income of formal workers in the long term (2001–15), 39 per cent in the medium term (2001–10) and 28 per cent in the short term (2001–05).

5 Chacaltana (2008) analyses the impact of the 2003 law and by the fourth year of implementation registration had been marginal. Díaz (2014) finds that the formalization observed in Peru until then occurred more in large enterprises than in small ones. Jaramillo (2013) argues that the zero-impact observed may have been due to insufficient monitoring of enterprises. Jaramillo, Lavado and Medina (2021) find that during the period 2005–19, the labour informality rate in SMEs decreased by almost 10 percentage points in Lima Metropolitana. Lastly, Casalí and Pena (2012) maintain that the special labour regime did not have the expected results.

Régimen Tributario Simplificado (simplified tax regime). The aim is to simplify the administration and taxation of small producers or traders and thus encourage formality. Unfortunately, there is no information on whether the introduction of these regimes has succeeded in significantly reducing informality.⁶

Registro de Trabajadores Obligatorio (“Plan Reto”) (mandatory worker registration). This was a strategy to strengthen labour inspection and formalization in Peru by the *Ministerio de Trabajo y Promoción del Empleo*, MTPE (Ministry of Labour and Employment Promotion), which involved adding unregistered private salaried workers to the payroll, as well as verifying the employer’s compliance with social security contribution requirements. During its implementation, between December 2008 and May 2011 a total of 38,506 private enterprises employing 818,268 workers were audited, 61,866 of whom were not on the payroll, and the *Plan Reto* ensured that more than 73 per cent of those workers had access to social security and a pension fund.⁷ However, the number of enterprises audited was 37 per cent of the number planned, and the number of people added to the payroll was 8.7 per cent of the number anticipated (ILO 2015).

Estrategia Sectorial para la Formalización Laboral 2014–2016 del MTPE (Ministry of Labour and Employment Promotion Sectoral Strategy for Labour Formalization 2014–16). The strategy’s purpose was to: (i) promote increased productivity to comply with the current regulations for economic units; (ii) improve incentives to encourage entry into labour formality; and (iii) strengthen the capacity of the labour sector to comply with labour regulations. Implementation was made through the 2015 and 2016 action plans, in which 117 activities were planned. However, 28 of the activities were not carried out and 31 were not 100 per cent completed. The main obstacles to effectively meeting the planned goals included limited financial and staff resources and weak management in coordinating with the other agencies and/or sectors involved.

In summary, the various measures that have been implemented in Peru over the last 30 years with the aim of formalizing the economy have either had mixed results or have been rather modest generally, and not very sustainable.

6 Azuara *et al.* (2019) find that there is indeed a concentration of enterprises reporting incomes just below the S/525,000 threshold, the *Regimen Especial de Renta*, RER (special income tax regime) limit.

7 Diario El Peruano (Official Journal), 13 June 2011.

 3

Digital transformation and electronic government policies

In 2000, the ongoing development of a series of regulations on digital transformation and electronic government began in Peru. The key regulations in this area include the following measures:

- The creation, between 2000 and 2002, of the *Portal del Estado Peruano* (Peruvian government website), which is a website under the auspices of the Office of the Council of Ministers (PCM). The website was designed to be a single gateway on the internet for access to all information, services and administrative procedures provided by government entities.
- The establishment in 2001 of policy guidelines to promote the mass expansion of access to the internet.
- The creation in 2003 of the *Comisión Multisectorial para el Desarrollo de la Sociedad de la Información*, CODESI (Multisectoral Commission for the Development of the Information Society), with responsibility for digital transformation. The *Oficina Nacional de Gobierno Electrónico e Informática*, ONGEI (National Office for Electronic Government and Computerization) was also created under the Office of the Council of Ministers, which is responsible for managing and supervising the

national computer system and electronic government policies and is the lead institution in the promotion of regulations for all subsequent years.

- The drafting in 2003 of the first version of the Peruvian Digital Agenda under the auspices of the CODESI, although the recent Agenda was not adopted until July 2005. The objectives of this document were as follows: (a) to have an adequate telecommunications infrastructure for the development of the information society; (b) to promote capacity-building to ensure access to the information society; (c) to develop Peru's social sector by guaranteeing access to quality social services, promoting new forms of decent work, encouraging scientific research and technological innovation, as well as ensuring social inclusion and the full enjoyment of citizenship;⁸ (d) to take steps to support the production and services sectors in the development and use of information and communications technologies (ICTs); and (e) to bring the state administration and its processes closer to citizens and businesses in general, providing quality, accessible, secure and timely services through the intensive use of ICTs.
- In 2003, the ONGEI became the Digital Government Secretariat of the Office of the Council of Ministers. Following on from that, the single State website was improved, and more efforts were made to ensure the adoption of digital government by more institutions, interoperability and digital security.
- The adoption in 2010 of the *Estrategia de Modernización de la Gestión del Estado* (Strategy for the Modernization of State Management), the key points of which were: (a) developing a number of **plans** (including a plan to modernize public administration to 2021, strategic institutional plans for regional governments, and results-based management in subnational governments); (b) **improving the quality of services**, which included aspects of digitalization such as establishing one-stop shops to provide virtual support to citizens on setting up online enterprises; and (c) achieving **open government**, which looked into an open government plan, transparent websites at the three levels of government, and an open data website and good practices.

The state modernization strategy prioritizes the development of an electronic government policy, the Digital Agenda 2.0, implementation of the Peruvian State's interoperability platform at the three levels of government, and consolidating technological tools to enable agile and efficient public management (a joint registry of Peruvian state entities, a single system for procedures, and a monitoring and evaluation system). Regulations were adopted in subsequent years for almost all of these points.

The Digital Agenda 2.0 set its sights on 2015 and proposed **more objectives and actions compared to the first version of the Agenda**; however, this time there is no section on responsible institutions, or general goals. There are no final indicators, intermediate targets or specific deadlines for any of the objectives or strategies. Once again, the sub-strategy "contribute to creating decent employment through the use of ICTs" is taken into consideration, but no details are provided on how this would be achieved. In fact, it has not been implemented to date.

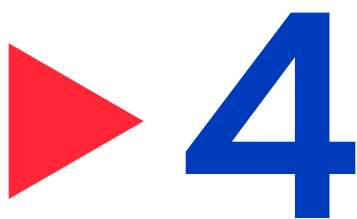
⁸ It is important to mention that, under the third strategy, the use of ICTs for the promotion of decent employment is included as a sub-strategy. Two of the proposed actions stand out. First, the creation of an information network in all regional labour and employment promotion directorates, through the use of ICTs. Institutions tasked with this include the Ministry of Labour and Employment Promotion (MTPE), the *Confederación Nacional de Instituciones Empresariales Privadas*, CONFIEP (National Confederation of Private Business Institutions) and the *Cámara Peruana de Construcción*, CAPECO (Peruvian Chamber of Construction). The goal of this undertaking was to have an inventory of potential institutions that could be integrated into the labour and employment promotion information network. Second, the provision of incentives to enterprises that carry out labour retraining by providing ICT training for their workers. The Ministry of Labour and Employment Promotion and the Ministry of Production (PRODUCE) were responsible for this, the objective being to increase the number of enterprises using ICTs in their labour retraining programmes by 10 per cent per year. Although a multisectoral commission for the follow-up and evaluation of the Digital Agenda was established, chaired by the ONGEI, there are no progress reports on the goal targets.

The national electronic government policy serves more as general guidelines and an introduction to concepts. The development of the technical standard, on the other hand, is of a more practical nature, as it sets out the requirements for implementing, maintaining and improving an information security management system within the context of an organization. The adoption in 2018 of the *Ley de Gobierno Digital* (Law on Digital Government) for the effective management of digital identity, digital services, digital architecture, interoperability, digital and data security, and the legal framework applicable to the cross-cutting use of digital technologies in the digitalization of processes and the provision of digital services by government entities at the three levels of government. The regulations for this law were adopted in 2021.

