



COUNTRY PRIVATE SECTOR DIAGNOSTIC

CREATING MARKETS IN PERU

Growth opportunities to reduce regional gaps

Executive Summary

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EXECUTIVE SUMMARY

In the two decades before the COVID-19 pandemic, Peru was one of the most prominent economic performers in Latin America. The fast growth transformed Peru into an upper-middle-income economy, with aspirations to become a high-income economy in the next decade. Poverty levels fell dramatically and converged to the average for Latin America around 2019. The success of the growth strategy was heavily anchored on external and internal factors: first, Peru's comparative advantage in commodities coupled with a friendly international environment contributed to boost exports and incomes, and second, solid macroeconomic management coupled with well-targeted social programs fostered an economic growth with some measure of inclusiveness. Leveraging these factors, the private sector has been a key driver of growth and poverty reduction in Peru. Foreign direct investment (FDI) grew dramatically during the period of high economic growth. Net FDI inflows in 2019 amounted to almost US\$6.8 billion, or 2.8 percent of gross domestic product (GDP), equivalent to eight times the 2000 levels. In addition, although mining exports still dominate Peru's international trade, agricultural exports have also boomed. Exports of fruits multiplied by 61, and exports of vegetables multiplied by 6 over the period. Tourism exports have also experienced substantial growth over the past decades, representing about 4 percent of the country's total exports (70 percent of all services exports) in 2022. Peru also has a notable fisheries industry, being the third largest producer of wild-caught fish.¹

However, the COVID-19 crisis exposed a stark contrast between Peru's achievements and deep structural challenges that had remained unaddressed, reflected in the polarizing levels of regional and income disparities, and reaching the point of threatening the economic and social gains of the past two decades. Globally, richer areas of Peru have levels of GDP per capita closer to the average for Latin America and East Asia, but Peru's poorest regions have income levels closer to those of South Asia and Sub-Saharan Africa. Territorial differences in incomes and poverty levels correlate with gaps in access to basic services: only in the five regions with the highest per capita income do more than 50 percent of the population have access to clean water. Low-quality jobs are substantially more common in rural areas and small urban towns than in the Lima area. Even before the COVID-19 pandemic, the structural disparities had started to cause a slowdown in the pace of economic growth and poverty reduction. When the pandemic struck and Peru imposed one of the strictest lockdown measures in the world—with the associated impacts on job destruction and poverty—GDP fell by 11.1 percent, well above the average decline for Latin America (6.7 percent).² Poverty saw a record annual increase of 10 Percent, erasing more than 10 years of progress in poverty reduction.

In addition, these structural disparities could be further exacerbated by climate change and related disaster risks, which—if unaddressed—could jeopardize the growth of the key pillars of Peru's private sector. The number of natural and human-induced disasters recorded in Peru increased dramatically between 2003 and 2022, and they are expected to become more frequent in the future.³ The reliance of the economy on natural resources has been key for economic growth, but vulnerability to climate change highlights the importance of long-overdue economic reforms. Increased glacial melt and changes in precipitation will significantly affect the timing

and availability of water for agriculture, drinking, and energy production and change the frequency and severity of droughts and floods with significant economic consequences. Climate change can threaten agriculture, fishery, and tourism; increase damage to infrastructure exposed to flooding and landslides; reduce water availability; and reduce the availability of hydroelectricity, increasing the carbon footprint of the electricity matrix.⁴

The Country Private Sector Diagnostic's (CPSD) objective is to provide recommendations that promote private sector investment in Peru in a time horizon of three to five years, and in policy areas and sectors that contribute to reducing regional inequalities. In its first sections, this report identifies recommendations in three cross-cutting areas that are preventing the Peruvian private sector from reaching its full potential and contributing to a more inclusive and climate-smart growth model: (a) poor subnational governance, (b) inefficient land markets, and (c) disabling labor regulations.⁵ First, the poor capacity of local governments undermines the attraction and promotion of private sector investments and growth (for example, in agriculture, aquaculture, or tourism) as well as the delivery of key public goods and services for the vulnerable. As a result, local governments do not play their role as engines of local development and convergence with more prosperous areas. Second, land market failures stifle investment in both public goods and private firms. Informality in land tenure inhibits private sector investment in multiple sectors of the economy: it decreases investment and productivity in agriculture, increases illegal and artisanal fishing that threatens fish stocks, and leads to small-scale mining and logging that contribute to high rates of deforestation.⁶ Third, rigid labor regulations widen differences in job quality between the formal and informal sectors and stifle private sector growth and productivity, with Peru having among the lowest quality of jobs in Latin America as a result. In its last section, the report provides a more detailed assessment of four sectors whose growth can contribute to reducing regional inequalities: (a) agriculture, (b) aquaculture, (c) tourism, and (d) digital economy (with a focus on financial services).

