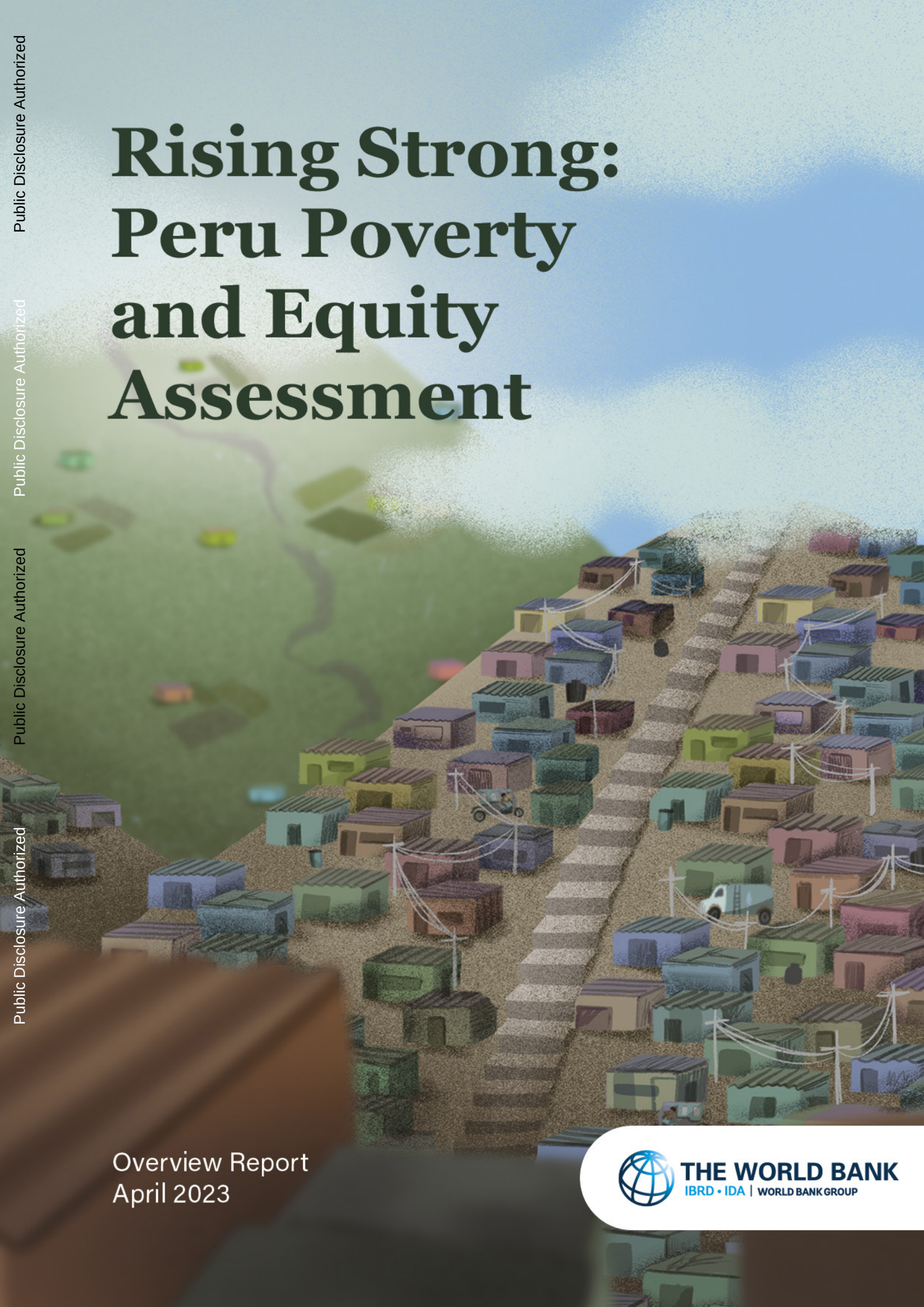
Rising Strong: Peru Poverty and Equity Assessment



Overview Report
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Executive Summary

Peru was one of the countries most affected by the COVID-19 pandemic in terms of health and economic impacts and the erosion of the social gains achieved in the previous decade. By July 2022, Peru had registered more than 6,000 deaths per million population because of COVID-19, placing the country among the countries with the highest COVID-related mortality rates per capita. The economy contracted by 11 percent in 2020, its biggest fall in 30 years and the largest in Latin America during that year. As a result, the national poverty rate increased to 30.1 percent, a level not seen since 2010, and extreme poverty reached 5.1 percent in 2020, comparable with the rate in 2013. By the end of 2021, the economy had recovered, but poverty and extreme poverty remained at the levels of 2012 and 2015, respectively. The magnitude of the welfare loss during the crisis revealed the fragility of the social gains that had been achieved during the previous two decades.

High levels of informality and limited social protection left workers unprotected from the economic shock of the COVID-19 crisis, and millions of workers lost their jobs. During the peak of the pandemic (the second quarter of 2020), approximately 6.7 million jobs were lost. However, the economic losses varied across the working population. Self-employed workers and individuals employed in small businesses—mostly informal—experienced the largest drop in employment. In contrast, people who were able to work from home and who had the benefit of internet connectivity—mostly formal—were less likely to lose their jobs. Youth, who exhibited higher informality rates relative to the rest of the population, lost their jobs at a higher rate. Women were also disproportionately affected, because they left the workforce at a higher rate than men, mainly because they supplied care to children and the elderly in households.

Despite the substantial government response to the crisis, Peru faces greater poverty now than before the pandemic. During the peak of the pandemic, the health system collapsed, and no one, regardless of their ability to pay, could access proper health care. Elements of the government response served as a buffer for income loss, preventing an additional poverty rate increase of 3.6 percentage points. However, although the mitigation package in Peru was one of the biggest in the region, it was insufficient to protect the vulnerable and the poor from falling (or falling further) into poverty.

Poverty has become predominantly an urban phenomenon. Although the trend toward the urbanization of poverty preceded the pandemic, the crisis accelerated the process. From 2013 onward, the share of the poor living in urban areas exceeded 50 percent. By 2019, urban areas were accounting for 56.7 percent of the total poor, and, with the pandemic, this proportion rose to 68.7 percent in 2021. The increase in urban poverty is consistent with the fact that the higher population density in urban areas fostered a higher risk of contagion. The need for containment measures was also greater. The urbanization of poverty and the concentration of the poor in urban pockets highlighted the urgency of an updated strategy to reduce poverty and reformulate the social protection system, which was not equipped to respond to the phenomenon of the urbanization of poverty.

Vulnerability to poverty in Peru has reached its highest level in two decades, which puts a significant share of the population at imminent risk in the face of shocks. Over the past two decades, vulnerability to poverty—measured as the share of the population living on US$6.85–US$14.00 a day in 2017 purchasing power parity (PPP) US dollars—has been rising.

In 2021, two Peruvians in five were at risk of falling into poverty, the highest rate since 2004. This high rate of vulnerability triggered the loss of 10 years of social progress during the COVID crisis, representing a greater setback in Peru than in the rest of Latin America and the Caribbean. Similar to poverty, vulnerability is concentrated in urban areas. The poor and vulnerable lack adequate formal coping mechanisms and rely on their families to support their consumption during a shocks.

The crisis has also intensified persistent territorial inequalities as well as disparities in access to productive assets and public services by minorities, women, Indigenous Peoples, and Afro-Peruvians. Peru's indigenous and Afro-Peruvian populations have few productive assets, limiting their capacity to become productive workers. Their educational attainment is relatively lower; they have less access to the internet, electricity, and financial services; and they are overrepresented in informal and self-employed jobs. As a result, the poverty rate is 7 to 8 percentage points higher among the indigenous population and Afro-Peruvians than among whites and mestizos. Similarly, persistent gender gaps limit women's capacity to take advantage of economic opportunities. Peruvian women are more likely to engage in poor-quality, low-productivity jobs. They also dedicate more hours to domestic work, a trend that was exacerbated by the pandemic, and they participate at a lower rate in the labor market. The average labor income is lower among women than men and has been recovering more slowly since the pandemic. Although poverty rates among men and women are similar, woman-headed households are more likely than man-headed households to be poor.

These persistent gaps, added to the political instability since 2016, have created a breeding ground for social discontent. Since 2016, because of the political crisis, the country has had six presidents, the political environment and the prospects for stable and sustainable governance have deteriorated, and economic performance and the foundations for investments have weakened. The governance crisis and the losses caused by the pandemic have set the stage for expressions of popular discontent: social gaps have become persistent, and political institutions are considered to have become blind to the country's needs. Barricades and protests have become commonplace in the streets. These problems have disproportionately affected the poor and most vulnerable.

The inflationary pressures and political uncertainty will hinder economic recovery. The political crisis and the rise in fuel and fertilizer has had a significant impact on Peru´s economy. The rise in prices in Peru started in mid-2021, as a result of the sizable increase in liquidity to counteract the fall in demand during the COVID-19 crisis. Inflation was exacerbated in 2022 because of the war in Ukraine. Inflation in May 2022 was 8.3 percent, the highest rate in 30 years. Most of this inflation is associated with food and energy. This has eroded the disposable incomes of workers and families and affected purchasing power. According to estimates, additional inflation had a negative effect on poverty, leading to a 1.4 percentage point decline in the rate of poverty reduction during 2021. Projections for 2022, suggest that the additional inflation has had a negative effect of 2 percentage points on poverty reduction. Roadblocks and protests have worsened the food crisis and eroded economic opportunity. The political uncertainty has delayed the economic recovery through the absence of a clear economic agenda and the reforms necessary to raise employment and investment.

Without significant economic growth and the needed reforms, poverty will not recover to the pre-pandemic level in the near term. In the past, sustained, inclusive growth supported a process of substantial poverty and inequality reduction. According to estimates of the direct impact of economic growth driven by income, 85 percent of the reduction in poverty (using the US$6.85-a-day line) between 2004 and 2019 was explained by economic growth, while more effective redistribution explained the remaining 15 percent.

Action is needed to engage the country on a new, inclusive path toward poverty and inequality reduction and addressing the harms caused by the pandemic in development. Although the economy has begun to recover from the short-term impacts of the pandemic, the potential long-term adverse impacts on human capital accumulation, food security, health outcomes, employment, and the capacity to undertake successful coping mechanisms threaten the country's future development. The pandemic also caused an estimated 20 percent increase in the number of orphans, which needs to be addressed. This report outlines four sources of fragility that should be tackled by the government and institutions to establish a new path toward poverty and inequality reduction.

What is behind the fragility of the social gains in Peru?

First, unequal access to public goods and services have prevented the population from accumulating productive assets. This has generated substantial gaps across socioeconomic groups and regions. Although access to basic services and infrastructure has improved over the past two decades, coverage is still far from universal. Access to a basic package of piped water, sanitation, electricity, and the internet has doubled in the past decade, but fewer than half the households have maintained such access. Moreover, the geographical disparities in access to basic services are significant. More than half of urban households have access to the basic package, but only 6 percent of rural households enjoy access.

The quality of services is low and unequal across the country. The provision of piped water and electricity has been plagued by interruptions in coverage and outages. Access to water is undermined because the water is not always safe to drink. The quality of health services is below the standards of the World Health Organization almost everywhere in the country, and the quality of education is low, especially in the Amazon rainforest and the Andes highlands. The quality of such services is unequal depending on location. While the number of doctors per capita in Lima is at the level recommended by the World Health Organization, the other regions lag. Similarly, while half the students in the Tacna region achieve satisfactory scores in reading and mathematics, in Loreto and elsewhere, the scores are at only 4 percent. Low, unequal access to these services threatens the ability of individuals to escape poverty and cope with shocks.

Second, the limited accumulation of productive assets by poorer population segments is linked to the low quality of jobs and stagnant labor productivity, which leaves workers unprotected from future shocks. The Peruvian economy is characterized by excessive informality given the country's gross domestic product (GDP), compared with other upper-middle-income countries. Informality has remained high throughout the past two decades, reaching the highest level during the pandemic. Labor productivity is low and has

been stagnant for years. During the economic expansion, productivity rose only slowly in Peru compared with the productivity in other upper-middle-income countries. Most Peruvian workers are employed in low-productive, mainly microenterprises. In 2021, despite the economy's gradual recovery and level of employment, the quality of jobs had not yet returned to pre-pandemic levels. Jobs have suffered in many dimensions, such as income, benefits, stability, and worker satisfaction, as reflected in the job quality index, which fell drastically, from 0.57 in 2019 to 0.53 in 2021.

The high rate of informality affects the capacity of the government to collect revenue, which is below the corresponding capacity in the rest of the region. The government of Peru collects relatively less revenue than other countries at a similar GDP per capita. Tax revenue is below potential in Peru because of the narrow tax base, the high rate of informality, and the low efficiency in tax collection. The high rate of informality and the high tax payment threshold on labor incomes mean that only 8 workers in of every 100 pay income taxes. Tax evasion is also estimated to be high relative to other economies in the Pacific Alliance, further limiting revenue collection.

Third, the capacity of the tax and transfer system to redistribute is limited because of the reliance on regressive indirect taxes and because of leakage in social transfers. The tax system in Peru is among the tax systems in upper-middle-income countries that has the least impact in the effort to reduce inequality. This is partly because most of the revenue in Peru is derived from indirect taxes (mainly the value added tax), which is the most regressive form of taxation. Value added tax exemptions, although they are progressive, leak and become available to people at the top of the income distribution. Other benefits, such as cash transfers, also leak, limiting he government's ability to redistribute.