- The development in 2020 of the Digital Agenda for the Bicentenary, which includes actions such as implementing digital platforms, or developing plans for competitiveness, connectivity, education and the digital economy. According to studies by the Office of the Council of Ministers (PCM 2020), this has led to Peru climbing 46 positions in the United Nation's citizen's E-Participation Index. Peru has also climbed 16 positions in the Global Innovation Index for the State's digital services.

It should be noted that between 2020 and 2021, the years of the COVID-19 pandemic, regulations were refocused on facilitating implementation of the State's and the economy's digital transformation. Extraordinary and urgent measures were taken so that the Ministry of Transport and Communications could secure the provision of connectivity in rural areas and places of prime social interest through a special procedure. In addition, in view of restrictions on movement, the integrated changeover of administrative procedures to digital platforms or services became mandatory. It is worth noting that this digital transformation could have been made earlier; however, it only happened when the pandemic suddenly increased the reliance on digital tools, both for the provision of and access to public services and for the remote working of public officials.

On balance, and despite the adoption of a number of regulations, it can be said that implementation has been limited. The digital transformation has not been widespread, sustained or homogeneous throughout the public sector, and gaps persist between the three levels of government and also between institutions at the same level of government. In any event, development has been uneven, as some institutions have gone beyond the Digital Agendas, including the *Superintendencia Nacional de Administración Tributaria*, SUNAT (Peruvian tax administration), the *Registro Nacional de Identificación y Estado Civil*, RENIEC (National Identification and Civil Status Registry), the *Superintendencia Nacional de Registros Públicos* (National Public Records Oversight Office), the *Organismo Supervisor de las Contrataciones del Estado* (supervisory body for public contracting), the Ministry of Economy and Finance and the National Bank.



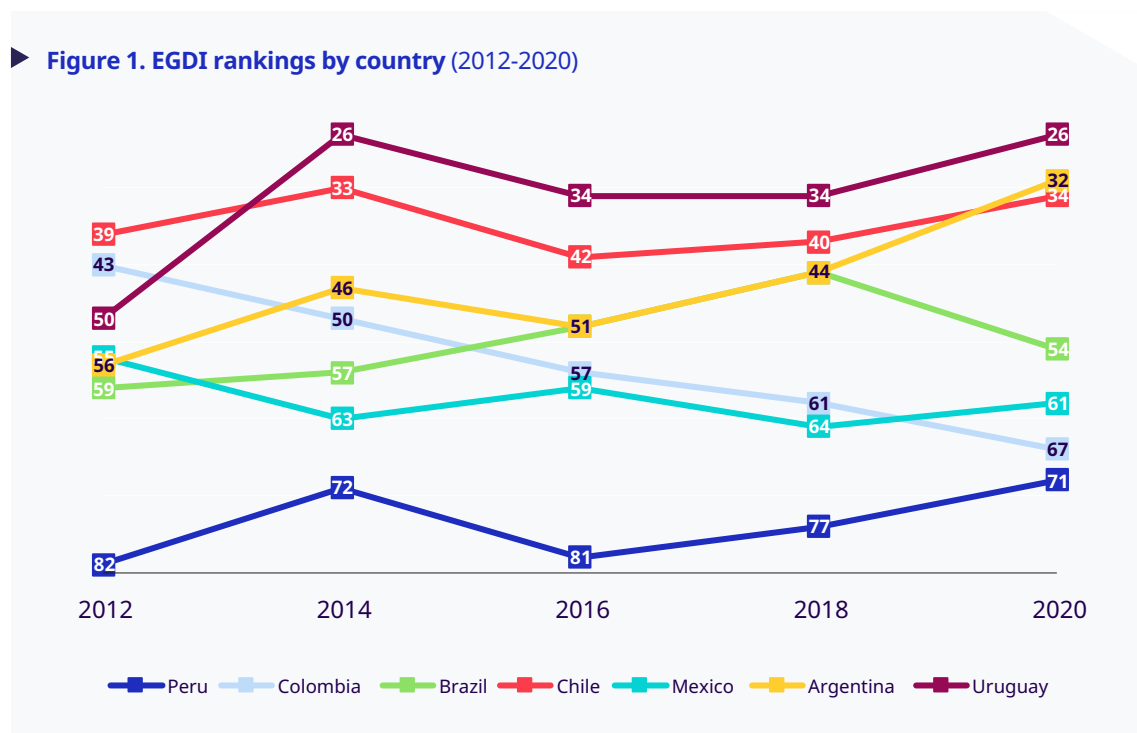
Current status of the digital transformation in Peru

According to preliminary information⁹ from the *Instituto Nacional de Estadística e Informática*, INEI (National Statistics Institute), in the second quarter of 2021 the situation is as follows: 95.4 per cent of households in Peru have access to ICTs; 94.7 per cent of households have access to mobile telephony; 52.5 per cent have access to the internet; 40.8 per cent have access to a computer; and 73.8 per cent of the population aged six years and over have access to and use the internet. The latter indicator is higher for males (76 per cent) than for females (71.5 per cent), while the 12–18 and 19–24 age groups make the greatest use of this technology, at 91.6 and 91.5 per cent respectively (INEI 2021b).

At the International level, these numbers, while lagging behind, represent recent improvements. The E-Government Development Index (EGDI), which measures the electronic government development of the 193 United Nations Member States, has three sub-indices: (i) digital services; (ii) connectivity; and (iii) human talent. Between 2012 and 2020, the country jumped significantly: from 82nd to 71st place in this **index** ranking.

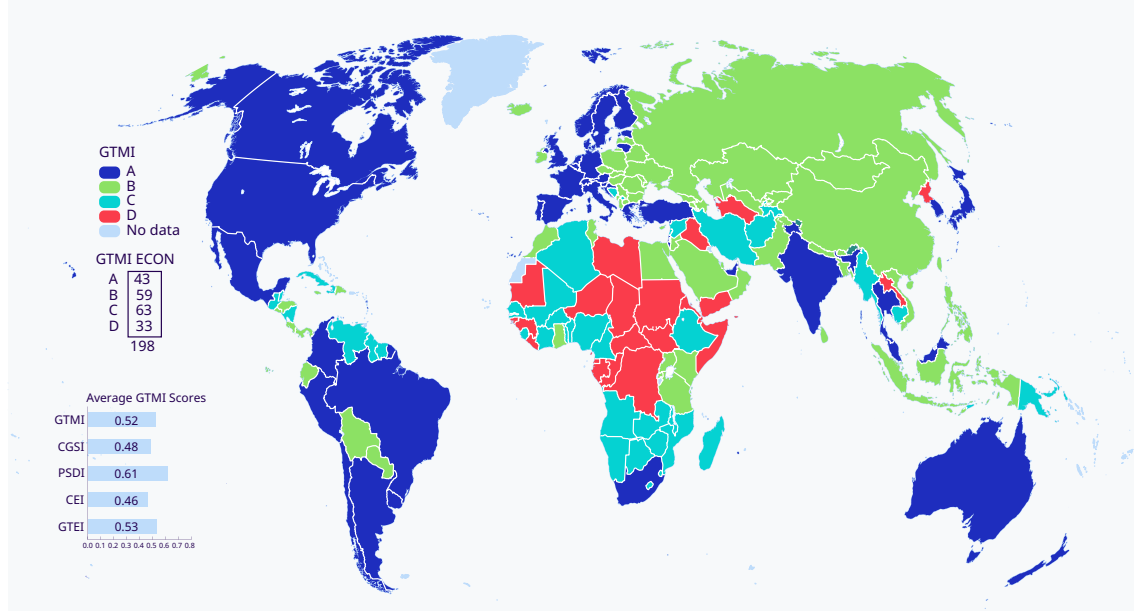
⁹ Press release dated 28 September 2021. <https://www.inei.gob.pe/prensa/noticias/el-525-de-los-hogares-del-pais-tiene-conexion-a-internet-en-el-trimestre-abril-mayo-junio-de-este-ano-13129/>.