CROSS-CUTTING CONSTRAINT #1: SUBNATIONAL GOVERNANCE

Since the early 2000s, Peru has been engaged in a sustained process of decentralization, which has fallen short of its goal of improving service delivery at the local level. Population and economic activity in Peru continue to be highly concentrated in Lima, which accounts for 32 percent of the population and close to 50 percent of GDP. Welfare gaps across districts account for 46 percent of the overall welfare inequality at the national level in Peru.⁷ Several features of the decentralization model contribute to these stubborn regional gaps.⁸ For example, there is no clear definition of responsibilities regarding both revenue collection and expenditures. The small population size of several municipalities prevents the adoption of larger-scale projects and their efficiency, while the mineral revenue-sharing scheme (*canon*) contributes to large disparities in fiscal revenues across municipalities. Even though the *canon* has represented a significant share of total public revenues for several districts, its impact on local economic development and regional convergence has been weak. To some extent, this low effectiveness is driven by the fact that such revenues can only be used to finance infrastructure projects, which can be difficult to implement given the poor technical capacity of several *canon*-dependent districts.

The poor technical capacity of regional and municipal governments has very significant adverse implications for both public and private investment. The high turnover of local government staff weakens the effectiveness of capacity-building programs.⁹ Poor technical capacity complicates investment management, execution, and supervision. Accordingly, municipalities lack not only specialized skills among their permanent staff (for example, engineers and architects) but also the capacity to assess the skill quality of specialized consultants. Local governments' capacities have concrete implications for the growth of key sectors in Peru. For example, the National Aquaculture Development Plan, supervised by the Ministry of Production (Ministerio de la Producción; PRODUCE), mandated the preparation of Regional Aquaculture Plans by Regional Governments to identify areas of support for the local aquaculture industry. However, regional plans were either not designed or not implemented. Similarly, lack of adequate territorial planning and development—largely driven by low capacity and by the disenfranchising disconnect between the bottom-up definition process of public investment priorities at the subnational government level and the top-down decision making on actual public expenditures through the national *Invierte.pe* (Invest) system—led to infrastructure investment gaps that limit the ability of small farmers to participate in export-oriented value chains. In the case of tourism, local governments lack the necessary skills to develop, promote, and manage the development of the sector. This deficiency includes the overall limited implementation of the Strategic Regional Tourism Plans and the enforcement of regulations that apply to the tourism sector. Poor subnational governance is also evident in business regulation enforcement, which varies substantially across regions and can have large negative impacts on private investments.

Finally, extreme natural events and human-induced environmental degradation have grown dramatically over the past years and several local governments do not have the capacity to cope with them.¹⁰ Some of the regions more exposed to these events do not have the technical capacity to cope with their impacts. Departments with higher poverty rates, such as Huancavelica, Cajamarca, and Apurímac, experienced more of these events in 2019, but many of their local governments do not have any instruments for disaster risk management in place. Natural and human-induced disasters are expected to become more frequent given the climate change trends, and their economic consequences may widen the existing territorial gaps if local governments do not adapt. For example, climate change models predict a reduction in water availability in most of Peru, particularly in the Costa and Selva regions, that is, the coastal and rain forest regions.¹¹

CROSS-CUTTING CONSTRAINT #2: LAND REGULATIONS

Poor efficiency, lack of transparency, and weak property rights continue to be prevalent in the market for land in Peru. The Peruvian land regime is the result of historical events that played out for many decades, resulting in more than 1,800 different regulations on property rights, granting overlapping functions to different administrative authorities, while many provisions are not applied in practice because of a lack of technical and financial resources.¹² The lack of a clearly stated and systematic policy response to the massive rural out-migration and to the reconfiguration of land ownership has led to a challenging institutional context with significant developmental impacts. This policy absence inhibits private sector investment in multiple sectors of the economy. The Peruvian housing market is an example of how these issues translate into poverty,

vulnerability, and informality. The housing shortage in Peru hovers around 1.3 million units.¹³ Most of the urban population in some areas of Peru (for example, Ucayali, Amazonas, and Huancavelica) live in informal settlements and neighborhoods without access to land property rights and basic services. Moreover, these types of settlements tend to be less resilient to natural disasters, because they occupy high-risk areas and houses are inadequately built, which is a concern given that at least 40 percent of the poor population in the Ucayali and Loreto regions face flood risks.¹⁴

In agrarian areas, despite several unsuccessful efforts to improve the land regime, land titling and the delineation of the plots remain a constraint on exporters of high-value crops on the coast and smallholders in the Sierra (mountain) and Selva regions. The growth of the modern export-oriented sector in the Costa region particularly depends on land extensions. The lack of clear property rights, including in collectively owned land by native communities in rural areas of the Andes and the Amazon, is a key deterrent to investing in more capital-intensive methods that could help boost productivity, and land challenges are limiting inclusion of smaller farmers aiming to participate in export-oriented value chains.

Finally, the absence of updated and complete property registries and cadastral records limits the ability of municipal governments to adequately design and execute investment in necessary public goods. Furthermore, ownership uncertainties create problems in expropriation processes because it is difficult to identify who should be compensated, as well as to determine property values. By 2017, only half of the 1,845 Peruvian districts had a cadastre, and only 20 percent updated it recently (with widespread variation across geographic areas).