Fourth, Peru's exposure to negative aggregate shocks increases the probability that households will become poor and remain poor. Peru is particularly exposed to natural shocks because of its location and topology, and its exposure to climate risk has increased over the past two decades. Low-income and rural households are more widely exposed to natural disasters, while urban and more well off households experience more idiosyncratic economic shocks. Among low-income and rural households, the probability of escaping poverty declines in the face of a natural disaster. And, among urban and more well off households, the probability of falling back into poverty increases in the face of an economic shock.

The poor and vulnerable will likely face the greatest variations in climate in the future, thereby increasing climate-induced inequality. The National Service of Meteorology and Hydrology of Peru estimates that, by 2050, the amount of precipitation will decline by as much as 40 percent in some areas of the country. Similarly, the temperature is expected to rise by as much as 3.5°C. The sharpest increases in temperature and reductions in rainfall are expected to occur in districts with larger shares of the poor (chronically poor districts) and vulnerable (high vulnerability districts) population.

How can the government and institutions in Peru reduce the fragility of social gains?

To reduce the fragility of social gains in Peru, the government and institutions must facilitate a new type of growth, one that is inclusive and that fosters poverty and inequality reduction, but also addresses the weaknesses revealed by the pandemic. Growth needs to be focused on improving the productive capacity of the poor and the most vulnerable. Efforts must be directed toward lifting persistent constraints, such as impediments preventing firms and workers from growing and becoming formal. Promoting formality by boosting the growth of firms would raise productivity, which could then be expected to benefit the poor and vulnerable, who are overrepresented in informal and low-quality jobs, thereby narrowing disparities. In this sense, new drivers of growth, such as prioritizing investment in high-potential growth sectors, should be considered. Betting on agriculture, forestry, and tourism, which account for a substantial share of the poor and vulnerable, would unleash the potential of these people across the country. It could also encourage climate-resilient development to prepare for the future. Achieving climate resilience in these sectors would scale back the vulnerability of workers to shocks as the workers adapt their activities to changes in climate, thereby diminishing the danger of layoffs as these sectors become greener and more competitive. Such policies must be considered even if they take longer to implement.

In the medium to long run, the government require more fiscal resources to finance the provision of high-quality services and accelerate the accumulation of productive assets among households. This would involve support mainly for the accumulation of human and financial capital, regardless of geographic location or sociodemographic characteristics. An initial effort would focus on closing the infrastructure gap in connectivity, technology, health care, and schooling. The relevant investments would require a geographic lens because the major gaps in infrastructure and service delivery are in remote areas. The necessary steps in this effort will include reforms at the subnational level based on clear definitions of spending responsibilities, the articulation of agency budgets around shared projects, and the promotion of relevant spending. Similarly, higher-quality services require more fiscal resources. The government should focus on policy actions to reduce tax evasion and increase the tax base and progressiveness of the tax-transfer system.

Meanwhile, in the short term, the damage caused by the pandemic should be addressed. COVID-19 negatively affected health and health care, school attendance and learning, the quality of employment, and employment among youth. A first step in addressing the damage would involve providing follow-up care to individuals who have not entirely recovered and investing in mental health programs. Another priority should be social assistance program support for children who have lost their primary caregivers. To confront close learning deficits deriving from the pandemic, strategies to help students catch up must be implemented. The government should also incentivize the return of formal jobs lost during the pandemic and help youth become more employable by providing training programs. Investments in closing the gaps that widened during the pandemic, such as the gap in economic opportunities that affects women, will be necessary.

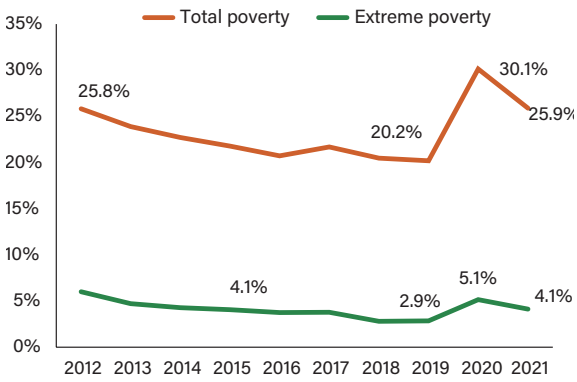
The short-term agenda should include the transition to an adaptive social protection system. The goal should be to make the system more resilient against future shocks and to identify ways to safeguard any new social gains within the economy. Social gains should be secured from future shocks. However, because shocks are not evenly distributed across the country and because the diverse population groups require a variety of tools to respond to shocks, a menu of social protection policies will be needed. The menu should include social assistance policies to reduce poverty, social insurance policies to protect the vulnerable, and measures to increase economic opportunities for all to improve the capacity of people to manage risks and cope with shocks.

Poverty and inequality after the crisis

01

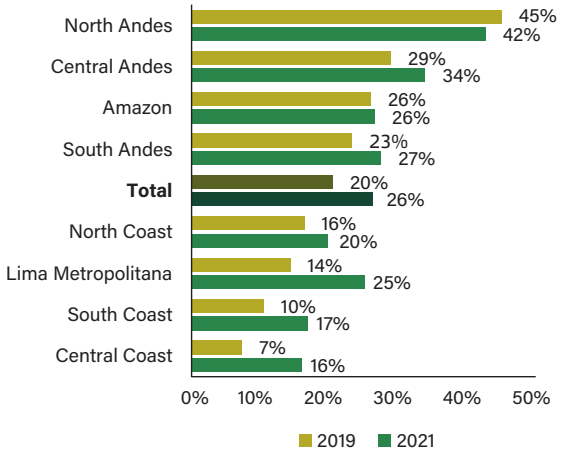
After decades of social and economic progress, Peru faces higher poverty rates now than before the pandemic. By the end of 2021, the poverty rate in Peru stood at 25.9 percent, comparable with the rate in 2012 (Figure 1). The extreme poverty rate stood at 4.1 percent, the same as the corresponding rate in 2015. In absolute terms, this means that, in 2021, there were 8.6 million poor people, while, in 2019, there were only 6.6 million poor people. (In 2011, the number was 8.3 million.) The poverty rate is now higher in almost all regions of the country. In 2021, one Peruvian in four was poor, but a geographic analysis shows differences across the country. In the northern and central Andes, the poverty rates were 42 percent and 32 percent, respectively, while, in the central and south coast, the rate was only around 17 percent. In Lima, it was 25 percent. In addition, in all areas except the northern Andes, the poverty rate was higher in 2021 than in 2019 (Figure 2).

Figure 1. National and extreme poverty, 2015–21
percent of total population



Source: Based on data of the National Household Survey.

Figure 2. National poverty by natural region, 2019–21
percent of total population



Source: Based on data of the National Household Survey.

The setback came after two decades of considerable poverty reduction. Between 2004 and 2019, the share of the population living under the national poverty line fell from 58.7 percent to only 20.2 percent.[1] Most gains corresponded to the period between the early 2000s and 2013, when the poverty rate dropped 34.8 percentage points, from 58.7 percent to 23.9 percent. In the following six years, between 2013 and 2019, poverty decreased only an additional 3.7 percentage points, to 20.2 percent. Following the same pattern, extreme poverty decreased the most during 2004–13, from 16.4 percent to 4.7 percent (11.7 percentage points). During 2013–19, it dropped an additional 1.9 percentage points, to 2.9 percent.

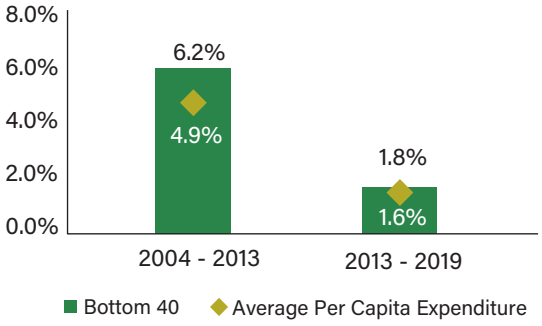
The two decades preceding the pandemic were characterized by higher-than-average growth relative to the rest of the region. While the region averaged 3.6 percent real growth in gross domestic product (GDP) between 2004 and 2013, Peru registered an average real GDP

1. In Peru, household consumption per capita and monetary poverty lines are used to measure poverty. The poverty lines are constructed based on the minimum cost of a food basket necessary to achieve adequate living conditions. The cost varies by geographic region as well as by rural or urban location. The national poverty line in local currency in 2021 was S/. 378 per capita per month, while the extreme poverty line in 2021 was S/ 201 per capita per month.

growth of 6.6 percent.[2] The outstanding economic performance is explained by successful macrostructural reforms, supportive monetary and fiscal policy, and favorable exogenous conditions because of the commodity price boom, which was coupled with significant net inflows of foreign direct investment.[3] Even after the economy slowed because of the end of the commodity boom, the economic slowdown in China, and the decline in private investment, the average real GDP growth was three times higher in Peru than the regional average.[4] As a result of the growth, GDP per capita in Peru doubled to S/ 17,012.

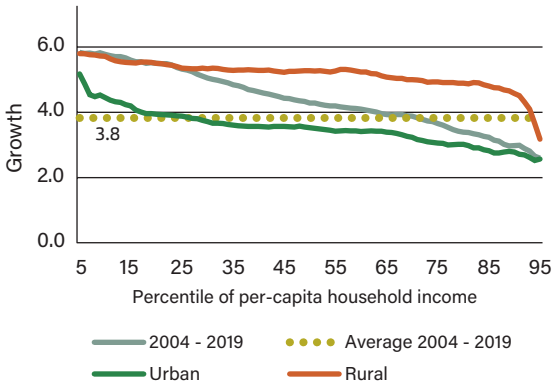
Growth during these years was pro-poor and allowed reductions in inequality. Welfare growth among the bottom 40 percent of the income distribution was above the average, especially during the years of greater economic expansion. Over the 2004–13 period, the average per capita household consumption growth of the bottom 40 was 6.2 percent compared with an annualized average growth of 4.9 percent (Figure 3). Similarly, per capita household income grew at a higher rate among the lower percentiles of the income distribution than at the higher percentiles in both urban and rural areas, as shown by the negative slope in the income growth incidence curve (Figure 4).

Figure 3. Average annualized growth rate in per-capita expenditure, 2004–13 and 2013–19



Source: Elaboration based on 2004–19 data of SEDLAC.

Figure 4. Growth incidence curves at the national, urban, and rural levels, 2004–19



Source: Elaboration based on 2004–19 data of SEDLAC.

2. Based on data of SEDLAC (Socio-Economic Database for Latin America and the Caribbean), Center for Distributive, Labor, and Social Studies, Facultad de Ciencias Económicas, Universidad Nacional de La Plata, La Plata, Argentina, and Equity Lab, Team for Statistical Development, World Bank, Washington, DC, https://www.cedlas.econo.unlp.edu.ar/wp/estadisticas/sedlac/.

3. Several structural reforms were implemented in the 1990s, such as the adoption of a fiscal rule, inflation targeting, and the establishment of a legal framework for foreign and private investment. Accordingly, the government signed key trade agreements, for example, with the United States (2006), Japan (2011), and the European Union (2012). The main policies implemented included the autonomy of the Central Bank, exchange rate flexibility, and a trade and financial opening. During this period, commodity prices rose significantly, favoring mineral exports. As a result, the private sector increased its contribution to economic growth, and private investment participation rose from 12 percent of GDP in 1993 to 18 percent in 2019. The net inflows of foreign direct investment in 2019 amounted to almost US$6.8 billion (2.8 percent of GDP), equivalent to eight times the 2000 level.

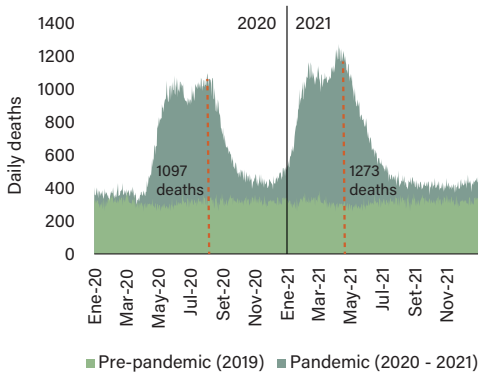
4. The average GDP growth between 2013 and 2019 was 3.1 percent in Peru and 1.0 percent in Latin America and the Caribbean.

Remarkable social gains were achieved during this period. In access to basic services and infrastructure, such as adequate housing, sanitation, and education, the share of individuals with at least one unsatisfied basic need fell from 56.8 percent in 1993 to 40.7 in 2007 and 25.3 in 2017.[5] The lack of access that notable improvement was in sewerage services, which fell by 30.7 percentage points, from 36.5 percent in 1993 to 5.8 percent in 2017. There was also considerable progress in access to piped water and electricity, which increased from 62 percent to 87 percent and from 76 percent to 96 percent, respectively, between 2004 and 2021. Similarly, better labor market outcomes contributed to the decline in poverty. Higher labor earnings explained 56 percent of the poverty reduction between 2004 and 2021 and 48 percent of the reduction in extreme poverty.