► Figure 1. EGDI rankings by country (2012-2020)



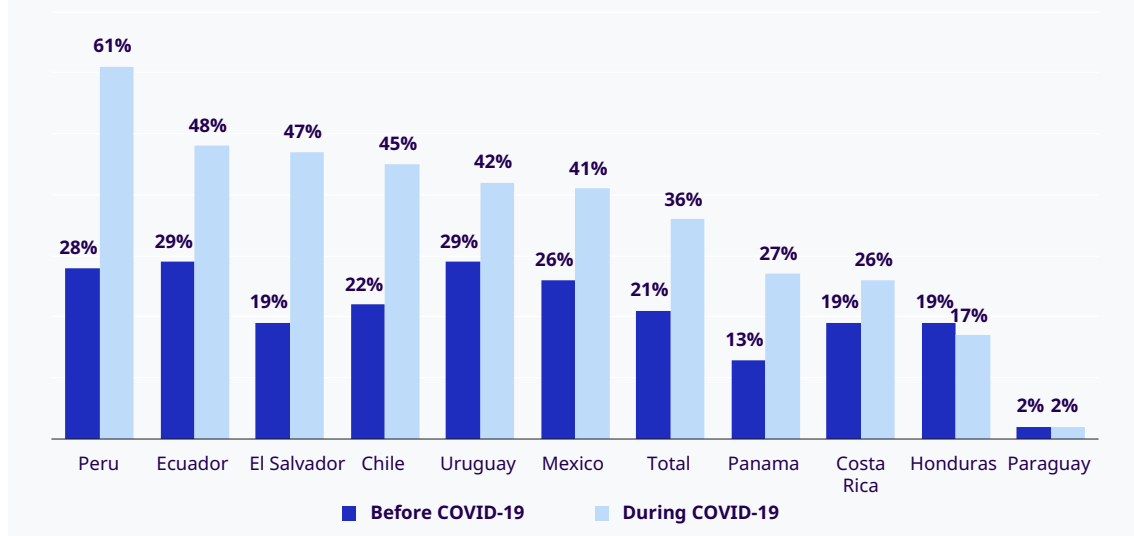
Source: Government of Peru (2021).

Another form of measurement is the **GovTech Maturity Index (GTMI)**, which measures the level of GovTech maturity in 198 economies. This index assesses four focus areas: (i) digital platforms; (ii) digitalization and data use; (iii) citizen engagement; and (iv) GovTech enablers. As of December 2020, Peru is ranked in Category A under “Very High GovTech Leaders”, where the countries with the highest GTMI score can be found. This ranking also includes Chile, Brazil, Colombia and Argentina (see Figure 2).

► **Figure 2. Status of GovTech maturity in the digital world (December 2020)**

Source: Government of Peru (2021).

The Inter-American Development Bank (IDB) publishes key indicators for the region's countries on digitalization, from the perspective of citizens and public officials. One indicator is the percentage of people who carried out an online procedure (see Figure 3). As can be seen, the largest pre- and post-COVID-19 difference in the region was in Peru. Before the pandemic, 28 per cent of respondents carried out at least part of a procedure digitally, while during COVID-19 this figure rose to 61 per cent. Notably, these values exceed the regional total, which rose from 13 to 36 per cent.

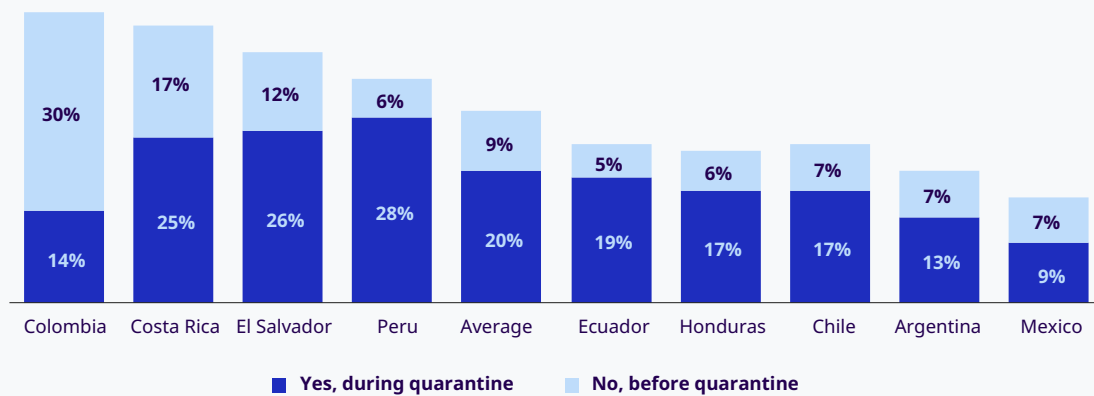
► **Figure 3. Percentage of IDB survey respondents who carried out at least part of a procedure digitally**

Note: Telephone and social media surveys conducted by the Inter-American Development Bank.

Source: IDB (2021).

Lastly, another indicator of interest shown is the percentage of public officials trained in the use of technological tools for teleworking during the quarantine (see Figure 4). On average, 9 per cent of public officials in the region were trained before the quarantine, while 20 per cent stated that they were trained during the quarantine. In the case of Peru, 6 per cent of public officials were trained before the quarantine, while 28 per cent were trained during the pandemic. In fact, Peru was the country in the region that trained the most public officials during the pandemic, followed by El Salvador and Ecuador.

► **Figure 4. Percentage of public officials trained in the use of technological tools**



Note: Percentage of total surveys conducted by the Inter-American Development Bank.

Source: IDB (2021, p. 46).

5

Some e-formalization initiatives in Peru

The main initiatives found in this review are described in this section. For this purpose, the study included interviews with qualified informants from both the public and private sectors. The initiatives are listed according to the government entity responsible for their development. An overview of these measures can be seen in the following table:

► Table 1. Type of actions implemented in Peru to combat informality

Type	Initiatives implemented in Peru	Body responsible
Policies to increase the productivity of enterprises	► <i>Tu Empresa</i> ► <i>Cómprale al Perú</i> ► <i>Programa Ruta de éxito</i>	► PRODUCE ► PRODUCE ► INDECOPI
Policies on revising/adapting rules, regulations or procedures	► <i>RUC Digital</i> ► <i>Comprobantes electrónicos</i> ► <i>Crea Tu Empresa</i> ► Simplifying the trademark and patent registration process ► Digital intermediary system platform	► SUNAT ► SUNAT ► PRODUCE ► INDECOPI ► SUNARP

Tipo	Iniciativas implementadas en el Perú	Responsable
Policies on generating or improving Incentives for formalization	► Formalizing Peru ► Allocation of vouchers through digital wallets and DNI accounts	► MTPE ► Banco de la Nación
Policies to improve administrative capacity to enforce compliance with standards	► <i>Chequea tu contratista</i> ► <i>Verifica tu chamba</i> ► Two-way electronic mailbox ► Warning and monitoring system ► Electronic payroll	► SUNAFIL ► SUNAFIL ► SUNAFIL ► SUNAFIL ► MTPE

Source: Self-compilation.

Increasing productivity

Crea Tu Empresa. The web platform *Crea Tu Empresa* ("Create your Enterprise") set up in March 2021, where, in just six steps and without leaving home, the process to formalize an enterprise can be completed in just 72 hours. After that, applicants must go in person to the notary's office and, in no more than 10 days, an informal enterprise would become formal. This initiative is complemented by other Ministry of Production (PRODUCE) measures for micro and small enterprises because, although being formal increases enterprise costs (the whole process of becoming formal costs between 400 to 500 soles, and enterprises start paying taxes and employment benefits), it also has benefits.