Peru can harness its current performance-based finance instruments to incentivize subnational governments to simultaneously address the challenges of governance capacity and land markets. The governance of land management in Peru is complex: urban land titling is the responsibility of provincial municipalities, urban cadastres are the responsibility of district municipalities, and regional governments oversee rural land titling and rural cadastres. At the national level, multiple ministries exert responsibilities on territorial governance. Land market issues need to be addressed in a multisectoral solution that combines different policy and regulatory instruments. Performance-based financing programs that cover this scope of policies and instruments do exist in Peru, and they could be used to promote and establish targets for planning, cadastre development, and other related functions at the subnational level. However, these programs need to be substantially better coordinated and streamlined. Improvements do not require reforms: they consist of changes in the technical design and operational management of the programs. Using such improvements, the Ministry of Economy and Finance could include relevant land management targets in such programs and test the approach on a limited number of targeted urban and rural areas. Sectoral ministries and agencies could provide complementary advisory services to local governments on land management issues and other sectoral policies that translate into investments in public goods and services at the local level (for example, in agriculture, tourism, or aquaculture). The results from an initial experiment on a limited number of regions where economic impacts on sectors can be achieved (for example, tourism, agriculture, and aquaculture) could then be used to scale the programs more widely.

CROSS-CUTTING CONSTRAINT #3: LABOR REGULATIONS

Labor market regulations are cited by firms in Peru as a key factor hindering business expansion, at a higher rate than occurs for their counterparts in Latin America and the Caribbean and in other upper-middle-income economies. Strict labor market regulations tend to translate into high labor costs for formal firms, which can be particularly burdensome for small and micro enterprises. The labor market in Peru is characterized by a relatively rigid regulatory environment, contributing to a strong duality between well-protected formal sector jobs and unprotected informal sector jobs.¹⁵ The index of labor market rigidity in Peru is higher than in its neighboring countries, advanced economies, or other developing regions.¹⁶ This rigidity is mainly attributable to complex regulations for workers' dismissals. For instance, Peru's priority rules for reemployment and dismissal of workers under indefinite contracts require third-party approval and a "just cause." If this cause is not considered "just," then a judge can request the worker's reinstatement in the same job. Too-restrictive labor market regulations can have negative consequences on incentives for firms to expand and hire new workers, as well as discourage the formalization of firms. Countries with higher redundancy costs and cumbersome dismissal regulations exhibit levels of informality above what would be expected for their income and educational levels.¹⁷

In addition to stringent labor market regulations, nonwage labor costs are very high in Peru. The costs of salaried labor include wages and several nonwage components, such as mandated benefits (for example, bonuses and paid leave), social security contributions (for example, pension, health insurance, and training), and job security provisions (for example, firing notice and severance payments). In the case of Peru, nonwage costs are mainly driven by social insurance contributions and bonuses (*aguinaldo*). Peru has the third highest nonwage costs in the region, amounting to 68 percent of the salary of an average worker.¹⁸ The consequences of rigid labor regulations and high nonwage costs are not the same for everyone in the labor market. Socioeconomic groups with a weaker hold on the labor market could be more likely to be segregated into informal jobs when the bureaucratic costs of formalizing workers are substantial to employers. This includes women and youth, who have a more limited formal record of labor market performance. In fact, there are large gender gaps in job quality in Peru, which are largely driven by women being more likely than men to have informal jobs in the formal sector.

SECTOR ASSESSMENTS

By unleashing private sector investment in more inclusive and climate-smart economic activities, Peru could not only accelerate its economy's growth rate, but also leverage it to achieve regional convergence and climate-resilient economic growth. The CPSD provides recommendations that can foster and accelerate private investment in three to five years while helping address the country's structural challenge of polarizing regional inequalities. Agriculture, aquaculture, tourism, and digital finance are sectors that have a high potential of attracting foreign and domestic investment and creating more and better jobs while also maximizing socioeconomic spillovers, particularly in regional convergence.¹⁹ The following four sector assessments provide concrete illustrations of how short-term policy action could contribute to a faster, more inclusive, and more climate-smart growth in the long term.

Agriculture

In the past two decades, the agricultural sector in Peru has experienced an impressive boom in exports of high-value-added crops led by private sector investment and innovation. Between 2000 and 2022, the total value of agricultural exports increased 15-fold, and the variety of export crops was greatly diversified. The export value of nontraditional (NT) crops has been growing at an average annual rate of 15.7 percent since 1998, reaching an export value of US\$8.4 billion in 2022. Demand for fresh high-value crops is projected to grow much faster than for commodities over the next decades. Agricultural exports from Peru were among the most resilient parts of the economy during the pandemic, growing strongly during both years. Several public policies contributed to the apparent success of the sector, including trade liberalization, strengthened phytosanitary regulation and supervision, public investments in large-scale use and connectivity of irrigation, the introduction of an agriculture promotion law, and the easing of land ownership and other restrictions for investors. Private sector investment in innovation and technology were also key in achieving the scale and quality required for the exponential growth in exports.