COVID revealed the fragility of the social gains

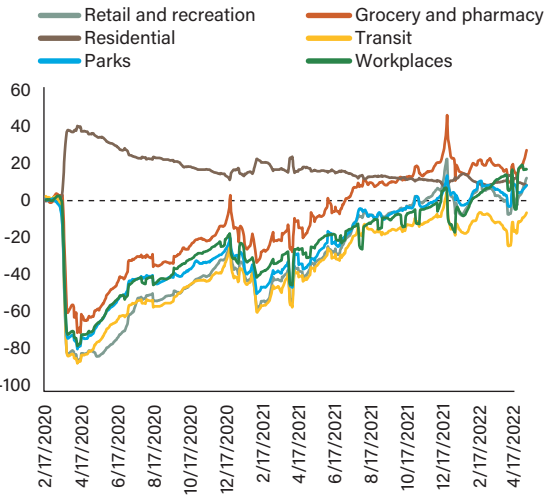
The long-term improvements in household welfare came to a sudden halt when Peru registered one of the world's highest COVID-related mortality rates and strictest lockdowns. According to the Ministry of Health, 3.5 million Peruvians were infected with COVID-19 between 2020 and 2021, and more than 213,000 died from the disease, placing Peru at the highest (or second highest) share of COVID deaths per capita in the world, a rate of 6,000 people per million (Figure 5).[6] Peru's strict quarantine measures removed people from economic and social activities, and mobility only returned to pre-pandemic levels in mid-2022. According to Google Mobility Trends, retail and recreational activities, activities in parks and workplaces, and the number of people at public transport stations fell by at least 72 percent.[7] Meanwhile, the amount of time people spent at home rose by almost 40 percent immediately after the lockdown (Figure 6). The lockdown and mobility restrictions were among the most severe in the region.

Figure 5. Excess deaths, 2020 and 2021 relative to 2019



Source: Data of SINADEF.

Figure 6. Changes in mobility by category, 2020–22



Source: Data of SINADEF.

5. This analysis is based on the population census of 1993, 2007, and 2017 using the unsatisfied basic needs measurement. See Censos Nacionales 1993: XI de Población y VI de Vivienda (dashboard), Instituto Nacional de Estadística e Informática, Lima, Peru, http://censos.inei.gob.pe/censos1993/redatam/; Censos Nacionales 2007: XI de Población y VI de Vivienda (dashboard), Instituto Nacional de Estadística e Informática, Lima, Peru, http://censos.inei.gob.pe/Censos2007/redatam/; Censos Nacionales 2017: XII de Población, VII de Vivienda y III de Comunidades Indígenas (dashboard), Instituto Nacional de Estadística e Informática, Lima, Peru, https://censo2017.inei.gob.pe/resultados-definitivos-de-los-censos-nacionales-2017/.

6. According to Our World in Data, Peru ranks first among countries with the highest mortality rate per million inhabitants. See Coronavirus (COVID-19) Deaths (dashboard), Our World in Data, Global Change Data Lab, University of Oxford, Oxford, UK, https://ourworldindata.org/covid-deaths. According to recent estimates published in Lancet, Peru ranks second after Bolivia (COVID-19 Cumulative Infection Collaborators 2022).

7. See COVID-19: Google Mobility Trends (dashboard), Our World in Data, Global Change Data Lab, University of Oxford, Oxford, UK, https://ourworldindata.org/covid-google-mobility-trends.

As a result of the global pandemic and the strict lockdown measures, the economy contracted by 11 percent in 2020. This was its biggest fall in 30 years and the biggest fall registered in any country in Latin America in 2020. The most severely affected sectors were construction, commerce, and other services. GDP in these sectors fell in real terms by 13.3 percent, 16.0 percent, and 10.0 percent in 2020, respectively. Moreover, employment in these sectors also fell, by 11.1 percent, 20.5 percent, and 26.2 percent, respectively.

The crisis eliminated in a single year more than a decade of progress in poverty reduction, revealing the fragility of the progress. In 2020, the national poverty rate rose to 30.1 percent, equivalent to the level in 2010. The extreme poverty rate also increased, from 2.9 percent in 2019 to 5.1 percent in 2020. Depressed labor market conditions led to lower labor incomes and lower per capita household expenditure. Average labor income declined by 21.0 percent, and average household per capita monthly expenditure fell by 15.9 percent.[8] The quality of jobs also decreased. The share of workers with adequate jobs dropped from 55.8 percent in 2019 to 45.5 percent in 2020.[9] The negative effects were more pronounced among individuals at the lower end of the income distribution.

By 2022, two years after the beginning of the pandemic, economic activity has recovered but households face lower labor incomes and lower quality of employment. GDP grew at a rate of 13.4 percent in 2021 and 2.7 percent in 2022, returning to the pre-pandemic growth rate. However, between 2019 and 2021, the informality rate rose from 72.7 percent to 76.8 percent, representing 693,500 new informal jobs. Average monthly labor income was still 5 percent lower in 2021 than before the pandemic, and expenditure was an average 3 percent lower in 2021 than before the pandemic.

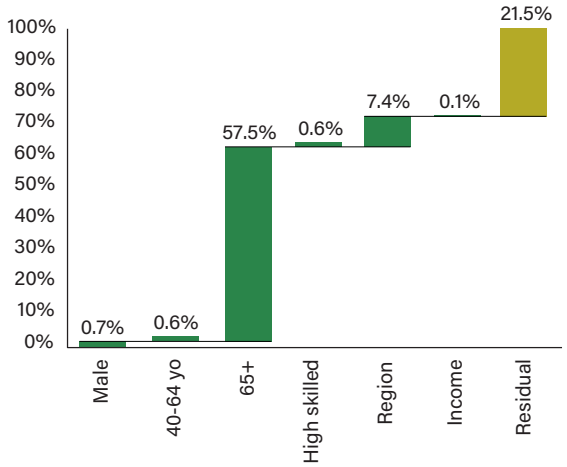
Income did not protect Peruvians from the health shocks of COVID

Unprecedented matching between various datasets reveals insights into the distributional impacts of COVID-19. Deaths are reported in a national registry, the Sistema Informático Nacional de Defunciones, along with socioeconomic characteristics, such as the date of death, gender, place of residence, and educational attainment.[10] However, there is no information on the income or expenditure of the households of the deceased, crucial variables in the calculation of distributional incidence. The National Household Survey (ENAHO) contains this information. A matching exercise was therefore performed to identify the socioeconomic characteristics of the deceased and their families.[11] While there are methodological caveats to the analysis, the results – at most – underestimate the magnitude of differences.

Age and region of residence explain most of the variation in mortality rates, whereas income played no role in the probability of dying from COVID-19. An analysis of variance in mortality rates by individual characteristics shows that more advanced age and region of residence are the main determinants of the probability of dying from COVID-19. Figure 7 shows the decomposition of excess mortality rates by variable. The age of the population explains most of the variance in excess mortality (close to 60 percent). Another 7 percent is explained by the regions in which the individuals lived. Education and gender have little explanatory power, and income explained none of the variance.

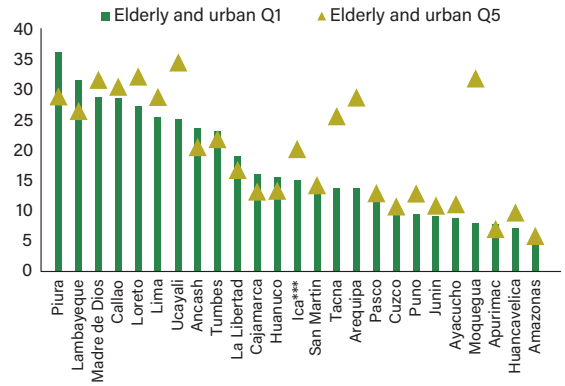
8. At constant prices in the Lima Metropolitan Area in 2021 (INEI 2022a).
9. A quality job, according to the job quality index, is defined as one in which the worker earns a sufficient income (above the poverty line), has benefits (health and retirement), has stability (contract), and is satisfied (Gammarano 2020).
10. See SINADEF (Sistema Informático Nacional de Defunciones, National Information System of Deaths) (website), Ministry of Health, Lima, Peru, https://www.minsa.gob.pe/defunciones/.
11. A thoroughly explained methodology can be found in the forthcoming World Bank Peru Poverty Assessment, chapter 2, appendix B.

Figure 7. ANOVA analysis: variance in mortality rates



Source: Elaboration based on data of the National Household Survey and SINADEF.

Figure 8. Excess deaths per 1,000, 65+ population, by region and expenditure quintile



Source: Elaboration based on data of the National Household Survey and SINADEF.

Peruvians ages over 40 were three times more likely to die during the pandemic than in a normal year, although their probability of dying remained below 1 percent, and Peruvians ages over 65 were two times more likely to die during the pandemic, with their probability of death surpassing 4 percent during the pandemic. Before the pandemic, 24,000 deaths were reported among the 40–65 age-group, and, in 2021, close to 72,000 deaths were reported in the same age-group. Among the 65+ age-group, 72,000 deaths were reported before the pandemic, while 151,000 deaths were reported in 2021.

Mortality rates were homogeneous throughout the income distribution; but they varied mainly by region of residence. In most regions, the urban population ages 65 or more showed no difference in mortality rates between the lowest and highest expenditure quintile (see Figure 8). The difference in mortality rates varied much more across regions. The excess deaths in regions such as Piura were twice that of Cajamarca and Huánuco and four times that of Apurimac and Huancavelica, independent of household income.[12]

Jobs did not protect workers equally from economic loss

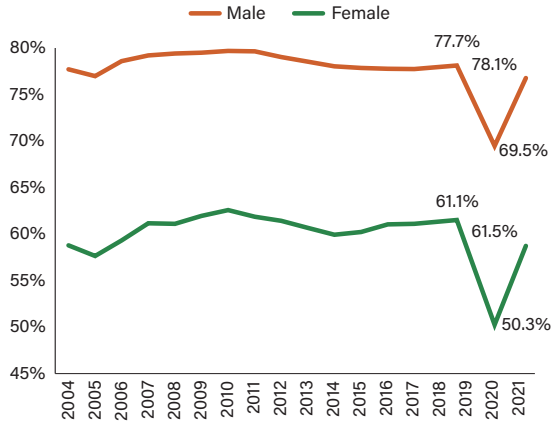
Workers suffered economic loss in various ways depending on their employment status. During the peak of the pandemic (the second quarter of 2020), approximately 6.7 million jobs were lost.[13] The impact on employment was heterogeneous and depended mainly on the formal or informal status of the workers and their jobs. For instance, in the Lima Metropolitan Area, self-employed workers and employees in businesses with fewer than 10 workers (mostly informal) exhibited the steepest drop in employment (63 percent and 66 percent, respectively).[14]

12. Higher urbanization in large cities within Piura compared with Apurimac and Cajamarca and a higher share of the elderly in a population could have played a role in the regional differences. COVID-19 spread more quickly in densely populated areas and was riskier among the elderly. For more information, see the forthcoming World Bank Peru Poverty Assessment, chapter 2.
13. INEI (2020b).
14. INEI (2020d).

Informal workers were 12.4 percent more likely to be unemployed. Workers who depended on public transport, mainly in urban areas, were particularly affected by the pandemic.[15] In contrast, workers who could work from home and had internet connectivity (mostly formal) were less likely to lose their jobs in 2020. Workers in essential sectors were 22.2 percent more likely to remain employed.[16]

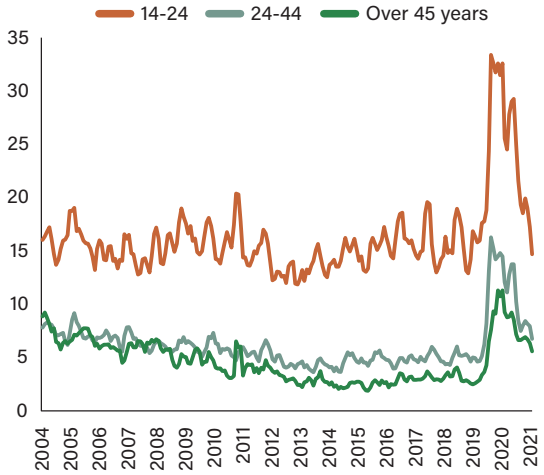
Women and youth were disproportionately affected by economic loss. Women were 9 percent more likely to lose their jobs.[17] They left the workforce at a higher rate than men, mainly to care for children and the elderly, given the closure of schools and the reduced supply of support and care systems. Figure 9 shows that the fall in labor participation among women, 11.2 percentage points, was greater than that among men, 8.6 percentage points. This is in line with evidence from the World Bank High Frequency Phone Survey conducted during the pandemic, which reported that 31 percent of women experienced an increase in the amount of housework, compared with 20 percent of men.[18] Young people (ages 14–24) also lost their jobs at a higher rate. Figure 10 shows that the unemployment rate among youth in Lima doubled between 2019 and 2020. It also increased more than the rate among adults: 20 percentage points among youth, compared with 10 percentage points among adults. Similarly, the informality rate among youth, which was already 8 percentage points higher than the rate among adults, increased during the pandemic.

Figure 9. Labor force participation, by sex, 2004–21
percent of total population ages 14 or more



Source: Based on data of the National Household Survey.

Figure 10. Lima Metropolitana: unemployment rate, by age-group, 2004–21
three-month moving average, %



Source: Data of Banco Central de Reserva del Perú.

15. (Cueva, Del Carpio, and Winkler 2021). Estimates are based on the longitudinal component of the National Household Survey (2020). The probability of women losing their jobs is conditional on characteristics that allow employees to work from home and on individual characteristics such as age-group, urban or rural residence, and educational attainment.

16. Estimates are based on the longitudinal component of the 2020 ENAHO. The probability that a woman would lose her job was conditional on characteristics that allow employees to work from home and on individual characteristics, such as age-group, urban or rural residence, and educational attainment (Cueva, Del Carpio, and Winkler 2021).