Tu Empresa. The *Tu Empresa* ("Your Enterprise") programme was created in August 2017 through Ministry of Production Supreme Decree No. 012-2017-PRODUCE. The purpose of this programme is to: (i) help increase productivity and sales; (ii) provide facilities to formalize business activities; (iii) provide information and, where appropriate, access to business services that help increase productivity and sales; (iv) promote and facilitate access to financing; (v) facilitate tools to promote digitalization; and (vi) provide business support. In 2019, it enabled 10,910 MSEs to formalize their businesses by legally registering them free of charge in business development centres. This generated a monetary saving of 3,922,735 million soles for business owners. The programme also provided 46,997 business advisory services in the areas of formalization, business management, digitalization, access to financing and production development (Plataforma Digital Única del Estado Peruano 2020). It is worth noting that the *Perú Imparable* (unstoppable Peru) digital platform was launched through this programme in May 2020, where MSEs can display their products free of charge in a virtual catalogue. Through this platform, MSEs can market their products in a variety of ways (online and face-to-face sales, through fairs) and are encouraged to use digital means of payment, and the platform also serves as a multidirectory to promote and connect businesses with new potential customers. As of December 2020, the platform had 6,038 registered MSEs. The purchase of their products is promoted through face-to-face and virtual fairs and the migration from traditional face-to-face sales to selling via the internet is encouraged. As a point of fact, MSEs achieved sales of more than 222,000 soles in face-to-face fairs (Andina 2020).

Cómprale al Perú. The *Cómprale al Perú* ("Buy in Peru") campaign, promoted by the Ministry of Production and the National Society of Industries, was launched in October 2020 and relaunched in November 2021 with the aim of encouraging the consumption of products made in Peru and increasing national production competitiveness. This campaign includes in its directory enterprises, companies and firms

from various sectors,¹⁰ which, by registering on the website, automatically become part of an easily accessible showcase of national enterprises and products. In addition, registered enterprises will be able to use the campaign logo on the packaging, merchandising or advertising of all their Peruvian products, once their company profile is approved and activated on the platform. It should be noted that, in order for enterprises to be part of this campaign, they must be formal, have an active SUNAT registration and produce their products in Peru or, if not, manufacture their products with 100 per cent Peruvian inputs. As of November 2021, some 1,060 enterprises were already part of the directory on the web page, and registrations were expected to exceed 2,000 by March 2022.

Other measures being implemented. In May 2020, the Ministry of Production proposed a series of measures to encourage sole traders, street traders and small enterprises to become formalized. Thus, a registration process was proposed to move street traders to a dedicated space (after coordination with the municipality, the State setting up satellite markets with all logistics in place). As for enterprises, in 2020, as a result of the pandemic, notaries reduced their fees to 50 soles for all enterprises with a turnover of up to 3 UIT (*unidades impositivas tributarias* – tax units) and more than one person wishing to formalize (Gestión 2020). The Ministry states that if the enterprise is formal, then the State can help it to access loans through the *Fondo de Desarrollo de la Microempresa* (Microenterprise Development Fund). In addition, MSEs that formalize will have free access to the services of the *Centros de innovación Productiva y Transferencia Tecnológica*, CITE (Productive Innovation and Technology Transfer Centres) for support in improving and producing their products, and they will be able to apply to the *Compras a MYPerú* programme to manage public procurement (Gestión 2020) and participate in the digital fairs organized by the Ministry.

¹⁰ These include, among many others, the food, textiles, clothing, cleaning products, agriculture, construction, plastics, accessories and general services sectors.

Simplifying procedures

RUC Digital (SUNAT). The **Registro Único de Contribuyentes (RUC) Digital (Unified Digital Taxpayers' Registration)** came into effect in 2020. Thanks to this initiative, all natural persons with a DNI (national identity card), with or without a business, can obtain their RUC in minutes via a mobile phone or computer connected to the internet. In addition, taxpayers can also obtain their *Clave SOL*¹¹ in the same process, enabling them to carry out virtual operations such as issuing electronic payment receipts (for example, fee receipts and sales receipts) or making changes to the data declared during their registration. This service is available 24 hours a day, seven days a week and is entirely digital, which simplifies the formalization of microenterprises. Before the start of the pandemic state of emergency, around 160,000 people visited SUNAT service centres in the country every month to obtain the RUC and Clave SOL, representing 60 per cent of the total number of visits.¹² In addition, since May 2020, registration in the RUC for legal persons (enterprises) has been completely virtual and is done through the *Sistema de Intermediación Digital*, SID-SUNARP (Digital Intermediary System) of the Public Records body.

Electronic records. The requirement for electronic records was introduced gradually. It began in 2018 for the highest taxpayers: enterprises with revenues higher than approximately 1.2 million soles in 2018 (300 UIT). Then, in 2019, enterprises with revenues of more than 600,000 soles (150 UIT) were included. The requirement for electronic records does not yet apply to small enterprises, but deadlines have been set for all taxpayers to have adopted electronic invoices and receipts by 2022 (Supervisory Authority Resolution No. 128-2021/SUNAT). Given that larger enterprises contribute more, by September 2020, 89.98 per cent of tax returns were generated from the issuance of electronic payment records, while by March 2020 only 32 per cent of enterprises were issuing electronic payment records. A study by the International Monetary Fund (2019) examined the Peruvian experience and concluded that electronic invoicing can have a positive impact on tax compliance, especially among specific groups of taxpayers. The study found that the electronic invoicing changes had little impact on the declared tax liabilities of larger enterprises but did affect small and medium-sized enterprises. This suggests that it helps to minimize errors in tax returns and reduce compliance costs. It was also found that electronic invoicing had a greater impact in sectors with significant compliance gaps. In addition, a measurement study has been carried out to develop the Tax Compliance Cost Index, including conducting a survey among business owners to elicit their opinions on online tax returns. One result of this study shows that 69 per cent of all business owners in all tax systems consider that online tax filing reduces the cost of the tax compliance process. In addition, there is evidence of a willingness of those surveyed to adopt the institution's new technologies: 71 per cent of respondents are willing to use SUNAT's software to manage their sales, purchases and inventories (this percentage includes business owners who issue electronic records and those who do not) (SUNAT 2020).

Digital intermediary system platform. This is a service platform that allows the registration procedure to be carried out through the electronic submission of documents with a notarized digital signature. Currently, almost 200 procedures are carried out online in this way. The digital intermediary system was established in October 2014, the first action taken being to form online enterprises. A token is used to verify the identity of the notary or public official sending the information. The electronic document is sent to SUNARP, with the public registrar receiving it directly in its system, verifying it, registering it if necessary, and signing it digitally. Lastly, the citizen receives a link in his or her email with the registration entry details, and the registered notarized part (SUNARP/SN DIRECTIVE No. 2019).

11 The *Clave SOL* is a password for personal use, consisting of a username and password, which allows access to the *Sunat Operaciones en Línea*, SOL (SUNAT online operations).

12 Diario El Peruano (Official Journal), 24 August 2020. <https://elperuano.pe/noticia/101586-sunat-implementa-tramite-en-linea-para-el-ruc-digital#:~:text=Before%20the%20start%20of%20the%20state,%20can%20be%20performed%20%C3%ADntegramente%20por%20Internet.>

Simplifying the trademark and patent registration process. According to the *Instituto Nacional de Defensa de la Competencia y de la Propiedad Intelectual*, INDECOPI (National Institute for the Defence of Competition and the Protection of Intellectual Property) (2014), trademarks are an additional tool to help enterprises compete in the market, so it is important that they are properly registered and protected. In this regard, INDECOPI proposed in 2014 to simplify the process of registering trademarks and patents by removing the requirement for written publication in the Official Journal *Diario El Peruano* and replacing it with publication in an electronic Official Journal. This is to reduce the cost and time of registering trademarks and patents, and to simplify the steps to be followed by registrants, thus encouraging the formalization of enterprises and improving their competitiveness.