However, firms championing this export boom have largely been concentrated on the coast in Peru, and the lack of similar growth in adjacent regions has had high costs in inclusiveness and sustainability. The export boom and its underpinning policies reflected and reinforced a dual economy with medium- to large-scale, highly competitive, vertically integrated firms mainly on the coast, and traditional, small-scale, subsistence farmers mainly in the Andes and Amazon. Several factors limit the inclusiveness and sustainability of the current model of export-oriented agriculture in Peru. The current production structure on the coast poses serious environmental concerns, particularly regarding water use, land use, and soil pollution. Competitive gains from its special labor regime have been threatened by social unrest because of labor concerns. Public investment gaps have limited the participation of small producers and organizations outside the coastal areas. For example, although big infrastructure was built, fewer investments were made in last-mile rural roads and irrigation. Similarly, the lack of adequate and sufficient extension services for smallholders precluded farmers outside the coast from seizing the same opportunities as large exporters on the coast.

Productive alliances (PAs)—which are contractual arrangements linking associations of smallholders to larger exporters—point to an alternative growth model that has been successful in promoting stronger inclusion of smallholders in export value chains. This growth model minimizes risks for both small producers and large firms and maximizes value addition and productivity for both. An analysis of such experiences in a sample of crops found that most successful PAs started with a private-led push by exporting firms to satisfy international demand, and without government intervention. The PAs provided benefits to the large firms in the form of diversification and longer peak harvest times that could safeguard against uncertainty, while simultaneously having positive effects on smallholder incomes, access to markets, technology, and finance. These experiences could be scaled. Although private firms are better endowed to identify such market opportunities, a public effort can mitigate information asymmetries among small and consolidated actors in the chain and help increase the number of smallholders that can integrate export value chains. Also, while PAs have

been relatively successful in providing access to markets, technology, and finance, there is a role for the public sector in partnership with the private sector, when feasible, in improving access to last-mile infrastructure, connectivity, land tenure, access to market intelligence, and bargaining power.

Private investment can play a critical role in the adaptation of value chains and the scaling of market-driven integration of smallholders. To exploit growing markets, exporting firms wishing to scale and diversify their sourcing will need to invest in strengthening their internal logistics activities (for example, cold-chain facilities or traceability technologies) and scaling their operational expenditures (which could include investing in their suppliers' capabilities, training, and working capital). If digital solutions are promoted (for example, using blockchains), private operators of digital platforms and e-commerce could help provide smallholders with more direct access to consumer markets. Peru's vertically integrated agribusiness firms—with advanced capabilities in logistic services—could also provide third-party logistics services to smallholders, with the possibility of exporting their services to many Latin American markets with similar needs. Peru will also have to improve and scale agrifinance and microfinance for growth-oriented smallholders who should be provided by private financial intermediaries with enhanced capabilities in this field. Outside the coast—particularly in the adjacent Sierra region—leveraging geospatial technologies will be key, as will integrated territorial planning to identify smallholders with strong potential to participate in export value chains. Smallholders must also be linked to exporters (or more directly to consumers) by leveraging public-private dialogues or PA mechanisms. Upgrading and scaling extension services to smallholders could accelerate access to technology, know-how, market intelligence, and climate-smart practices, while leveraging emergent technologies (like blockchains) to increase traceability and provide them with direct access to information on markets and consumers.

The adoption of policy actions and environmental practices that respond to global market trends can harness the momentum created by the “coastal boom,” increase inclusive and sustainable growth, and contribute to regional convergence. In the coastal region, it will be critical to promote water management policies and climate-smart agriculture (CSA) practices to improve the resilience of agriculture systems.²⁰ Private sector investments in the water sector will be key, including investments in water management, water technologies, and wastewater treatment and reuse. Exporters can reduce environmental impacts by sourcing from farmers in the Sierra and Selva when climatic and geographic conditions are more favorable for some NT crops. Adherence to environmental standards is an increasingly important criterion for international markets with carbon border adjustment taxes increasingly considered by developed countries as a tool to combat climate change. Accordingly, Peruvian agribusiness exporters need to strengthen their capacity to estimate environmental footprints and leverage technological innovation to reduce it. Upgrading and scaling extension services to smallholders could accelerate the use of green practices while increasing traceability. At the same time, improved worker representation and better enforcement of existing labor regulations could preserve the practice of seasonal hiring while improving working conditions and distributing the benefits of the export boom.

Tourism

The COVID-19 crisis hit the tourism sector disproportionately hard, but it also highlighted key underlying weaknesses that, if addressed, can accelerate and improve recovery. With 4.4 million visits in 2019, tourism in Peru reached the fifth position in international arrivals to the region. In 2019, tourism contributed 9.3 percent of Peruvian GDP and generated almost 1.3 million total jobs, which translated to 7.5 percent of the country's total employment. These figures changed significantly in 2020 with the advent of the COVID-19 crisis. International arrivals in 2020 and 2021 declined dramatically, contributing to large employment losses in the tourism sector, which were among the highest in the region. Between 2019 and 2020, employment in tourism fell by 84 percent, compared with less than 45 percent for the region.²¹ This report identifies four main policy areas that can help tourism recover faster and better in Peru.