17. Cueva, Del Carpio, and Winkler (2021).

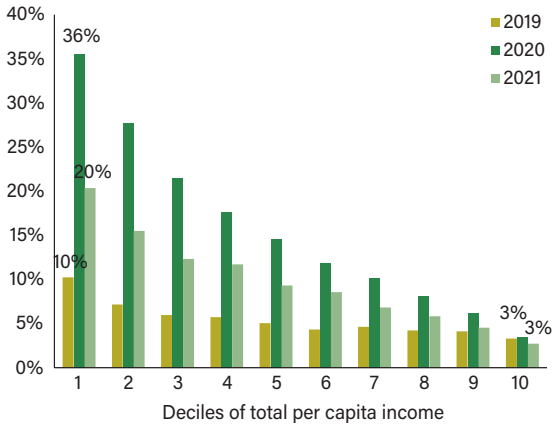
18. The High Frequency Phone Survey was an instrument implemented in the midst of the pandemic by the World Bank in a joint effort with statistical offices in Latin America and the Caribbean and other regions (Mejía-Mantilla et al. 2021). The surveys were performed by phone in a panel format in three waves. On average, 1,000 interviews were performed in each country during each wave. The surveys collected information on multiple dimensions, such as changes in employment and income, the prevalence of food insecurity, access to health, education, and financing services, coping mechanisms, and so on.

The government response only partially mitigated the effects of COVID-19

In response to the loss of jobs and income, the government rolled out a significant cash transfer for the poor and vulnerable. Between March 2020 and September 2021, the government implemented one of the largest economic plans in the region, valued at 21.6 percent of GDP that that consisted of provision of liquidity to enterprises through guaranteed loans, fiscal transfers to vulnerable population groups and firms, increased expenditures on goods and services, and relaxing access to unemployment and private retirement accounts.[19] A total of six cash transfer programs were launched to mitigate the effects of the pandemic.[20] In total, 72.6 percent of households received at least one type of benefit. The incidence among poor households was 84.1 percent, while, among extremely poor households, it was 85.7 percent.

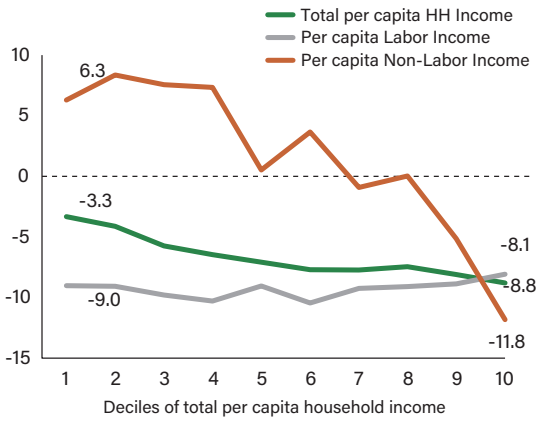
Transfers partially served as a buffer against the reduction in labor income. Figure 11 shows that, among households in the lowest decile, transfers represented more than a third of household income per capita in 2020, an increase of 26 percentage points relative to a normal, nonpandemic year (2019). Among households in the top decile, transfers represented only 3 percent of household income in 2019 and 2020. Figure 12 shows a similar pattern. Labor income per capita declined across all deciles by around 9 percent. However, per capita, nonlabor income (which includes transfers) rose 6 percent among households in the lowest deciles, which mitigated the fall in total per capita income among poor households. Although transfers served as a buffer, and they were reasonably targeted, the transfers were not large enough to counter the unprecedented magnitude of the economic shock, and the poor still experienced shrinking household incomes, pushing more people into poverty.

Figure 11. Per capita social transfer, % of total per capita income, 2019–21
total per capita income household income, %



Source: Estimates based on SEDLAC data.
Note: Transfers include CCT and non-CCT. Total per capita income excludes imputed rent.

Figure 12. Growth incidence curve, by income component, 2019–21



Source: Estimates based on SEDLAC data.
Note: Total per capita income excludes imputed rent. Nonlabor income includes transfers, pensions, capital income, and other sources of income such as donations.

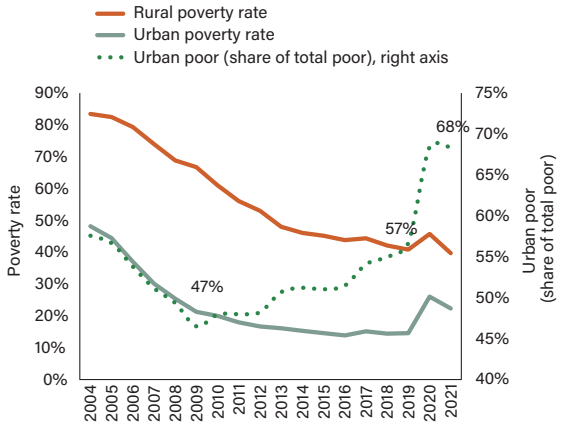
19. According to Ministry of Economy and Finance, tax and public spending measures account for 7.8 percent of GDP.
20. The cash transfers to mitigate the pandemic were the bono para hogares en extrema pobreza, the bono independiente, the bono rural, the bono familiar universal, the Bono 600, and the Bono Yanapay (Gob.pe 2021).

Without the government's response, the pandemic would have been more devastating in terms of poverty, especially among rural inhabitants, Indigenous Peoples, and Afro-Peruvians.[21] Estimates based on ENAHO data of 2020 show that the poverty rate would have been 3.6 percentage points higher without the benefit transfers.[22] The poverty rate in urban areas would have been 3 percentage points higher, while, in rural areas, it would have been close to 5.5 percentage points higher. Although the biggest mitigation measures were adopted in 2020, the government continued its efforts in 2021. The Bono Yanapay covered 67 percent of all households. As a result, in 2021, the poverty rate would have been 2 percentage points higher without benefits. The rate in urban areas would have been 2 percentage points higher without the emergency mitigation measures, while, in rural areas, it would have been close to 3 percentage points higher. The benefits also helped avoid greater poverty impacts among the indigenous and Afro-Peruvian populations because the mitigation measures prevented additional 3.3 and 2.4 percentage points increases in the poverty rate in 2020 and 2021, respectively.[23]

Poverty has become more urban than ever before

In the aftermath of the crisis, poverty has become predominantly urban. The trend toward the urbanization of poverty began before the COVID-19 crisis. However, the process was accelerated by the pandemic. From 2013 onward, Peru experienced the urbanization of poverty, as the share of the poor living in urban areas rose to above 50 percent. By 2019, urban areas accounted for 56.7 percent of the total poor. Because of the pandemic, the share increased significantly, to 68.7 percent in 2021 (Figure 13). This is consistent with the fact that the higher population density in urban areas created a greater risk of contagion and a greater need for containment measures. Meanwhile, rural poverty gains have already been recovered, while urban poverty is driving the stagnation in poverty reduction. Urban poverty is concentrated in Lima (24 percent of the poor), and Lima together with the 12 other biggest cities in the country accounts for 40 percent of the poor (Figure 14). The urbanization of poverty and the concentration in urban pockets call for an updated strategy to reduce poverty. The slowdown in economic activity, external shocks, low productivity, high informality in labor markets, and domestic and international migration are among the main correlates of the rise in urban poverty and vulnerability (Box 1).

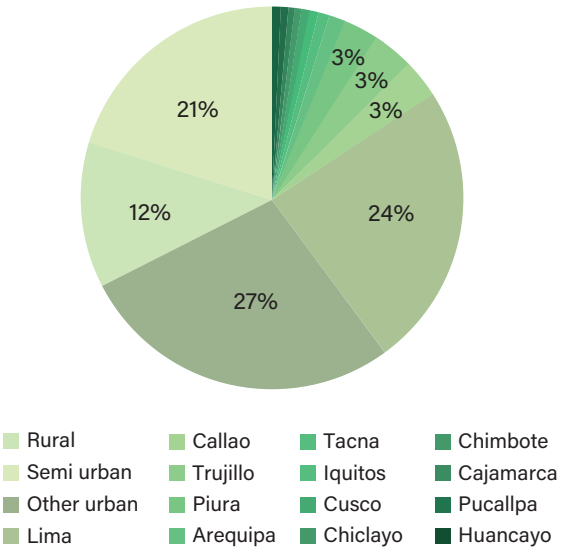
Figure 13. The urbanization of poverty: poverty by area, 2004–21
% of total population, share of total poor



Source: INEI-Enaho.

21. Individuals are considered indigenous or Afro-Peruvian if they live in households in which the heads consider themselves Afro-descendant, Aimara, Amazonian, or Quechua because of customs or ancestry.
22. Estimates using the 2017 purchasing power parity (PPP) international poverty lines of US$6.85 a day and ENAHO.
23. Estimates using the 2017 PPP international poverty line of US$6.85 a day.

Figure 14. Share of the poor, by urban-rural area, 2021
% of total poor



Source: Based on data of the National Household Survey.
Note: Data on the poor by district are derived from small area estimates based on the 2017 and 2021 National Household Surveys and the 2017 census. For the 13 largest cities, districts are grouped as other urban areas, semiurban areas, and rural areas as defined by the National Institute of Statistics and Informatics.

Box 1. Venezuelan migration to Peru

About 6.8 million people have left the República Bolivariana de Venezuela to escape an economic, social and political crisis; these emigrants represent the world's second largest external displacement crisis.[a] After Colombia, Peru has welcomed more Venezuelan migrants and refugees than any other country in the region, and it is first in the number of refugee applicants. An estimated 1.4 million Venezuelan migrants and refugees were living in Peru in 2022 (R4V 2023). The immigrant and refugee population has settled mostly in coastal regions, and about 84 percent are in Callao and Lima.

The inflow of Venezuelan migrants and refugees represented a major challenge to the provision of public services, particularly in areas with a greater concentration of migrants. In response, public education and health systems had to undertake targeted efforts to meet the increased demand. In 2019, it was estimated that the public education system would require 118,000 additional spaces to accommodate Venezuelan students, of which only 35,000 were attending school at the time.

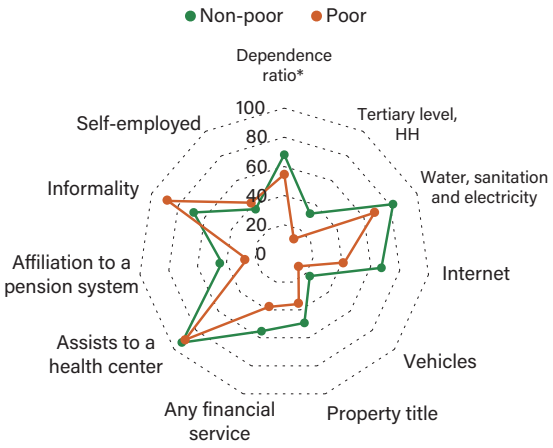
a. "Situación de Venezuela," Emergencias, United Nations High Commissioner for Refugees, Geneva, https://www.acnur.org/situacion-en-venezuela.html.

Registered Venezuelan immigrants and refugees arriving in Peru typically have higher educational attainment relative to Peruvian. However, their entry into the labor market has occurred in disadvantaged conditions and with a degree of skills mismatch.[b] Venezuelan workers earned around 37 percent less by the hour relative to Peruvian workers performing similar functions. Most dependent Venezuelan workers had no contract and worked in small businesses. Thus, they did not have employment-based health insurance. The vulnerability of their jobs is mainly explained by their migration status and their limited ability to validate their educational degrees.

Venezuelan immigrants and refugees appeared to have been more severely affected than Peruvians by the pandemic. The concentration of Venezuelan immigrants and refugees in urban areas increased their exposure to COVID-19. Likewise, the higher incidence of poverty and lower productive-asset base among them before the pandemic (18 percent compared with 13 percent among Peruvians in comparable regions) limited their ability to cope. Venezuelan immigrants and refugees faced the pandemic under more vulnerable labor and living conditions and with lower access to health insurance. Furthermore, they were not eligible to receive government cash transfers to protect them against the income shocks associated with the COVID-19 crisis.

The urban monetary poor possess significantly fewer productive assets and have less access to services and markets relative to the nonpoor. In 2021, the urban poor were more vulnerable and had lower human, physical, and institutional capital than the urban nonpoor (Figure 15). For instance, the share of the urban poor in households in which the heads have attained tertiary education reaches only 12 percent, while the corresponding share among the nonpoor is 33 percent. Likewise, only 68 percent of the urban poor have access to water, sanitation, and electricity, while the corresponding share is among the nonpoor is 82 percent. The urban poor also lack internet access. Only 42 percent of the urban poor have access to the internet, while 67 percent of the nonpoor have access. The urban poor lack access to property titles and financial services, as only 36 and 38 percent of the urban poor have access, while among the nonpoor 49 percent and 55 percent have access to property titles and financial services, respectively. The urban poor and nonpoor exhibit similar rates of assistance at health centers, but the low affiliation to a pension system and the higher rates of informality and self-employment among the poor mean they are more deprived in access to social protection and financial and labor markets.[24]

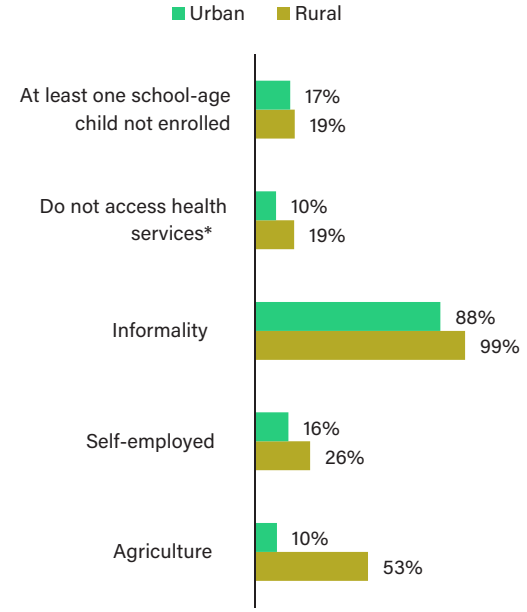
Figure 15. Characteristics of the urban population, by poverty status, 2021
% of the population



Source: INEI-Enaho.
Note: The dependence ratio is income earners over total household members.

b. This is according to the results of the 2018 Survey Directed to the Venezuelan Population Residing in Peru (INEI 2022b).
24. Lavado and Miranda (2022).