Programa Ruta de Éxito ("Route to Success" programme). This programme was launched by INDECOPI in 2018, and seeks to bring business owners and micro and small enterprises in the Amazon region closer to the market by providing them with benefits and tools to enter the market with better opportunities. To this end, INDECOPI provides them with advice on the granting process for collective mark registrations, free-of-charge phonetic and figurative searches, and advice on individual, commercial and certification trademarks. It also provides training in labelling and the placement of octagon hazard symbols on products when necessary. The regional production directorate, under the same programme, provides free advice on company incorporation and discounts on administrative procedures at notaries, as well as a financing programme, free business and tax advice, technical advice and assistance. As of July 2021, it has helped 23 enterprises involved in handicrafts, agriculture, production and tourism in the provinces of *Chachapoyas*, *Rodríguez de Mendoza* and *Condorcanqui*, contributing to sustainable development throughout the Amazon region (Plataforma Digital Única del Estado Peruano 2021).

Improving incentives

Formalizing Peru. The *Centro Integrado Formaliza Perú*, CIFP (Integrated Centre for Formalizing Peru) was created on 29 June 2018 through Ministerial Resolution No. 169-2018-TR to promote the entry and retention of workers in labour formalization. This is done through guidance, training and technical assistance services; the centre provides support to facilitate labour formalization procedures and thus access to incentives and benefits such as preferential access to government procurement, support programmes and health services (MTPE 2021). They are currently located in 12 regions of Peru: *Lima Metropolitana*, *La Libertad*, *Moquegua*, *Ucayali*, *Cajamarca*, *Huánuco*, *Áncash*, *San Martín*, *Puno*, *Apurímac*, *Huancavelica* and *Tacna*. According to the 2020 MTPE Annual Report, the centres helped and/or provided guidance to 3,567 persons, trained 9,423 persons and provided technical assistance to 1,274 persons. The report also mentions that 31,940 labour enquiries were resolved through the electronic consultation system and 36,316 labour enquiries were resolved through social networks (institutional Facebook).

Allocation of vouchers through digital wallets and DNI accounts. Different strategies were employed to reach the target beneficiaries for the allocation of the *Yanapay* voucher (monetary subsidy of 300 soles). For people without a bank account, the alternative was to use digital wallets and, as another option, allocation through a DNI (national identity card) account for beneficiaries up to 59 years of age and with a mobile phone in their name. The DNI account is a basic digital account created so that beneficiaries of monetary subsidies can receive the money without leaving home. Withdrawals can be made at any *Banco de la Nación* ATM, money can be transferred to the *BIM* digital wallet, and purchases and payments can be made at retailers affiliated to the *Vendemas de Niubiz* application. At the time of writing, this account and its activation were only available to beneficiaries of the *Yanapay* individual financial support. Take-up of the DNI account was high. According to the Government, in less than 40 days more than 1.5 million citizens across the country activated their *Banco de la Nación* DNI accounts to access *Yanapay* financial support. Thus, the number of adults with accounts in the financial system increased from 12.7 million

to around 14.2 million. Among the regions with the greatest progress, in terms of the objectives set for each locality, *Tumbes* stands out with 79 per cent of DNI accounts activated, followed by the regions of *Piura*, *La Libertad*, *Lambayeque*, *Amazonas* and *Moquegua*, with 76 per cent progress. *Cajamarca* is at 75 per cent, while *Callao* and *Lima* each have 74 per cent. The remainder of the regions have exceeded 60 per cent of projections for each jurisdiction.¹³ In general, in the case of all emergency transfers, the effort to build a single database of Peruvian families, combining information from the *Sistema de Focalización de Hogares* (Household Targeting System), the Ministry of Labour and Employment Promotion (MTPE), the *Registro Nacional de Identificación y Registro Civil* (National Identification and Civil Status Registry), the INEI, SUNAT and the *Superintendencia de Banca, Seguros y AFP* (Supervisory Body for Banking, Insurance and Pension Funds), is noteworthy.

Improving monitoring/inspection

Planilla Electrónica (electronic payroll). The electronic payroll was created in 2007. It is an electronic document in which employers with three or more workers must register information on their workers, pensioners and service providers. The payroll must be submitted electronically monthly and increases the capacity of the labour authority to supervise and monitor compliance with labour rights. Díaz (2014) finds that the electronic payroll tool has enabled the MTPE to reach a larger number of enterprises, thereby strengthening the inspection and enforcement system. In addition, he finds that employment registered on the payroll on the platform has grown faster than total employment (particularly since 2006). In 2008, there were 2.17 million workers registered on the electronic payroll, in 2011 this number grew to 2.73 million, and in 2013 it reached 3.13 million. According to Díaz, the growth in registered workers implies that there is a process of formalization or reduction of informality that began in 2006 but increased considerably in 2008 thanks to the electronic payroll. Lastly, he finds that many MSEs have joined the formal sector thanks to the digital tool. Chacaltana (2016) finds a similar impact of the electronic payroll. He notes that the digitalization of records and the alliance between SUNAT and the MTPE has led to improved monitoring, supervision and inspection processes. As mentioned above, monitoring capacity is an important factor for formalization and electronic records facilitate both processes for enterprises and workers and monitoring for the authorities.

Chequea tu contratista ("Check your Contractor"). This web platform was created in 2021 with the aim of enabling business organizations and public entities to find out whether the enterprises they hire for outsourcing services or those that provide staff (labour intermediation) have their workers on the electronic payroll. One objective of the application is to ensure that outsourcing enterprises, generally for job seekers in high-demand occupations (surveillance, security, repairs, cleaning, call centres, and so on), formalize their workers. When it is found that there are workers not on the electronic payroll, the outsourcing or labour intermediation enterprises will receive an email warning via the electronic mailbox of the Superintendencia Nacional de Fiscalización Laboral, SUNAFIL (National Superintendence of Labour Inspection) that they have a maximum period of **10 working days to formalize their staff. In the event of persistent non-compliance, SUNAFIL offices will be informed so that they can carry out the relevant inspections.**¹⁴

Verifica tu chamba ("Verify your Job"). This is a website that informs users whether or not they have been registered on their employer's payroll by simply entering their details and those of the enterprise where they work. If the enterprise is at fault, SUNAFIL will send an alert, indicating that it has detected that its

13 News published by Banco de la Nación on its website. <https://www.bn.com.pe/noticias/2021/01122021-cuenta-dni-permitido-inclusion-financiera-peruanos-cobro-inmediato-yanapay.html>.

14 Plataforma única del Estado Peruano. <https://www.gob.pe/institucion/sunafil/noticias/346266-sunafil-presenta-chequea-tu-contratista-para-que-usuarios-de-tercerizadoras-verifiquen-si-trabajadores-que-emplean-estan-planilla-estan-planilla>.

workers are in an informal situation and urging them to register them. It should be noted that these alerts are confidential, to prevent potential reprisals against the workers. This website was created in March 2021 and by November 2021 was already reporting significant formalization results: a total of 202,453 workers were formalized in 2021 because of this website, which represents 68 per cent of the employment formalizations in 2021. Most of the users who entered the payroll are employed in the economic sectors of agriculture (35 per cent), services (22 per cent), manufacturing (13 per cent), commerce (8 per cent) and construction (7 per cent). Furthermore, 56 per cent work in Lima Metropolitana, 11 per cent in Ica, 8 per cent in Piura, 5 per cent in Lambayeque and the same percentage in La Libertad.¹⁵ This initiative stands out because it has also helped achieve better results for the institution: by November 2021, 296,000 formalizations were achieved, a higher figure than in 2019 (143,000) and 2020 (102,311).