Promoting investment in nature-based and adventure tourism in a post-COVID-19 context could prove strategic in accelerating and improving the recovery. For example, generating US\$10,000 in a local economy takes approximately 96 cruise-tourists or 9 package tourists, but only 4 nature travelers. Statistics on outbound tourists from the United States and Australia suggest that the global adventure tourism market represents about 30 percent of travel global expenditure. Those numbers place the global value of the segment at about US\$420 billion for 2019. Peru's institutions, especially the Ministry of Foreign Trade and Tourism (MINCETUR) and the tourism board (PROMPERU), could strengthen their collaboration for management and promotion of adventure and nature tourism in Peru's lagging yet very tourism-asset-rich regions. The goal should be to ensure proper tourism management plans for protected areas and to develop actionable market research, joint promotional efforts, and tourism products that consider both tourism revenue potential and conservation efforts. Public-private coordination and overall destination management should be reinforced through the creation or the revamping of destination management organizations (DMOs). Limited local context consideration, weak institutions, lack of capacity and coordination, limited clarity on objectives and responsibilities, and lack of financial sustainability have reduced the effectiveness of DMOs or caused their virtual disappearance. The enforcement of regulations applicable to the tourism sector, including adventure and nature based, should also be strengthened to meet the standards expected by tourists in these segments.

Investing in infrastructure and road and air connectivity, which remain key constraints for attracting tourists to most regions, could have a transformative impact in addition to positive externalities on citizen well-being and on other sectors. Issues related to access infrastructure and lack of interregional routes affect both road and air connectivity to, and within, Peruvian cities and regions. The central and regional governments could explore options to upgrade regional airports and various access roads through existing public-private partnership frameworks, especially when the upgrading contributes to the development of various sectors (including agriculture and aquaculture). An experts-led working group of relevant stakeholders (small operators, airlines, regulators, and so on) should be set up to understand barriers to interregional air travel to regional destinations with high tourism potential, using international best practice. Direct financing or budget support would be required for establishing health

systems and facilities, as well as for improving water and sanitation infrastructure, all of which represent key bottlenecks. The capacity of public sector actors, particularly local and regional governments, should be enhanced to better develop, promote, and manage territorial and tourism (destination) development, including in natural settings.

Existing products and activities should be strengthened, while new ones should be developed and targeted to attract the main identified segments. The adventure and nature-based tourists seek destinations and companies that can offer unique, high-quality experiences. To do so, the sector needs to improve the overall skills of operators, particularly for specialized tourism such as risky activities, nature observation, and interpretation of heritage and languages, as well as advisory services for the design of experiences in accommodations and travel agencies. In addition, the absence of certification for specialized tourism operators is a serious deterrent in their appeal to adventure and nature-based tourists. Capacity-building programs should improve the quality of small and medium enterprises (SMEs) and enable them to gain relevant certifications.

Finally, key sector-specific and economywide regulations should be reformed to enable investments and job creation in the sector. Inadequate land titling and management and district zoning hurt the attractiveness of greenfield investments in the tourism sector. The general labor regime of Peru does not accommodate seasonal employment and discourages the creation of formal jobs, and the National Superintendence of Labor Inspection (SUNAFIL) does not have standardized and predictable protocols for its interventions—parallels can clearly be drawn with the experience in agriculture. In addition, the 2016 Adventure Tourism Safety Regulations were modified in July 2021 to include a wider range of adventure tourism activities, but the overall provisions are still outdated. Updates should consider increasing the capacity of relevant government institutions, and licensing for tour operators should be simplified on a national and regional level as well. Finally, it will be necessary to build the capacity of financial institutions to manage tourism lending portfolios with a sound understanding of the specific characteristics of tourism businesses, beyond classic hospitality establishments.

Aquaculture

Peru has a growing aquaculture sector, both marine and fresh water, building on an established fishing industry. Peruvian marine aquaculture concentrates on scallops and shrimp cultivated in the Pacific Ocean or in saltwater ponds close to the ocean. Freshwater aquaculture primarily cultivates trout, using lagoons, rivers, and artificial ponds. Peru's aquaculture grew by 14 percent annually between 2015 and 2019, outpacing global growth significantly despite the impact of climate events and disease. The aquaculture sector directly employs 30,000 people and, together with other fishery activities, generates around 339,000 jobs (direct and indirect). However, most of the direct jobs in aquaculture are informal, and so the sector has significant potential to increase productivity and the quality of employment. The primary bottlenecks identified include a lack of a national aquaculture policy framework that includes spatial planning and ensures the availability of public services, including infrastructure, in the primary growing areas.

Weak governance due to high staff turnover in the institutions dedicated to the aquaculture sector, coupled with the lack of planning and monitoring, has limited the growth and potential of the sector. The Peruvian aquaculture sector could benefit from a clear roadmap with long-term objectives and from regulatory stability. Although the overall regulatory framework is relatively clearly defined, agencies have a high turnover of high-level officials. This institutional weakness is a key obstacle to an organized development of aquaculture because there is a lack of technical expertise and continuity in policy making. This problem is aggravated by the scarce allocation of financial resources and human capital by Peru's Regional Governments (GOREs), limiting policy execution and investment in infrastructure and other public services at a regional level. Lack of continuity of governance makes it difficult to design, deploy, and evaluate policy instruments. Aquaculture is also affected by the negative externalities of other economic activities, primarily by mining that contaminates water sources required for cultivation. This problem is a direct consequence mainly of gaps in spatial planning management and policies, coupled with the lack of both supervision throughout regions and mitigation of informal activities.