Figure 16. Characteristics of the poor, by location, 2021
% of the population



Source: Based on data of the National Household Survey.
Note: In the event of illness or accident, the poor tend to forgo health services because of their lack of money or health insurance or the excessive distance to the nearest health center.

Because of the pandemic, both the poor and nonpoor in urban areas experienced losses that represented setbacks relative to the situation almost a decade earlier. Although the improvements have been substantial, the urban poor are still more vulnerable and possess less human, physical, and institutional capital than the urban nonpoor. Table 1 shows that asset accumulation and service access among the urban nonpoor has worsened in certain areas. Thus, among the urban nonpoor in 2021, the share of households in which the heads had tertiary educational attainment, the members had access to pension systems, and the population living in dwellings to which they had property titles had declined below the levels of almost a decade earlier.[25] The poor had also experienced a similar setback relative to the levels of almost a decade earlier. By 2021, the incidence of self-employment was higher and the possession of property titles was less common among the urban poor than in 2013. Moreover, while informality decreased among the urban poor, it increased among the urban nonpoor.

Table 1. Profile of the urban poor population, 2013 and 2021
% of the total

Indicator	2013*		2021		2021 vs 2013	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Dependence ratio	62.3	46.9	68.0	54.6	^	^
HH head Tertiary education	33.7	9.5	32.8	12.3	v	^
Water, sanitation, and electricity	80.0	59.3	82.1	68.1	^	^
Access to Internet	36.5	6.9	67.3	41.7	^	^
Vehicle ownership	23.6	9.4	23.1	13.0	v	^
Property title	56.7	45.8	49.4	35.7	v	v
Any financial service	52.6	36.5	55.3	38.0	^	^
Assists to a health center	86.9	72.9	92.8	89.9	^	^
Affiliation to a pension system	43.8	17.5	43.3	25.8	v	^
Informality	63.5	89.2	68.4	87.7	^	v
Self-employed	31.6	40.5	36.4	41.8	^	^

Source: INEI-Enaho.
Note: Financial inclusion corresponds to 2015.

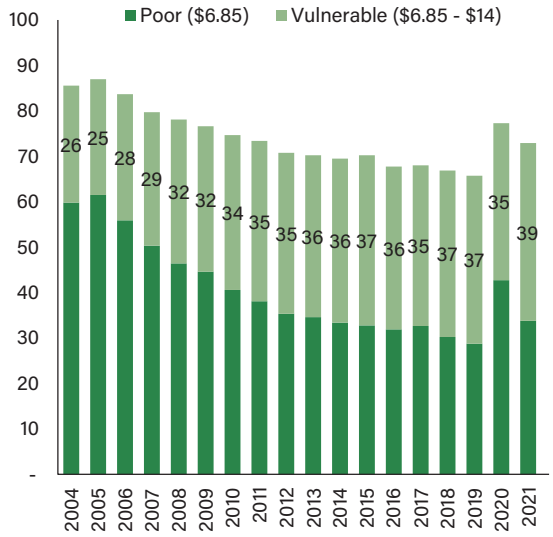
The vulnerability rate peaked and was concentrated in urban pockets

Over the past two decades, vulnerability has been increasing and putting at risk the progress that had been achieved. By 2021, close to 40 percent of the population risked falling into poverty, the highest share since 2004. Measured using the international middle-income poverty

25. According to estimates based on ENAHO data, the decline in the share of the population living in dwellings to which they had property titles may be explained by the decline in the share of the population living in their own properties (with or without a home loan). This is consistent with the urbanization of poverty and the rise in the number of people living in poverty because of the pandemic.

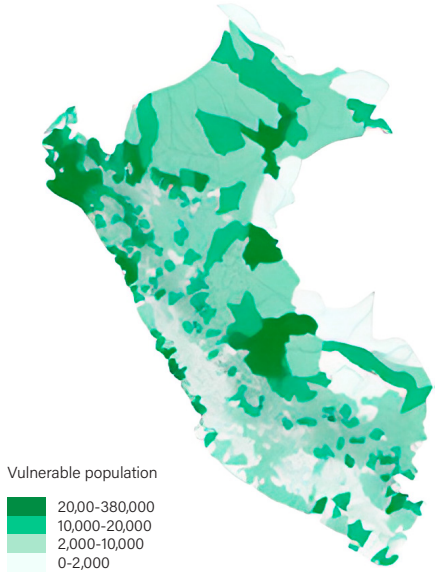
line of income per capita between US$6.85 and US$14.00 a day in 2017 purchasing power parity (PPP), the vulnerability rate rose from 26 percent in 2004 to 39 percent in 2021.[26] While the poverty rate declined over the period, people climbing out of poverty could not manage to reach much above the poverty line and were thus vulnerable to falling into poverty in the event of a shock (Figure 17). This high vulnerability rate triggered the loss of 10 years of social progress during COVID, representing a greater setback in Peru than in the rest of the Latin America and Caribbean region. According to estimates using SEDLAC data and the international middle-income vulnerability line (income between US$6.85 and US$14.00 a day), the share of the vulnerable in Peru is similar to the share in El Salvador (39 percent), but much larger than the shares among regional peers, such as Bolivia and Colombia (31 percent), Ecuador (34 percent), and Mexico (37 percent). Between 2019 and 2021, the share of the vulnerable in Peru grew by 2 percentage points, an increase only below the rise in Dominica, Panama, and Paraguay, where the share of the vulnerable rose by 3 percentage points.[27]

Figure 17. Poor (US$6.85) and Vulnerable (US$6.85–US$14.00), 2004–21
% of total population



Source: Poverty and vulnerability estimates using SEDLAC data (CEDLAS and the World Bank) and international poverty lines.

Mapa 1. Vulnerability by district, 2021
% of total population



Source: World Bank calculations using ENAHO and the 2017 national census.

26. Estimates using SEDLAC data and income definitions and updated international poverty lines.
27. Statistics based on SEDLAC definitions and data on Bolivia, Chile, Colombia, Costa Rica, Dominica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Paraguay, and Uruguay.

The vulnerability to poverty varies greatly across Peru. To determine the geographic dispersion of vulnerability, the analysis must be extended beyond the aggregate of the regions. Estimating poverty and vulnerability at lower administrative units is a path to understanding welfare dynamics more precisely. In the case of Peru, the ENAHO survey can only produce statistically representative estimates down to the regions. This level of spatial resolution may be too coarse, particularly in contexts where social assistance programs require cross-referencing more detailed information from administrative data and remote-sensed sources to understand emerging and existing challenges faced by households. Poverty mapping techniques allow estimates of the share of households living below the poverty line in administrative units based on national census data rather than direct measures, which are often unavailable.

Applying and extending poverty mapping techniques make estimates the share of vulnerable households at the district level possible, providing valuable information about the areas where households need additional assistance.[28] Unlike vulnerability rates measured using international poverty lines, vulnerability rates measured at the district level can be defined as the vulnerability of falling into poverty (risk-induced vulnerability) or the vulnerability of remaining poor (poverty-induced vulnerability) because of the availability of information at greater detail.[29] Between 2017 and 2021, the total vulnerability rate in Peru rose from 28.2 percent to 37.4 percent, with large spatial variations across districts and regions. Based on their vulnerability rates, districts can be divided into three groups: low vulnerability, high vulnerability, and the chronically poor.

The districts in the low vulnerability group exhibit low levels of poverty-induced vulnerability and few households at risk of poverty. In contrast, despite relatively low poverty rates, the districts in the high vulnerability group present high levels of income volatility. The chronically poor districts have high poverty levels and, by construction, few households at risk of poverty.

Pockets of vulnerability are found in districts throughout all three major parts of Peru, particularly in the northern and central coast, the central Andes highlands, and the Amazon rainforest. The biggest pockets of vulnerability are in Lima, that is, in the districts of Ate, Comas, San Juan de Lurigancho, and San Martin de Porres. These four districts account for 1.2 million vulnerable people at risk of falling below the poverty line. They also represent a significant pocket of the poverty-induced vulnerable, with over 500,000 poor. On average, 61 percent of the population in these districts is either at risk of falling into poverty or of remaining poor. These four districts account for 10.4 percent of all the vulnerable in the country and 9.6 percent of the country's total population. Other districts in Lima are characterized by an even clearer overrepresentation of the poor and vulnerable. In Carabyllo, for example, half the population is at risk of falling below the poverty line, and 25 percent is already poor and risks remaining under the poverty line. Thus, the total vulnerability in the district is 75 percent. The district represents 3.5 percent of Lima's population, but 5 percent of the vulnerable in Lima.

28. More detailed information on data and methodology can be found in the forthcoming World Bank Peru Poverty Assessment, chapter 4.
29. More information on the methodology used in estimating vulnerability as well as the results can be found in the forthcoming World Bank Peru Poverty Assessment, chapter 4.

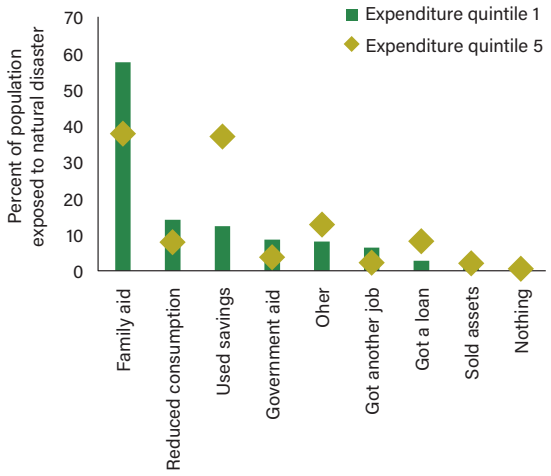
Pockets of vulnerability outside Lima are on the northern coast (the district of El Porvenir, in Trujillo, with close to 150,000 vulnerable), in the northern Andes (the district of Cajamarca, in Cajamarca, with over 100,000 vulnerable), in the central Andes (the Amarilis district, in Huánuco, with close to 50,000 vulnerable), and in the northern Amazon (the district of San Juan Bautista, in Loreto, with 55,000 vulnerable).

Like poverty, vulnerability is more highly concentrated in urban areas. Of the 10 million Peruvians identified as vulnerable in 2021, that is, at risk of falling below the poverty line, 72.6 percent were living in urban areas. Only 17.5 percent were in rural areas, and the remaining 9.8 percent were in semiurban areas.[30] Rural areas are characterized by higher vulnerability rates relative to urban areas, at 61.3 percent and 31.8 percent, respectively. The higher rate in rural areas is caused by higher levels of poverty-induced vulnerability (31.9 percent versus 17.8 percent) and risk-induced vulnerability (29.5 percent versus 14.0 percent). However, urban areas have a larger share of the vulnerable because they account for more people.

The lack of adequate, formal coping mechanisms puts the vulnerable at imminent risk in the face of shocks. Poor and vulnerable households lack effective coping mechanisms during a shock and tend to rely on help from their families to support their consumption. The reliance on informal coping mechanisms decreases as income rises. For example, according to the 2021 ENAHO, 57 percent of the population exposed to a natural disaster in the poorest quintile relied on family assistance to compensate for the negative impacts of the shock, while the share was only 38 percent among the richest quintile (Figure 18).

Reducing consumption is the second most common coping mechanism among the poorest households (14.0 percent), while it is used less by the richest quintile (7.9 percent). The opposite is true in the case of the use of savings as a strategy to cope with natural disasters; 36.9 percent of households in the fifth quintile rely on their savings, while the share is only 12.3 percent among the lowest quintile (Figure 18).

Figure 18. Responses to natural disasters, by per capita expenditure and quintile, 2021



Source: Based on data of the 2021 National Household Survey.

Social policies in Peru are not in step with the new reality of rising urban poverty and greater vulnerability. Social policies can be categorized as social protection, social assistance and labor market policies. In Peru antipoverty initiatives typically involve social assistance. Moreover, the main social assistance programs were designed to fight rural poverty. This was the case of, for example, the Juntos conditional cash transfer, which was launched in 2005 and aimed at supporting rural households. With the COVID-19 shock, the government saw the need to protect the urban poor and vulnerable. In response to the crisis, it rolled out cash transfers. However, to

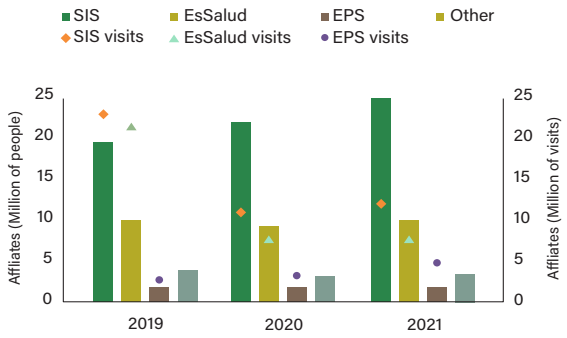
30. Urban, semiurban, and rural areas are identified following the relevant district typology of the National Institute of Statistics and Informatics.

target the poor and vulnerable, it had to create a new registry that combined the existing National Household Registry database (Padrón General de Hogares), the 2017 National Population and Housing Census, the databases of the National Household Registry Platform of the National Registry of Identification and Civil Status, and the associated Unique Identification Registry of Natural Persons into a single master household database.[31] This experience showed the need to update social system registries and develop a plan for adaptive social protection.