Two-way electronic mailbox. In January 2020, the Ministry of Labour and Employment Promotion made the use of the electronic mailbox mandatory for the notification of SUNAFIL administrative procedures and actions. Through this regulation, SUNAFIL provided for the automatic assignment of an electronic mailbox to each employing entity in the country, which would be a mandatory digital address for the notification of administrative acts and/or actions issued (for example, inspection actions, information requirements or guidance content). The electronic mailbox has allowed SUNAFIL to streamline its inspection and oversight work, adopting a more active role and initiating oversight campaigns on various matters. Apart from these initiatives, Juan Carlos Requejo, head of SUNAFIL, stated that, before carrying out inspections in the agricultural sector, they use SUNAT's RUC registration databases, the electronic payroll and the Peruvian National Agricultural Health Service's database.¹⁶

Warning and monitoring system. In 2019, the Ministry of Labour and Employment Promotion approved the implementation of the Sistema de Alertas y Monitoreo, SAMO (Warning and Monitoring System) as an IT tool for analysing, detecting and issuing alerts to prevent and monitor the risks of non-compliance with labour regulations. The sources of information for this tool include the electronic payroll and the RUC, in order to develop performance and monitoring indicators based on the behaviour patterns of enterprises and ongoing reports on enterprises that have a high risk of non-compliance with social and labour standards (Diario El Peruano 2019). The warning and monitoring system is a tool that also issues alerts to SUNAFIL's regional offices so that they can take immediate action. Thus, using this tool, SUNAFIL planned to carry out 97,520 inspections by 2020, which would represent an increase of 40 per cent of the total number of closed inspection orders that were planned for 2019 (Diario El Peruano 2019).

15 Plataforma única del Estado Peruano. <https://www.gob.pe/institucion/sunafil/noticias/552718-uso-de-aplicativo-verificatu-chamba-de-sunafil-permitio-que-mas-de-200-mil-personas-ingresen-a-planilla-este-ano>.

16 Conference "ICTs and labour inspection: challenges and good practices in the context of the Covid-19 pandemic". https://www.facebook.com/watch/live/?ref=watch_permalink&v=243948354080116.

Conclusions and recommendations

Although Peru is lagging behind, there has been significant progress in recent years in digital transformation policy and electronic government. The pandemic has accelerated digital transformation, both in terms of government and regulatory initiatives and of technology adoption by citizens and businesses. However, this rate of digital transformation has not been maintained after the pandemic and therefore no further progress has been made.

Moreover, Peru is failing to keep up with the digital transformation of middle-income countries, not through a lack of strategy but because of a lack of implementation and coordination. It is worth noting that the strategy has been focused on simplifying procedures, but not specifically on formalizing employment, even though studies show that formalizing enterprises does not necessarily formalize workers. It is therefore a major challenge in Peru for the digital transformation to lead to progress in the labour sector.

There has been notable progress made in Peru in inspection, with the implementation of the electronic payroll in 2007. This tool has made it possible to monitor compliance with labour rights and, as a result, many MSEs have joined the formal sector. In 2008, there were 2.17 million workers registered on the electronic payroll, while in 2013 the number reached 3.13 million.

As for the digital wallets and DNI accounts used for the allocation of the Yanapay voucher, they can continue to be used for savings and other purposes, as a way to encourage people to access and use financial services. The Banco de la Nación is organizing information events to guide beneficiaries on how to activate and use the DNI accounts. Thus, financial and digital education is being promoted.

Several challenges have been identified, including public management issues, lack of trained personnel, poor connectivity in rural areas and slow adoption of technologies by the population. The main challenges are in the following areas:

Public management

- **Wide variation in the adoption of technologies between entities.** Local governments are lagging far behind in electronic government. Even within central government, progress varies among ministries. It is therefore important to establish clear steps and priorities within the strategy.
- **Poorly focused, sustainable and coordinated planning.** The three Digital Agendas put forward vague objectives, strategies and actions. The goals are often general, and do not always specify time frames, indicators, responsibilities and intermediate targets. Therefore, the steering role of the Digital Governance Secretariat and the Office of the Council of Ministers needs to be strengthened.
- **Weak monitoring.** Although a monitoring committee was set up for the first two Agendas, no report has been produced on where progress is being made and where it is lacking. At present, the Digital Governance Secretariat provides a web page with the results of digital transformation policies, but it does not cover the same points as the Digital Agenda for the Bicentenary, and the data is not freely available (in other words, it is not possible to see the information at institutional or regional level, only national aggregates).

- **Digital transformation focused on simplifying processes.** No clear progress of Peru's digital transformation in the formalization of employment. In fact, while it has sought to simplify processes, in their meta-analysis Jessen and Kluve (2019) found that interventions targeting the formalization of workers are more effective than those targeting enterprises. Thus, Peru has ample room to implement labour formalization measures.
- **Digital platforms to facilitate the transition to e-formality.** Given the diverse number of digital platforms that have been created over the past few years, the Government can use this data to facilitate the transition to e-formality. In addition, the three levels of regional governments should further consolidate the databases they have across sectors so as to more accurately identify self-employed workers and help them to formalize. It should take into account that all these platforms register personal data such as names and surnames, identity document details, date of birth, sex, marital status, address and remuneration. However, should the need arise to use such data, there should be a "decoupling" process in order to avoid problems with the right to information.

Connectivity

In rural areas, the percentage of people accessing the internet is less than 25 per cent. The situation is better in urban areas (66 per cent), but Peru is still far from democratizing internet access. Moreover, in the first quarter of 2021, 88.5 per cent of the total internet-using population accessed the internet via mobile phone, 16.7 per cent via laptop, 14 per cent via a computer, 2 per cent via a tablet and 7.9 per cent via other devices (INEI 2021b).

Digital skills of public officials

Several representatives of institutions with digital transformation plans say that attracting and retaining skilled staff is key, but this is difficult due to the shortage of IT professionals and the current salary levels of public entities.

Facilitating processes for micro and small businesses (MSEs)

Lowering the costs and complexity of operating a business formally has been one of the main formalization strategies used (in the areas of labour and tax). However, licensing, tax withholding and company incorporation procedures still have room for improvement. It is also important to note that the simplification of processes also varies widely, and this is linked to the normal formalization process for different sizes of enterprises. Improvements in labour and tax legislation, together with the simplification of processes for micro, and especially small and medium-sized enterprises, would contribute to a process of accumulated productivity, growth and formalization.

In light of the above identified challenges, the following **recommendations** are highlighted:

Formalization policies

- Implement policies aimed at formalizing workers, either through visits by inspectors or official letters from the tax authorities. For example, Pignatti (2017) analyses the 2011 Colombian “Action Plan” that doubled the number of labour inspectors (from 400 to 800) in four years. The researcher found a small and statistically significant impact on workers’ formal employment, which is sustained over several years (Jessen and Kluge 2019). Likewise, these labour inspectorates should enforce institutional labour standards.
- Strengthen the MTPE’s Sectoral Strategy for Labour Formalization. Elements allowing for the monitoring and evaluation of the main actions taken should be incorporated, such as outcome and impact indicators, as well as a baseline on the status of the services provided. In addition, extensive information on informal employment should be available in order to identify and define the characteristics of informal employment segments, which would facilitate the design and implementation of the strategy.

Improving policy implementation and monitoring

- Set deadlines for the publication of reports and updating of databases by the Digital Transformation Secretariat, in the same way as other entities (for example, Peru’s Central Reserve Bank or the National Statistics Institute).
- Publish in a consolidated way the indicators and goals of each digital transformation committee and carry out regular updates.
- Recruit more staff to support institutions that are lagging behind in digital transformation.