The aquaculture sector in Peru needs more innovation and new technological processes and tools that allow it to compete in the international market. Peruvian aquaculture yields have been highly volatile in recent years because of climate change-induced volatility in oceanic conditions and disease. The presence of pathogens exacerbates the already relatively high mortality of key species, like shrimp. The absence of modern technology and skills to adapt to a changing climate and control for factors, especially among individual, micro, and small producers, leads to significant economic losses. Additionally, the supply of seeds for scallops depends on natural conditions threatened by climate change while the country is dependent on imports from Ecuador for shrimp seeds, and improved practices present an opportunity to capture more value locally. Peru could benefit from the example of the global aquaculture industry, which is moving toward adopting circular waste management practices in the transformation stage, creating synergies with other sectors, such as agriculture. Research activities are insufficient in scope and currently not well tailored to the needs of aquaculture operations. Companies in the sector have not invested in research and centers for genetic improvement to increase and genetically improve local seed production. Public support for research into better practices and technology and their adoption to specific geographical and climate conditions could support the sustainable growth of the sector. Overly rigid regulatory practices hamper innovation, impose additional cost, and lead to duplicative processes. This situation is evident, for example, in the context of sanitary standards where the government does not accept international certifications that firms must obtain for accessing high-value export markets. This government position leads to a duplication of the cost of compliance and can cause delays because the length of local audits frequently limits the export of firms' fresh products.

Value-chain structure. The growth of the sector has been constrained by high levels of informality, lack of public services, and a scarcity of human capital. These issues make it difficult to ensure tracing and certification, which are prerequisites for smaller producers to be integrated into global value chains. In addition to recommendations to improve public services, which were addressed in the earlier discussion on the bottleneck of governance and management, the sector needs targeted training programs and integration schemes to include smaller producers into local and global value chains.

Digital Economy

Digital services are an important enabling factor for national development strategies. Digitalization supports efficiency in other sectors—for example, health, education, agribusiness, commerce, and finance. Although digital services constitute a development pillar in many areas of the economy, the digital economy is not a monolithic block and consists of various interdependent components. Access to digital infrastructure throughout the country is a necessary condition for the digital economy to take off while the use of digital financial services has benefits both to foster financial inclusion and provide the basis for transactions with digital businesses. Promoting digital skills can help increase uptake of digital services and accelerate digital development. Among these, the most immediately pressing challenge is to solve issues around digital infrastructure and to consolidate the gains in the use of digital financial services (DFS) during the COVID-19 pandemic by introducing a comprehensive legal framework.

Poor infrastructure and limited internet connectivity are major impediments to fostering the digital economy in Peru. According to the Network Readiness Index of 2022, Peru ranks 78th out of 134 countries.²² More than half of rural *centros poblados* (populated centers; CCPPs) or localities (smaller than a district) do not have mobile internet coverage, while, in contrast, almost all urban CCPPs do. The primary priority for the equitable expansion of the digital economy needs to be the selection of a new operator of the national fiber-optic backbone infrastructure Red Dorsal Nacional de Fibra Óptica (RDNFO), combined with the implementation—and, where needed, restructuring—of the last-mile projects connecting rural communities to the internet. Other priorities include promoting mechanisms for infrastructure sharing, efficient spectrum use, and (increased) competition in the fixed internet market. An ongoing effort to streamline regulation is a positive development that is expected to contribute to improvements. In the context of universal access, it is also important to support digital literacy of individuals and micro, small, and medium enterprises (MSMEs), with a focus on demographics with below-average use, such as women and rural populations.

Promoting the use of DFS presents an opportunity to accelerate the closing of Peru's sizable gap in access to financial services. Before the COVID-19 pandemic, digital payments and online purchases were undeveloped, hampered by low levels of financial inclusion and knowledge in the population. The available DFS were primarily focusing on simple card-based point-of-sale transactions. The government of Peru has used its COVID-19 response to expand access to DFS in line with the National Policy of Financial Inclusion. Peru's public Banco de la Nación is rolling out digital accounts linked to the national ID document, Documento Nacional de Identidad (DNI), that citizens will have. The first stage of these DNI accounts aimed to enroll 2 million citizens and allowed them to access the social transfer payments. The program was expected to open accounts for 50 percent of citizens by December 2022; it will be critical to strengthen the security of accounts and minimize cases of fraud. To consolidate these gains, the government should implement a comprehensive legal framework and strengthen and streamline existing regulations regarding cybersecurity, anti-money laundering/combating financing of terrorism (AML/CFT), and privacy. The new regulation and supervision framework, based on best-practice examples from peers such as Mexico, Brazil, and Colombia, should aim to provide a sound basis for

the operation of financial technology (fintech) firms, crypto assets, open banking, and insurance technology (insurtech). The implementation of interoperability between electronic wallets is also critical to the development of DFS in Peru. The government of Peru should also create the basis for digital-only banking. While these issues are being resolved, a high priority should be ensuring coordination between the various agencies that are involved.