The pandemic accelerated the collapse of the health care system. Before the pandemic, the number of visits to the Integral Health Insurance system (Seguro Integral de Salud, SIS), a government noncontributory system, was similar to the number of visits to the EsSalud system, a contributory health system for formal sector workers (Figure 19). However, the number of affiliates of the SIS system is twice that of the EsSalud system, and SIS capacity is higher as it includes the network of establishments of the Ministry of Health and also that of regional governments. As a result, EsSalud had trouble meeting the health needs of its affiliates. During the pandemic, visits to these health systems declined significantly because the systems became overwhelmed by COVID-19 cases. Visits did not recover in 2021. This reduction in addressing health issues was highlighted by ENAHO. Before the pandemic, 45 percent of the population that required care had not visited a health center; by 2021, the number had climbed to 55 percent. Most people were relying on pharmacies to meet health care needs instead of visiting recognized health care providers.

Figure 19. Health insurance coverage and care, 2019–21

million of people, million of visits in right axis



Source: Data of the National Superintendence of Health.
Note: Other includes armed forces, self-insurance, entidades prestadoras de servicios de salud prepagados (private health service providers), and insurance companies.

Persistent disparities in productive assets among minorities and political instability foster social unrest

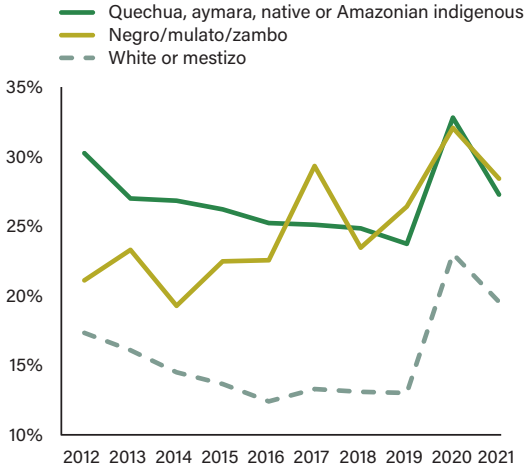
Indigenous Peoples and the Afro-Peruvian population typically face higher poverty rates than the rest of the population. According to the 2017 National Population and Housing Census, about 6 million Peruvians self-identified as indigenous or native peoples of the Andes, which is equivalent to 26 percent of the census population ages 12 or above. Another 828,841 people self-identified as Afro-Peruvian (negro, mulato, or zambo), which is equivalent to 4 percent of the population. Furthermore, 66 percent self-identified as white or mestizo.[32,33] About 23 percent of the indigenous population was living in Lima. Another significant share was living in southern regions such as Puno (15 percent) and Cusco (12 percent). Afro-Peruvians were more concentrated in Lima (27 percent), Piura (15 percent) and La Libertad (12 percent). Indigenous Peoples and the Afro-Peruvian population face a

31. World Bank (2022b).
32. Mestizo refers to a person whose parents belong to two separate ethnicities, usually a white parent and an indigenous parent.
33. The remaining 4 percent responded that they identified themselves as Nikkei or Tusán (0.16 percent), other ethnic group (1 percent) or they do not know (3.3 percent).

higher poverty rate relative to people who self-identified as white or mestizo, and the difference is significant (figura 20). By 2021, the poverty rate was 7 to 8 percentage points higher among indigenous and Afro-Peruvians than among the white or mestizo population.[34] Poverty rates rise to 27 percent and 28 percent among Indigenous Peoples and Afro-Peruvians, while, among people considered white or mestizo, the rate only reaches 20 percent.

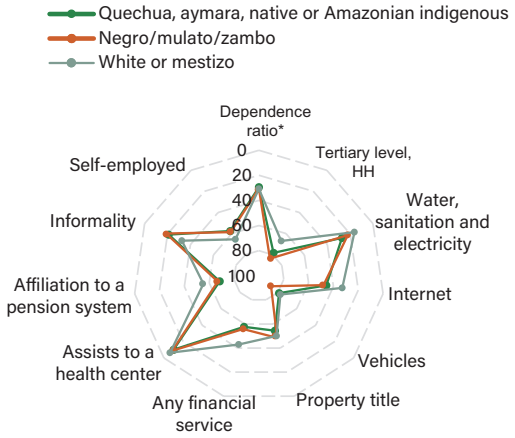
Similarly, Indigenous Peoples and Afro-Peruvians possess fewer productive assets relative to the rest of the population. People who self-identify as indigenous possess lower levels of productive capital compared with people who self-identify as white or mestizo (Figure 21). In terms of human capital, for instance, 33 percent of whites and mestizos live in households with household heads who have tertiary educational attainment, the shares are 16 percent and 22 percent among Afro-Peruvians and Indigenous Peoples, respectively. In terms of quality of jobs, the indigenous and Afro-Peruvians are active more frequently in informal jobs (at a rate between 11 and 13 percentage points higher) or among the self-employed (at a rate between 6 and 7 percentage points higher) relative to people who self-identify as white or mestizos. They also have less access to productive services, such as electricity, the internet, and financial services.

Figure 20. National poverty by self-identification with ethnic groups, 2012–21
% of population ages 14 or more



Source: INEI - Enaho

Figure 21. Characteristics of population, by self-identification with ethnic groups, 2021
% of population ages 14 or more

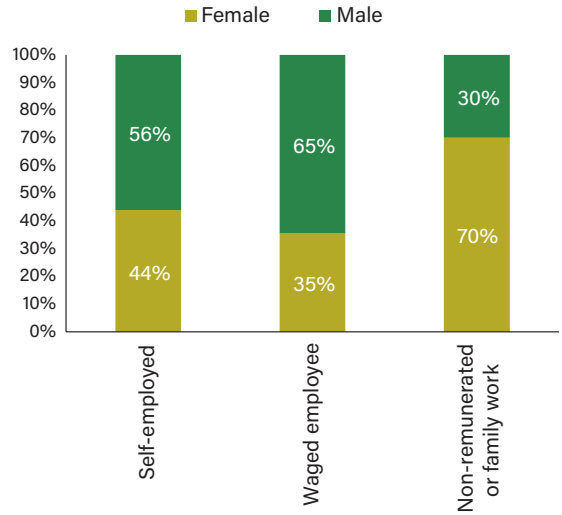


Source: Based on data of the National Household Survey.
Note: The dependence ratio is income earners over total household members.

34. Estimates of the poverty rate among the subset of the population ages 14 or more who answer the self-identification question.

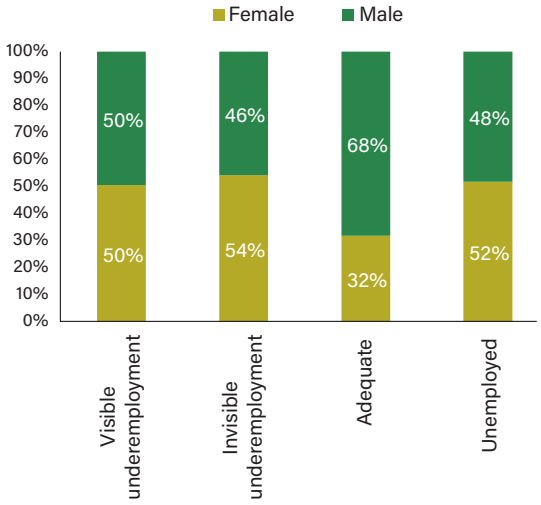
Persistent gender gaps in the labor market continue to undermine economic and social well-being. Female labor force participation rates have remained unchanged and well below male participation rates (around 20 percentage points less) over the last two decades. Moreover, women are more likely to be engaged in poor-quality, low-productivity jobs. They account for 70 percent of unremunerated work and only 32 percent of total adequate employment (Figures 22 and 23). Estimates suggest that women dedicated an average of 39 hours per week to domestic work compared with 15 hours among men.[35] The higher amount of time they spend doing household work diminishes women's employment opportunities, savings, and general well-being. These differences between men and women translate into systematic differences in labor income. By 2021, the average labor income among women was only 74 percent of the average labor income among men, and the share has remained unchanged for decades (in 2005, it was 73 percent).

Figure 22. Distribution by type of employment, 2021
% of total



Source: Based on data of the National Household Survey.

Figure 23. Labor distribution, by sex and employment and unemployment status, 2021
% of total

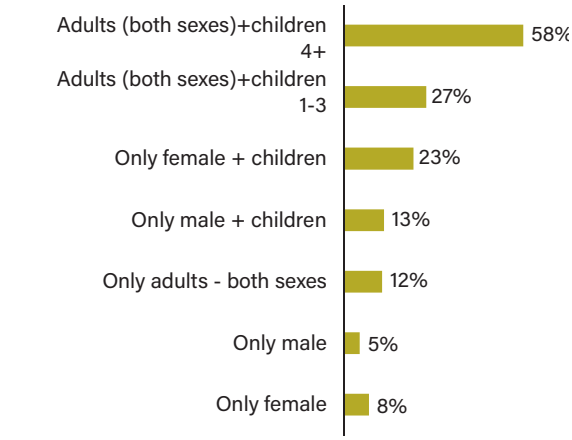


Source: Based on data of the National Household Survey.

Women's difficulties in gaining access to economic opportunities have negative implications for monetary poverty. Poverty and extreme poverty rates are similar among men and women in Peru. However, the incidence of poverty tends to be higher among female adolescents (ages 11–14), older women (ages 65–75), and women at peak reproductive age (20–40). The poverty rate is considerably higher (58 percent) among households with adults of both sexes and children ages more than 4 (Figure 24). Among households with only one adult and children, the poverty rate is higher if the adult is a woman (23 percent) rather than a man (13 percent). Furthermore, 56 percent of poor households contain adults of both sexes and children ages under 3, while the share is only 38 percent among the nonpoor and 42 percent overall (Figure 25). Additionally, 17 percent of poor households are composed of adults of both sexes, which arises to 30 and 27 percent, respectively, for nonpoor and total households.

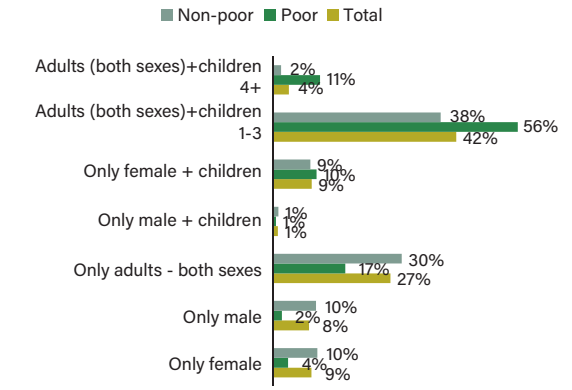
35. According to data from a time-use survey in Peru conducted in 2010 (INEI 2011).

Figure 24. Poverty rate, by household composition, 2021
%



Source: Based on data of the National Household Survey.

Figure 25. Household composition, by poverty status, 2021
% of all households



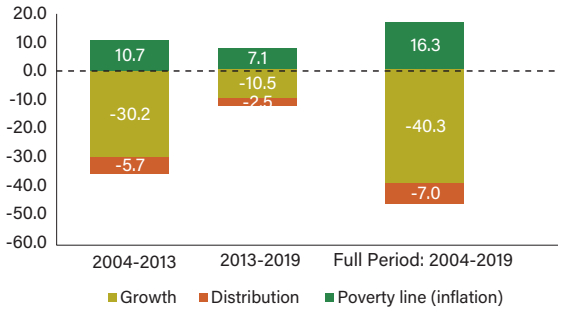
Source: Based on data of the National Household Survey.

Although inequalities across regions and districts have significantly narrowed in Peru, persistent social gaps and political instability have been breeding grounds for social discontent. Because of the political crisis, there have been six presidents since 2016; the political conditions and governance environment have deteriorated; and economic performance and investment perspectives have weakened. The pandemic and the resulting loss in the momentum of progress aggravated the crisis and set the stage for an increase in manifestations of popular discontent because of the persistence of social gaps. Political institutions have come to be perceived as ignoring the needs of the country. In fact, according to a recent Ipsos global survey on broken-system sentiment, about 70 percent of Peruvians agreed with statements such as "Traditional parties and politicians do not care about people like me," and "Experts in this country do not understand the lives of people like me".

In the absence of significant economic growth, poverty will not recover to pre-pandemic levels

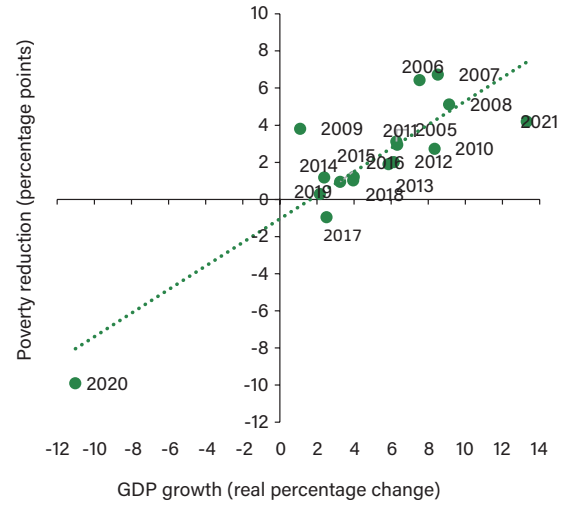
In the past, sustained, inclusive growth supported a process of substantial poverty and inequality reduction. According to estimates of the direct impact of economic growth driven by income, changes in the shape of the distribution of income, and changes in the cost of the consumption basket because of inflation, 85.1 percent of the poverty reduction (by the US$6.85-a-day poverty line) between 2004 and 2019 was explained by economic growth, while the remaining 14.9 percent was explained by redistribution. The rise in prices that increased the value of the poverty line acted against poverty reduction over this period (Figure 26). Furthermore, the years in which the economy grew at its slowest pace were also the years in which poverty was reduced the least (Figure 27).

Figure 26. The relative contribution of growth and redistribution to poverty reduction, 2004–19
Change in US$6.85-a-day poverty



Source: Estimates using the Shorrocks-Kolenikov decomposition, SEDLAC data, and 2017 international poverty lines.