Coordination across sectors and between levels of government

- The Office of the Council of Ministers has a coordination secretariat, which has a key role in ensuring that the regulations generated by the Digital Governance Secretariat can be implemented at all levels of government. This means incorporating these initiatives into the plans of ministries, decentralized bodies and subnational governments, and identifying the digital limitations of institutions.
- The Digital Governance Secretariat can ensure that the databases of the different entities are compatible and can be used jointly. For example, for emergency transfers, building a database with cross-referenced information from various other sources took time, because the institutions and their databases do not communicate. These efforts must be maintained and linked to other data sources, such as income tax returns.
- Promote the interoperability of databases between different state entities, so as to create consistency and trust and to translate this into processes (purchasing, acquisitions, procurement, tenders, and so on) that are simpler, quicker and above all more formal.

Programmes for training and attracting digital talent in the public service

- There is an ongoing shortage of digital professionals in public institutions. This means that
- implementing e-formalization initiatives becomes more costly, with longer implementation times and increased risks of loss of information or fraudulent access.

- Digital training programmes for public officials should be organized, and they should have higher salary levels than their counterparts in order to attract and retain staff trained within public institutions.

Investing in connectivity

- Almost all digital transformation policies are dependent on internet access by the public and private sector. It is therefore logical that first of all significant internet connectivity coverage should be achieved in Peru. While it may be important to further expand regulations and create more initiatives, this will not have the maximum possible impact if connectivity in rural areas and regions remains stagnant.
- The Government has been committed to a national fibre-optic backbone network since 2011. On 12 July 2012, Law No. 29904, on broadband promotion and building the national fibre-optic backbone network, was enacted to promote the development, use and universal access to broadband throughout the country. The Ministry of Transport and Communications was designated as the entity responsible for taking all the steps required to set up the network, signing the concession contract on 17 June 2014 with Azteca Comunicaciones Perú S.A. for its construction, operation and maintenance for 20 years, through a public-private partnership involving an investment of US\$ 333 million.
- In July 2021 (Ministerial Resolution No. 689-2021), after three years without reaching an agreement, the Ministry of Transport and Communications terminated the national fibre-optic backbone network concession contract in the public interest. According to the Ministry, the network is underused due to the inefficient structuring of the contract and differences between the Ministry and ProInversión, as only 3.2 per cent of its installed capacity is being used. As a result, the project has failed to generate the expected benefits of internet service access for the socioeconomic development and improvement in the quality of life of the six million people it was expected to benefit, nor is it profitable for the enterprise. Moreover, there have been delays in setting up the network, including in regions where retendering is required.
- Not only is connectivity necessary, but MSEs must also have the mechanisms to make use of the internet. In this regard, the use of smartphones should be encouraged to enable them to use digital platforms and thus facilitate their transition to e-formality.

Incentives and facilities for the adoption of technologies

Progress has been made in the use of the web for payments and procedures, but the level of adoption is still low. It is important to use incentives for the adoption of technologies as it will allow for digital inclusion. The voucher allocation scheme by the *Banco de la Nación* is one such use, and the reasons why people do not activate the account or collect the vouchers should be identified. It is also important to offer facilities to open accounts with the *Banco de la Nación* with just the DNI and at the national level.

Administrative simplification for MSEs

The use of technology to simplify the formal operation of businesses is an important alternative to combat business and labour informality. However, there is still room for improvement in this area, such as standardizing and facilitating start-ups, subsidizing or encouraging the use of technology in operations, facilitating the adoption of electronic receipts, obtaining operating licences, business-specific certificates, and taxation.

Lastly, Peru is taking steps on two main pathways: digitalization by the Office of the Council of Ministers and formalization by the the Ministry of Labour and Employment Promotion. However, these pathways do not currently clearly and precisely overlap, for the reasons set out in the document. It is vital and a priority for both ministries to coordinate and for the Digital Governance Secretariat to play a key role in the National Labour Council, in order to pursue e-formalization with a focus on the worker. Finally, it is essential for the Ministry of Labour and Employment Promotion to make the statistical data of the electronic payroll available, and to make efforts, together with SUNAT, to consolidate the matching of enterprises and workers, with the aim of monitoring policies and subsequently evaluating them.

Bibliography

- Andina.** 2020. "¡Perú imparable! Más de 200 MYPE ofrecen sus productos en feria virtual". <https://andina.pe/agencia/noticia-peru-imparable-mas-300-mype-ofrecen-sus-productos-feria-virtual-826771.aspx>
- Azuara, O., R. Azuero, M. Bosch and J. Torres.** 2019. *Special Tax Regimes in Latin America and the Caribbean: Compliance, Social Protection, and Resource Misallocation*. Inter-American Development Bank.
- CAF** (Corporación Andina de Fomento – Development Bank of Latin America). 2020. *The GovTech Index 2020 Unlocking the Potential of GovTech Ecosystems in Latin America, Spain and Portugal*.
- CAPECE** (Cámara Peruana de Comercio Electrónico). 2021. "Reporte Oficial de la Industria Ecommerce en Perú: Impacto del COVID-19 en el comercio electrónico en Perú y Perspectivas al 2021". <https://www.capece.org.pe/wp-content/uploads/2021/03/Observatorio-Ecommerce-Peru-2020-2021.pdf>
- Casalí, P. and H. Peña.** 2012. Project "Programa para la extensión de la protección social en los países de la subregión andina, Bolivia, Ecuador y Perú". Los trabajadores independientes y la seguridad social en el Perú. Lima: ILO.
- Castellares, R. and O. Ghurra.** 2020. "Efectos de la Ley de Promoción del sector Agrario en los ingresos de los trabajadores formales". *Revista Moneda* (181), 32–36.
- Castells, M. and A. Portes.** 1989. "World underneath: The origins, dynamics, and effects of the informal economy". In Castells, M., A. Portes and L. Benton (Eds) *The informal economy: Studies in advanced and less developed countries*, 3-12. London: The Johns Hopkins University.
- Chacaltana, J.** 2008. "Una evaluación del régimen laboral especial para la microempresa en Perú, al cuarto año de vigencia". https://www.researchgate.net/publication/228660574_Una_evaluacion_del_regimen_laboral_especial_para_la_microempresa_en_Peru_al_cuarto_ano_de_vigencia
- Chacaltana, J.** 2016. *Formalización en el Perú: tendencias y políticas a inicios del siglo 21*. Pontificia Universidad Católica del Perú. Lima: CENTRUM Católica.
- Chacaltana, J., V. Leung and M. Lee.** 2018. "New technologies and the transition to formality: the trend towards e-formality". EMPLOYMENT, Working Paper No. 247. International Labour Office.
- Chacaltana, J. and V. Leung.** 2020. "Pathways to formality: Comparing policy approaches in Africa, Asia and Latin America". In *Global Employment Policy Review 2020: Employment policies for inclusive structural transformation*, 143–170. ILO. https://www.ilo.org/wcmsp5/groups/public/---ed_emp/--ifp_skills/documents/publication/wcms_734489.pdf
- Cortés, F.** 2002. "La metamorfosis de los marginales: discusión sobre el sector informal en América Latina". *Tratado latinoamericano de sociología del trabajo*, 592–618.
- De Soto, H.** 1986. *El otro sendero: la revolución informal*. Lima: Ed. El Barranco.
- DEVELOPMENT.** "Department of Economic and Social Affairs". [https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2020-Survey/2020%20UN%20E-Government%20Survey%20\(Full%20Report\).pdf](https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2020-Survey/2020%20UN%20E-Government%20Survey%20(Full%20Report).pdf)
- Diario El Peruano.** 2019. "MTPE aprueba implementación de sistema informático para fortalecer inspección de trabajo". <https://www.gob.pe/institucion/mtpe/noticias/70038-mtpe-aprueba-implementacion-de-sistema-informatico-para-fortalecer-inspeccion-de-trabajo>

Díaz, J. J. 2014. "Formalización empresarial y laboral. Hacia un desarrollo inclusivo: el caso del Perú". LC/L. 3779, 173–260. Santiago: CEPAL.