The government of Peru should build on progress made in e-government with the introduction of electronic payments and information platforms. The most important opportunities now are introducing a digital ID and instituting regulations that allow the interoperability of electronic payment systems. Digital ID is a foundational technology that would improve Peruvians' ability to easily access digital finance, e-government, and electronic businesses. These fintech innovations require resolving the questions of where information is housed and how access between government agencies and third parties is regulated. The government could learn from best-practice examples, such as in India. Recent successes in the development and improvement of e-government platforms need to be complemented by measures to promote adoption. These measures would include advisory services for the digital transformation of the Banco de la Nación, understanding the adoption process of digital payments, and filling the DFS knowledge gap. Platforms oriented toward SMEs and small agricultural producers could benefit from simplification.

To make full use of the opportunities of the digital economy, the government should support the uptake of technology in existing businesses and promote a start-up ecosystem with a focus on attracting venture capital. Although companies in Peru show some uptake of digital services to conduct business, progress is lagging its peers. In addition to promoting digital and financial literacy for individuals and SMEs, described earlier, the central and regional governments should support firms across sectors so the firms can benefit from digital solutions. Peru should consider providing support for accelerators, incubators, and tech hubs to generate more tech companies. Peru's start-up and venture capital sectors could benefit from partnering with regional technology hubs to attract more investment and foster regional expansion early in the life of start-ups. International experiences—for example, Colombia's development of the SofisTICa program (in Colombia Productiva)—could inform the design of programs that would allow companies in traditional sectors as well as information and communication technology to increase growth, productivity, and competitiveness.

Table ES. 1 outlines priority actions addressed in this CPSD.

TABLE ES.1: MATRIX OF PRIORITY ACTIONS

POLICY AREAS	SPECIFIC ACTIONS	TIMELINE
Cross-cutting or multisectoral		
Strengthen subnational government capacity.	<ul style="list-style-type: none"> Improve the Budgetary Programs (Programas Presupuestales; PPs) to be more effective at (a) aligning central and local government prioritizing of investments, and (b) achieving specific targets on cadastre development, land tenure regularization, connectivity, irrigation, and SME-enabling services. Promote market-oriented and cluster-specific public-private dialogues (PPDs) to inform the objectives and design of PPs and subsequent public investments in local enabling infrastructure and services. 	Short term
	<ul style="list-style-type: none"> Support accelerating and establishing PPPs in waste and wastewater management systems and related infrastructure in coordination with the National Water Authority (ANA). 	Short to medium term
	<ul style="list-style-type: none"> Introduce clear rules of responsibilities for expenditures and measures of fiscal capacity to allocate revenues across regional and local governments. Implement a stabilization fund for canon revenues to reduce their volatility. 	Medium to long term
Reform and improve the land market.	<ul style="list-style-type: none"> Improve the coordinating and streamlining of performance-based financing programs to incentivize and support local and regional governments in completing and updating the registry and cadastres. Promote property regularization in rural areas, especially for native and peasant communities. 	Short to medium term
Reform and improve the labor market.	<ul style="list-style-type: none"> Improve access to quality jobs while continuing to allow seasonal hiring (for example, in agriculture and tourism). Improve supervision tools and performance of SUNAFIL to ensure implementation of the law. 	Medium to long term
Sectoral		
Agriculture-specific investments in critical gaps in public services (in support of the integrated territorial approach and results-oriented programs earlier in this table)	<ul style="list-style-type: none"> Promote market-oriented and value-chain-specific PPD to identify constraints on fresh-food exports in lagging regions or facilitate productive alliances to link local smallholders in the Sierra to coastal exporters and off-takers. Leverage SENASA and other institutions in Peru to (a) enhance training and extension services for smallholders who aim to export or supply exporters; and (b) scale the adoption of CSA among smallholders. 	Short term
	<ul style="list-style-type: none"> Establish infrastructure and services (for example, testing facilities, collection points, and product tracing) to connect new agricultural regions to global supply chains. 	Medium term

Note: ANA = National Water Authority; CSA = climate-smart agriculture; PPs = Budgetary Programs (Programas Presupuestales); PPD = public-private dialogue; PPP = public-private partnership; SENASA = phytosanitary regulations and supervision system; SUNAFIL = National Superintendence of Labor Inspection.