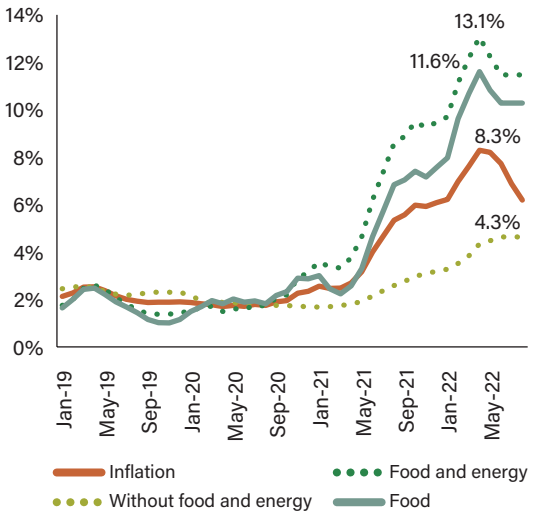
Figure 27. GDP growth and poverty reduction, 2005–21
real change, percentage points



Source: Based on data of the National Household Survey.

The recent high inflation and political uncertainty will likely hinder economic recovery, and poverty rates will likely not recover in the medium term. The rise in prices in Peru started in mid-2021 and reached 6.4 percent in December of 2021, as a result of the sizable increase in liquidity to counteract the fall in demand during the COVID-19 crisis. Inflation was exacerbated in 2022 because of the war in Ukraine. Inflation in May 2022 was 8.3 percent, the highest rate in 30 years. Most of this inflation is associated with food and energy. Food inflation was 11.6 percent, and energy inflation was 22.0 percent (Figure 28). Peru is not an oil producer, and its supply chains are complex, meaning it is in a worse situation than peer countries. Inflation has eroded disposable incomes among workers and households, and affected purchasing power.

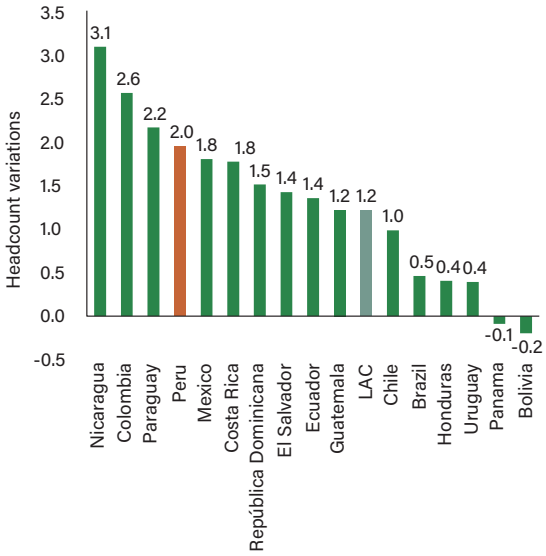
Figure 28. Consumer price index Inflation, by component
year over year percentage change



Source: BCRP 2022.

36. More details on the methodology and the results of poverty projections can be found in the forthcoming World Bank Peru Poverty Assessment, chapter 1.

Figure 29. Expected headcount variations (US$6.85), 2022 with vs without inflation crisis
percentage points



Source: World Bank 2023.

According to estimates for 2022, additional inflation may have hampered prospects of poverty reduction by 2 percentage points. It is possible to estimate the deviation of the trajectory of poverty reduction in 2022 with respect to pre-Ukraine war estimates based on multiple inputs including: GDP growth rate and population projections, inflation estimates, and historic employment and income elasticities. Based on this approach, Peru would be among those in the region with the highest headcount variation due to inflation, only below Nicaragua, Colombia and Paraguay (Figure 29). Roadblocks and protests also likely worsened the food crisis and eroded economic opportunity. Moreover, political uncertainty continues to delay the economic recovery because of the absence of reforms needed to raise employment and investments. Under these circumstances, poverty rates may not reach pre-pandemic levels before 2025.

Higher inflation caused downward social mobility along the entire income distribution. Estimates of additional inflation in 2022 show that 1.2 million people suffered from downward social mobility.[40] A little over half of these people transitioned from the vulnerable (US$6.85/day–US$14/day) to the poor (less than US$6.85/day), and the remaining transitioned from the middle class (US$14–US$81/day) to the vulnerable. The new poor and the new vulnerable were more likely to live in urban areas than their counterparts and in woman-headed households and to be more skilled, less informal, and more likely to be salaried (Table 2).

37. BCRP (2022).
38. Estimates using SEDLAC 2021 and the national poverty lines in 2020, augmented by 2 percent (average inflation of the 2017-19 period) to compare observed and projected inflation for 2021.
39. Estimates based on microsimulations. Poverty is measured using the $6.85 International Poverty Line. (World Bank, 2023).
40. Estimates based on microsimulation using SEDLAC data and the 2017 PPP international poverty lines (World Bank 2023). New poor and vulnerable are identified using estimates of additional inflation. The additional 2022 inflation is the difference between observed and projected inflation for 2022.

Table 2. Profile of the new poor and the new vulnerable resulting from additional inflation (2022 with vs 2022 without additional inflation)

	New Poor	Old Poor	New Vulnerable	Old Vulnerable
Population	659,363	12,342,131	506,466	11,849,001
Household Characteristics				
Area: Urban	82.0	61.4	93.4	87.0
Household size	4.9	4.7	4.1	4.4
Dependency	40.4	42.7	28.9	34.4
Household head				
Age (mean)	50.0	50.0	52.2	52.0
Male (%)	60.3	66.1	64.3	62.7
Education level (%)				
Low Skilled	55.0	64.7	36.8	49.3
High Skilled	45.0	35.3	63.2	50.7
Inactivity (%)	8.2	10.1	8.2	9.8
Employment (%)	90.5	87.3	90.2	88.5
Salaried	49.3	26.7	55.5	48.2
Self-employed	46.9	69.8	43.3	50.1
Unpaid	3.8	3.5	1.3	1.6
Agriculture	31.0	56.6	11.4	24.0
Industry	20.9	11.9	21.9	20.7
Services	48.1	31.5	66.7	55.2
Unemployment (%)	1.3	2.6	1.6	1.7
Informality (%)	78.5	90.8	64.0	74.8

Source: World Bank 2023.
Note: Estimates based on microsimulation for 2022. The new poor and vulnerable are identified using estimates of additional inflation and the SEDLAC dataset. Version March 2023.

In the absence of compensatory policies, the crisis will have long-term consequences

The COVID-19 shock has affected many areas of human development, and the potential impacts on the lives of Peruvians will eventually become manifest. The long-term effects are expected to occur in human capital accumulation because of the extensive school closures, in physical health because of the food insecurity issues associated with the crisis, but also the long-term impacts of the disease, in mental health and well-being, given that high mortality rates led to orphanhood, and in economic opportunities, given the exposure of many to long spells of unemployment. Because Peru was one of the countries most affected in the world, extensive compensatory policies will be needed to prevent Peru from also becoming the most impacted country in the long run.

First, the pandemic has affected human capital accumulation, and, because of the disruptions, many individuals will acquire less human capital than they otherwise would

have. A recent World Bank report estimates that the loss in learning-adjusted years of schooling in Peru because of COVID-19 is approximately 1.7 years, one of the highest rates in the region.[41] School closures have also affected other spheres of child and youth development. According to a joint study by the United Nations Children's Fund and the Ministry of Health of Peru, 73.4 percent of parents or caregivers consider that remaining at home during the COVID-19 quarantine affected the mental health of their sons and daughters.[42] Furthermore, for many children, school meals represent the only reliable source of daily food and nutrition, and the meals were not available because of the school closings.

Not all children and youth were impacted in the same way. The lack of connectivity was a major limitation among vulnerable groups. Recent data from the World Bank (2022a) show that only 1 household in 4 in Peru can access the internet through Wi-Fi. Among indigenous students, the ratio is 1 household in 5. The compensatory actions of parents also play an important role in children's learning. Evidence of the effects of parental compensatory actions during COVID-19 school closures (such as investing time in the education of their children) on children's future earnings and well-being shows that parental investments reduce the negative impact of school closures, but do not offset the impact entirely.[43] The evidence also shows that the negative effects are especially severe among the children of low-income parents with low educational attainment.

The losses in human capital will have long-term consequences in the earnings and poverty status of this generation of children and youth. According to a study by Bracco et al. (2022), more than a third of the 2020 academic year was lost because of school closures, and the new generation of workers would experience a decline of 8 percent in earnings by 2045 if no adjustments are made. These reductions are expected to increase the poverty rate by 6.5 percent in the long run. Inequality impacts are also expected in the long term because of school closures. The patterns described above in the unequal capacity to engage in meaningful learning during school closures will result in unequal losses in human capital formation.

Second, the reduction in income, the increase in poverty, and the food crisis led to food insecurity among families. In 2020, at the peak of the pandemic, 58 percent of households in Peru reported that they had suffered from at least one type of food insecurity, and, by December 2021, the share of households that ran out of food was still up by 9 percentage points relative to the period before the pandemic.[44] The potential long-term implications of malnutrition and stunting involve losses in productivity and lower incomes. The literature points to a 21 percent drop in earnings among adults because of undernutrition and stunting in early childhood.[45] Gasparini and Laguinge (2022) find that the drop in income because of stunting is not evenly distributed across households. The reduction in income among the poorest income deciles is around 0.11 percent, while the income among the richest deciles remains unchanged.

41. World Bank (2022a), based on Azevedo et al. (2022).
42. MINSA and UNICEF (2021).
43. Fuchs-Schündeln et al. (2022).
44. Some food insecurity indicators include households that run out of food in the past month, households where one member did not eat for an entire day, and households where an adult could not eat a healthy and nutritious food.
45. Horton and Ross (2003).

Third, COVID-19 deaths generate indirect effects on the families of the deceased. Estimates derived from national registries show an excess of 43,500 orphans in Peru in 2020–21 compared with 2018–19.[46] This excess orphanhood represents a rise of 20 percent with respect to previous years or 5 additional orphans per 1,000 children, including orphanhood because of the death of a mother, a father, or both parents. Excess orphanhood is more typical of urban areas. Evidence from past epidemics shows that the death of a parent or caregiver may be associated with serious harm to the long-term health and development of children. Thus, losing a parent increases the time a child spends in productive activities inside and outside the home (as a substitute for adult labor), translating into less time and resources devoted to the child's accumulation of human capital through education. Several studies on the HIV pandemic in Africa find that orphanhood had a permanent adverse impact of one year of educational attainment among orphans ages 7 and 15. The psychological effects on children orphaned by the deaths of parents or caregivers include an increased risk of posttraumatic stress disorder, depression, and suicide attempts in adulthood.

Youth unemployment represents a serious future problem because greater exposure to unemployment likely affects long-term labor market opportunities. In Peru, young workers were among the most affected by the pandemic: youth unemployment doubled between 2019 and 2020. Various studies show that youth unemployment imposes an unemployment scar on wages that persists. Thus, according to a study in the United States, a six-month spell of unemployment among young men age 22 results in an 8 percent drop in wages at age 23.[47] The negative effects are persistent; even at ages 30 and 31, the young men receive wages that are 2 percent to 3 percent lower than the wages otherwise would have been. A low-quality first job—such as an informal one—may negatively affect individuals for the rest of their lives. Because of the pandemic, the cohort entering the labor market obtained lower-quality jobs. Evidence shows that the quality of early job matches significantly affects human capital accumulation and career paths. A study in Mexico shows that young workers whose first jobs were formal were 10 percent more likely to have a formal job 18 months later.[48]

46. World Bank estimates are derived from the Unique Identification Registry of Natural Persons, which is managed by the independent national organization responsible for the identification of Peruvians through the National Registry of Identification and Civil Status. Estimates included in the technical note "Orphanhood in Peru: Estimation and proposal of a registration system", prepared through the project "Social Protection Reforms in Peru for post-COVID-19 recovery". (World Bank, 2022e).
47. Mroz and Savage (2006).
48. Abel et al. (2022).

What explains Peru’s fragility in social gains?

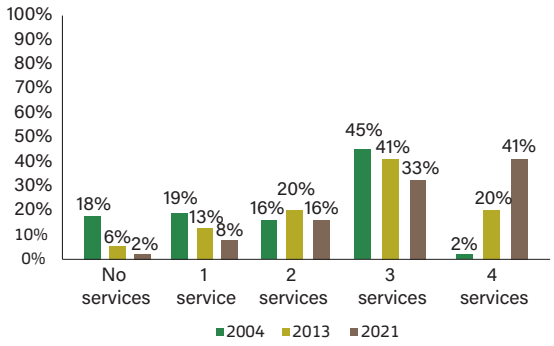
02

a. Despite improvements in access to public services, access and quality are inadequate

Access to services has expanded significantly in the last two decades, particularly access to piped water and electricity, while access to sanitation still lags. Between 2004 and 2021, the household access rate to drinking water, measured by access to piped water at home, rose from 67 percent to 87 percent (Figure 32). Access to electricity also increased, from 76 percent to 96 percent. Access to sanitation, measured by access to flush toilets within households, also improved, though the rate remained low, at around 70 percent. The rate of household asset ownership rose from 27 percent to 71 percent.[49] Access to health services also improved. In 2021, 91 percent of the population reported that they visited health centers when needed; the share was 69 percent in 2004. The share of households in which at least one member had access to the internet increased from 2 percent to 49 percent.