El Comercio. 2021. "Sunafil: ¿cómo denunciar virtualmente a una empresa privada que no acata el estado de emergencia?" <https://elcomercio.pe/respuestas/sunafil-como-denunciar-virtualmente-a-una-empresa-privada-que-no-cumple-el-estado-de-emergencia-coronavirus-covid19-cuarentena-lima-revtli-noticia/>

Farrell, Diana. 2004. "The Hidden Dangers of the Informal Economy." In *McKinsey Quarterly* 3: 27–37.

Florida, A., B. Afewerk and N. Wagner. 2020. "Shedding light on the shadows of informality: A meta-analysis of formalization interventions targeted at informal firms". *Labour Economics*, 67, 1–13. <https://doi.org/10.1016/j.labeco.2020.101925>

Gestión. 2020. "Esta es la estrategia de Produce para la formalización en tiempos de pandemia". <https://gestion.pe/economia/esta-es-la-estrategia-de-produce-para-promover-la-formalizacion-en-tiempo-de-pandemia-noticia/?ref=gesr>

Gobierno del Perú. 2021. "Reporte de avances en gobierno y transformación digital". <https://indicadores.digital.gob.pe/#ParticipacionCiudadana>

IDB (Inter-American Development Bank). 2021. "Servicios públicos y gobierno digital durante la pandemia: perspectivas de los ciudadanos, los funcionarios y las instituciones públicas". <https://publications.iadb.org/publications/spanish/document/Servicios-publicos-y-gobierno-digital-durante-la-pandemia-Perspectivas-de-los-ciudadanos-los-funcionarios-y-las-instituciones-publicas.pdf>

ILO (International Labour Organization). Regional Office for Latin America and the Caribbean. 2014. *Panorama Laboral Temático: Transición a la formalidad en América Latina y el Caribe*. Lima: ILO.

—. 2015. "Fortalecimiento de la inspección laboral en Perú: la Planilla Electrónica y el Plan RETO". https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/documents/publication/wcms_371221.pdf

—. 2020. *E-formalization in Europe*. Colin C. Williams.

IMF (International Monetary Fund). 2019. *Digitalization to Improve Tax Compliance: Evidence from VAT e-Invoicing in Peru*.

INDECOPI (Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual). 2014. "Propuestas para Mejorar la Competitividad del País". https://repositorio.indecopi.gob.pe/bitstream/handle/11724/4539/83%20_GEE_Propuesta_para_mejorar_competitividad.pdf?sequence=1&isAllowed=y

INEI (*Instituto Nacional de Estadística e Informática*). 2020. "Producción y Empleo en el Perú. Cuenta Satélite de la Economía Informal 2007-2019". https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1764/libro.pdf

—. 2021. *Perú: Comportamiento de los indicadores de mercado laboral a nivel nacional*.

—. 2021b. "El 66,8% de la población de 6 y más años de edad accedió a internet de enero a marzo del presente año". <https://m.inei.gob.pe/media/MenuRecursivo/noticias/nota-de-prensa-no-098-2021-inei.pdf>

Jaramillo, M. 2013. "Employment growth and segmentation in Peru, 2001–2011". ILO: Geneva.

Jaramillo, Miguel, Pablo Lavado y Rocío Medina. 2021. *Impacto del Régimen Especial de la Pequeña Empresa en la Informalidad Laboral*. Lima: Consejo Privado de Competitividad.

- Jessen, J. and J. Kluve.** "The Effectiveness of Interventions to Reduce Informality in Low- and Middle-Income Countries". <https://docs.iza.org/dp12487.pdf>
- Lewis, W.** 2004. *The Power of Productivity: Wealth, Poverty, and the Threat to Global Stability*. Chicago: The University of Chicago Press.
- Loayza, N.** 2016. "Informality in the Process of Development and Growth". *Policy Research Working Paper No. 7858*.
- Loayza, N.** 2018. "Informality: Why Is It So Widespread and How Can It Be Reduced? Research & Policy Briefs from the World Bank Malaysia Hub". <https://documents1.worldbank.org/curated/en/130391545228882358/pdf/Informality-Why-Is-It-So-Widespread-and-How-Can-It-Be-Reduced.pdf>
- Martínez, G.** 2021. "Cosechando lo sembrado: la ley de promoción agraria y la exportación de las pequeñas empresas". Tesis de Maestría. https://repositorio.up.edu.pe/bitstream/handle/11354/3204/MartinezGustavo_Tesis_maestria_2021.pdf?sequence=6
- Mezzer, J.** 1987. "Abundancia como efecto de la escasez. Oferta y demanda en el mercado laboral urbano". *Nueva Sociedad*, 90, 106–117. https://static.nuso.org/media/articles/downloads/1529_1.pdf
- MTPE** (Ministerio de Trabajo y Promoción del Empleo). 2021. Centro Integrado Formaliza Perú. Lima: MTPE.
- PCM** (Presidencia del Consejo de Ministros). 2 January 2020. "Agenda Digital al Bicentenario". Informes y publicaciones del Gobierno del Perú. <https://www.gob.pe/institucion/pcm/informes-publicaciones/606643-agenda-digital-al-bicentenario>
- Plataforma Digital Única del Estado Peruano**. 2020. "Produce: Programa nacional Tu Empresa formalizó a 10 910 mypes nacionales en 2019". <https://www.gob.pe/institucion/produce/noticias/76443-produce-programa-nacional-tu-empresa-formalizo-a-10-910-mypes-nacionales-en-2019>
- . 2021. "Ruta del Éxito: Instituciones del Estado suman esfuerzos para promover la formalización y desarrollo de los micro y pequeños empresarios". <https://www.gob.pe/institucion/indecopi/noticias/503662-ruta-del-exito-instituciones-del-estado-suman-esfuerzos-para-promover-la-formalizacion-y-desarrollo-de-los-micro-y-pequenos-empresarios>
- Pignatti, C.** 2017. *Enforcement and Compliance with Labour Legislation: The Effect of the Colombian "Action Plan"*, International Labour Organization, mimeo, ILO: Geneva.
- Salazar-Xirinachs, J. M. and J. Chacaltana.** 2018. "Políticas de Formalización en América Latina: Avances y Desafíos". https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/documents/publication/wcms_645159.pdf
- Sociedad de Economía Crítica.** 2019. "¿Qué hay de nuevo en el viejo debate sobre las causas de la informalidad laboral?" *Cuadernos de Economía Crítica*, 5(11), 99–121. <https://www.redalyc.org/journal/5123/512359395009/html/>
- SUNAT**. 2020. "Plan de Gobierno Digital 2020-2022 Estudio de Medición para determinar el índice de Costo de Cumplimiento Tributario 2019. Informe Analítico", 31–35. <https://www.sunat.gob.pe/legislacion/superin/2020/anexo-236-2020.pdf>
- Tokman, V.** 2001. "Las relaciones entre los sectores formal e informal: Una exploración sobre su naturaleza". *Economía*, 24(48), 17–73. <https://revistas.pucp.edu.pe/index.php/economia/article/view/847>
- UN** (United Nations). 2020. United Nations E-Government Survey 2020. Digital Government in the Decade of Action for Sustainable Development.
- World Bank.** 2020. "Doing Business 2020. Comparing Business Regulation in 190 Economies". <https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402.pdf>



International
Labour
Organization