POLICY AREAS	SPECIFIC ACTIONS	TIMELINE
Tourism-specific regulatory reforms and investments	<ul style="list-style-type: none"> Streamline certification and formalization, and revise standards to meet ecotourism and specialized adventure needs. Provide capacity to local and regional governments and destination management organizations, starting with pilot regions. Develop integrated tourism destination development master plans, in consultation with the private sector; include analysis of constraints on air travel. 	Short term
	<ul style="list-style-type: none"> Improve existing access roads to secondary destinations and key assets (for example, Route 34A between Arequipa and Patahuasi). 	Medium term
Aquaculture governance: Long-term roadmap Technology: Climate change adaptation	<ul style="list-style-type: none"> Implement the National Aquaculture Policy/regulatory framework that includes spatial planning regulation and a business perspective. Foster the provision of funds for research on climate change adaptation measures; support adaptation to geographic conditions. Support the development of research centers, particularly for genetic seed optimization. 	Medium term
Digital economy improvements: Equitable access to digital infrastructure, establishment of a comprehensive DFS framework, and promotion of the digital start-up ecosystem	<ul style="list-style-type: none"> Select a new operator for RDNFO, using a sound, financially sustainable business model that allows adjusting to new technology and market changes, and ensure implementation of last-mile connectivity projects with a focus on underserved rural areas. Introduce a comprehensive legal, regulatory, and supervision framework for digital financial inclusion, using experience from successful peer countries. Foster regional integration of digital start-ups and venture capital. 	Short to medium term

Note: DFS = digital financial services; RDNFO = national fiber-optic backbone infrastructure (Red Dorsal Nacional de Fibra Óptica).

NOTES

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- 2 World Development Indicators (WDI), GDP growth at constant local currency unit (LCU).
- 3 INEI (National Institute of Statistics and Information), "Capítulo 4: La Informalidad y la Fuerza de Trabajo [Chapter 4: Informality and the Workforce]" in *Producción y Empleo Informal en El Perú. Cuenta Satélite de la Economía Informal 2007-2019 (Incluye Sección Especial: Efectos de la COVID-19 en la Actividad Económica y el Empleo Informal)*. [Production and Informal Employment in Peru. Satellite Account of the Informal Economy 2007-2019 (includes Special Section: Effects of COVID-19 on Economic Activity and Informal Employment)] (Lima: INEI, 2020), https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1764/capo4.pdf; Eventos Naturales, Antrópicos y Desastres database, https://www.inei.gob.pe/media/MenuRecursivo/indices_tematicos/68.xlsx.
- 4 World Bank, "Peru Country Climate and Development Report (CCDR) Concept Note" (World Bank, Washington, DC, 2022).
- 5 The term "climate-smart growth" is used in this document as a shorter term for "low-carbon and climate-resilient economic growth."
- 6 World Bank, "Peru CCDR Concept Note."
- 7 The dispersion in household expenditures per capita across districts accounted for 46 percent of the variance in household expenditures per capita (a proxy for inequality) at the national level in 2018, according to the World Bank Poverty Assessment for Peru (forthcoming internal document).
- 8 World Bank, "Repensar el futuro en el Perú—Aportes para la reactivación económica y el desarrollo sostenible" ["Rethinking the Future in Peru—Contributions for Economic Reactivation and Sustainable Development"] (Peru Policy Note, World Bank, Washington, DC, 2021).
- 9 This turnover is further aggravated by the fact that local authorities cannot be reelected.
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- 11 BID-CEPAL, "La Economía del Cambio Climático en el Perú" (Banco Interamericano de Desarrollo, Comisión Económica para América Latina y el Caribe, 2014).
- 12 World Bank, "Perú: Hacia un sistema integrado de ciudades— una nueva visión para crecer" (Notas de Política, World Bank, Washington, DC, 2015).
- 13 World Bank, "Peru: Strengthening of the Property Legalization Process as Alternative to Formalization" (P155274, World Bank, Washington, DC, 2015).
- 14 J. Rentschler and M. Salhab, "People in Harm's Way: Flood Exposure and Poverty in 189 Countries" (Policy Research Working Paper 9447, World Bank, Washington, DC, 2020).
- 15 J. C. Saavedra, "Reforma Laboral: Del Consenso a la Acción," *Revista Poder*, October, 2014; J. Toyama, "La Rigidez Laboral Peruana," *Revista Poder*, October 2014.
- 16 The Labor Market Rigidity Index measures the stringency of several statutory labor market regulations across countries over time, focusing on hiring, working hours, redundancy rules, and redundancy costs.
- 17 A. C. David, F. Lambert, and F. Toscani, "More Work to Do? Taking Stock of Latin American Labor Markets" (IMF working paper WP/19/55, International Monetary Fund, Washington, DC, 2019); A. David, S. Pienknagura, and J. Roldos, "Labor Market Dynamics, Informality, and Regulations in Latin America" (IMF working paper WP/20/19, International Monetary Fund, Washington, DC, 2020).
- 18 V. Alaimo et al., "Measuring the Cost of Salaried Labor in Latin America and the Caribbean" (IDB technical note 1291, Inter-American Development Bank, Washington, DC, 2017).
- 19 However, a more stable and predictable political context—a factor the CPSD cannot address—would be needed.
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- 21 ILO (International Labour Organization), "Hacia una recuperación sostenible del empleo en el sector del turismo en América Latina y el Caribe" (ILO, Geneva, Switzerland, 2021), https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/documents/publication/wcms_809290.pdf.
- 22 According to the Network Readiness Index 2022. See https://networkreadinessindex.org/wp-content/uploads/reports/nri_2022.pdf.

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