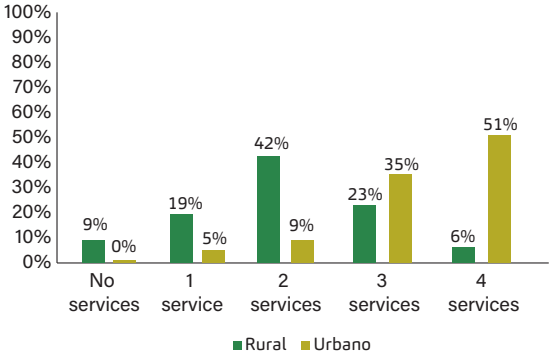
Despite the progress, only two Peruvian households in five have access to a package of four main basic services: piped water, sanitation, electricity, and internet, and access is not evenly distributed. The provision of access to this package still lags in the country. In the past decade, access to the package has doubled, but remains low. Only 41 percent of households have access to all four. Although most Peruvians have access to at least three of these services, around 26 percent of households have access to only one or two or even none (Figure 30). Access is also an issue in public services. For example, only 36 percent of schools, including private and public schools, have access to electricity, water, and sewerage. There are also significant geographical disparities in access to basic services. More than half of urban households have access to the basic package of four services, but this is true of only 6 percent of rural households (Figure 31). Most of the population in rural areas has access to two or three of these services. Still, a significant portion of the population (28 percent) only has access to one or none of these services. Disparities are also common across regions. For instance, although 85 percent of dwellings have access to drinking water, sanitation, and electricity in Lima (including the Lima Metropolitan Area and Callao), the share is only 29 percent in Ucayali.

Figure 30. Households with access to service packages, 2004, 2013, 2021
% of total households



Source: Based on data of the National Household Survey.

Figure 31. Households with access to a basic service package, by rural or urban location, 2021
% of total households

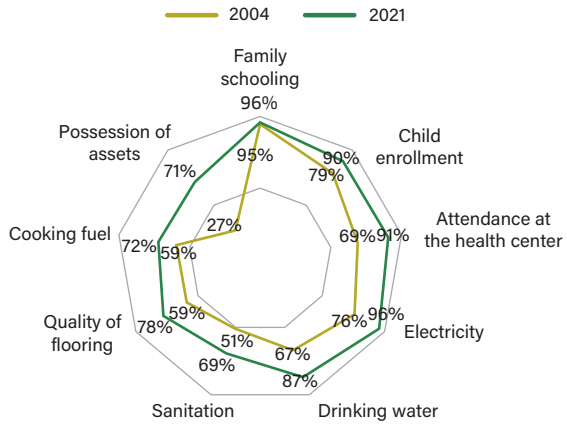


Source: Based on data of the National Household Survey.

49. Household asset ownership is defined as possession of at least two of the following: radio, television, telephone, cellphone, internet, vehicle, and property title. Property title was not included in 2004.

Low service quality undermines the improvements in access. For instance, the quality of access to water and electricity poses a significant challenge because of interruptions in coverage and electricity outages. Only 39 percent of households have access to safe water (Figure 33).[50] Furthermore, an average Peruvian household only has access to water 74 percent of the time.[51] Power outages are experienced by 39 percent of households. In a typical month, 65 percent of these households report two or more interruptions, and the average duration of the outages is 11 hours.[52] The quality in health services, proxied by the number of doctors per 10,000 inhabitants, is only 17, below the 23 recommended by the World Health Organization (Map 2). Quality in education, measured by the share of children and youth exhibiting satisfactory performance in reading and mathematics, is 24 percent in primary education and 9 percent in secondary education (Map 3).

Figure 32. The multidimensional poverty index: access to services, 2004–21
% of the total population



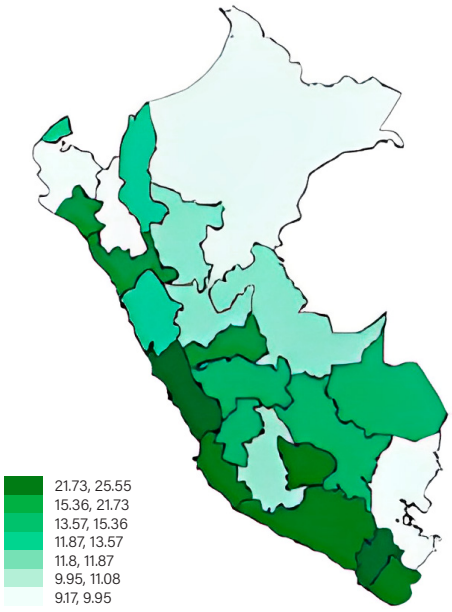
Source: Based on data of the National Household Survey.

Figure 33. Quality of the access to water, education, and health care

Source: INEI 2021a; MINEDU 2019; MINSA 2021.

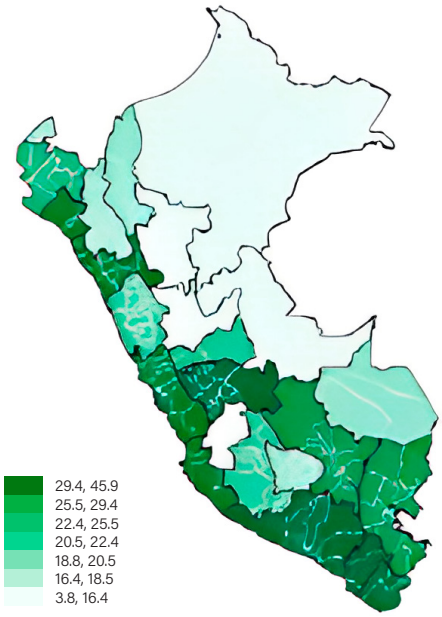
50. This represents the share of households with service access to water containing free residual chlorine in a quantity greater than or equal to 0.5 milligrams per liter.
51. INEI (2021b).
52. INEI (2020a).

Map 2. Doctors per 10,000 habitants, by region, 2021
% of total population

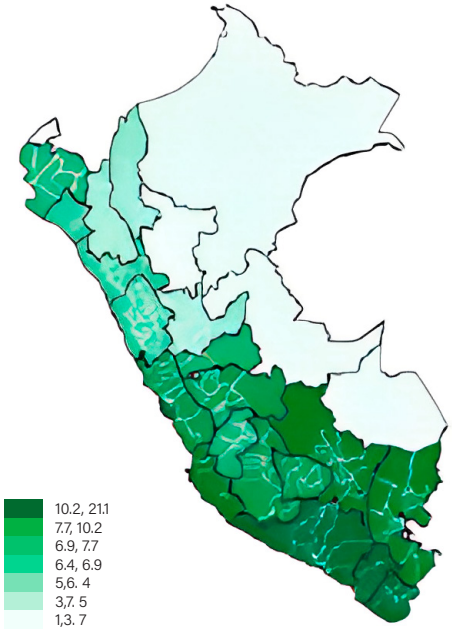


Map 3. Satisfactory performance in reading and mathematics, 2019
% of students from 4th grade (primary) and 2nd grade (secondary)

a. Primary



b. Secundary



Sources: ESCALE (Estadística de la Calidad Educativa) (dashboard), Unidad de Estadística Educativa, Ministerio de Educación, Lima, Peru, https://escale.minedu.gob.pe/inicio; MINSA 2021.

Similar to the case in access to services, district and regional inequalities are also substantial in the quality of services. For example, while the national average number of hours per day with access to water is 17.8, it is less than 8.0 hours a day in the regions of Loreto and Tumbes.[53] Likewise, in Pucusana, a district in the Lima Metropolitan Area, almost an hour from the center of the capital, 76 percent of the dwellings have four hours or fewer of water provision per day.[54] In Lima, there are 23.4 doctors per 10,000 inhabitants, approximately the rate recommended by the World Health Organization, and similar to the average in Chile, Colombia, and Mexico. However, other regions in the country lag. In Piura, for instance, there are only 9.2 doctors per 10,000 inhabitants.[55] The share of children receiving satisfactory grades in primary school is at 30 percent in Lima and 45.9 percent in Tacna. In contrast, the share drops to only 3.8 percent in Loreto. In secondary school, only 14.4 percent of youth in Lima perform satisfactorily in reading and mathematics, while, in Tacna, the share reaches 21.1 percent, and in Loreto, it sinks to 1.0 percent.

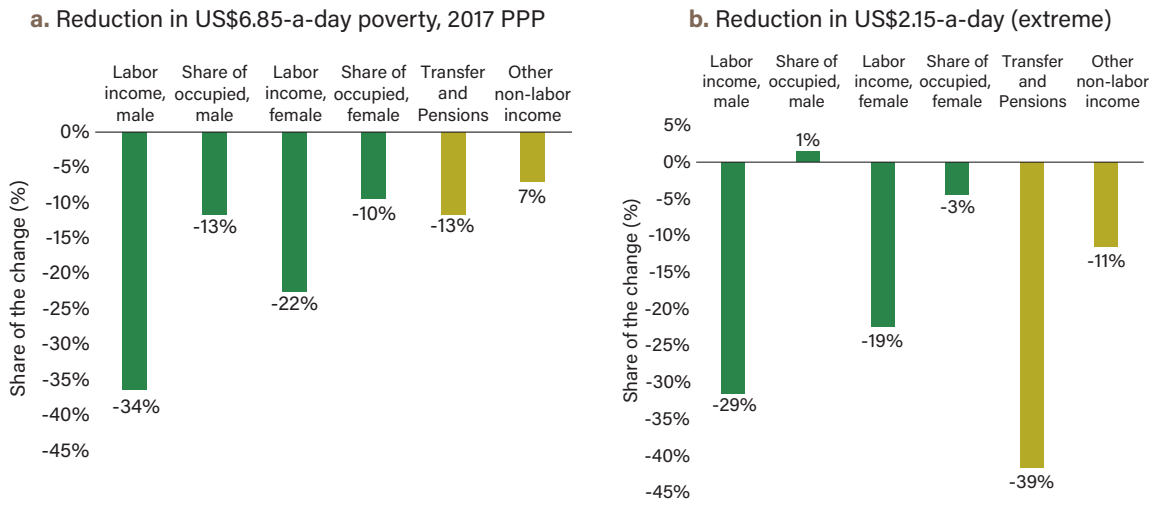
Inadequate access, low quality, and unequal distribution of public goods limit the ability of Peruvians to accumulate productive assets. The low availability and quality of health and education services lead directly to the lower human capital among Peruvian workers, who thereby are less productive and earn lower wages. Moreover, the lack of safe water and sanitation means that the population is more prone to waterborne diseases, jeopardizing attendance at school or work. This also influences learning and productivity outcomes and the ability to earn higher wages. Similarly, the lack of reliable electricity or other power supply negatively affects worker and business productivity. The lack of reliable electricity increases the burden of household chores, which could be performed more efficiently with home appliances.[56] This reduces labor force participation and increases the opportunity cost of sending children to school, particularly among women and girls, who typically take up the burden of additional household chores.

b. Despite some improvements in the labor market, the quality of jobs is low

Over the last two decades, economic growth has translated into improvements in the labor market, contributing to 79 percent and 50 percent of the decline in poverty and extreme poverty, respectively. Before the pandemic, economic growth facilitated the creation of four million jobs, a rise in average labor incomes by 50 percent in real terms, and an increase in the creation rate of formal jobs, which exceeded the corresponding rate among informal jobs. Accordingly, the higher labor earnings explain 56 percent of the reduction in poverty between 2004 and 2021, as measured by the US$6.85-a-day international poverty line (2017 PPP) (Figure 34, panel a), and 48 percent of the reduction in extreme poverty, as measured by the US$2.15-a-day international poverty line (2017 PPP) (Figure 34, panel b). Moreover, the increase in female labor force participation contributed between 10 percent and 3 percent to the reduction of poverty and extreme poverty, while labor incomes among women contributed between 22 percent and 19 percent, respectively. In this sense, the contribution of labor market outcomes exceeded the contribution of social transfers and pensions in poverty. The latter had a more significant role in the decline of extreme poverty.

53. INEI (2021b).
54. See Censos Nacionales 2017: XII de Población, VII de Vivienda y III de Comunidades Indígenas (dashboard), Instituto Nacional de Estadística e Informática, Lima, Peru, https://censo2017.inei.gob.pe/resultados-definitivos-de-los-censos-nacionales-2017/.
55. See MINSA (2021) for the total in Peru. For international comparisons, see Medical Doctors (per 10,000 Population) (dashboard), Global Health Observatory, World Health Organization, Geneva, https://www.who.int/data/gho/data/indicators/indicator-details/GHO/medical-doctors-(per-10-000-population).
56. Fewer than 60 percent of households in Peru have a refrigerator, and only a third have a washing machine.

Figure 34. Income decomposition, by income component (2017 PPP), 2004–21



Source: Based on 2004 and 2021 data of the National Household Survey.
Note: Poverty decomposition is based on income per capita. Transfers and pensions include conditional and unconditional transfers, as well as contributory and noncontributory pensions. Other nonlabor income includes capital income and public and private gifts or donations. This exercise excludes imputed housing rents.

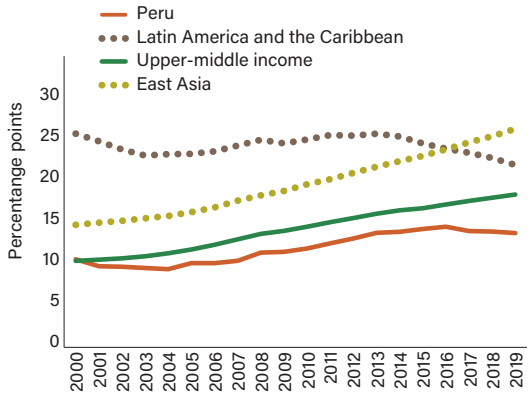
Even before the pandemic, the economic slowdown had exposed structural weaknesses in Peru's labor market, particularly the high informality rates. The labor market contributed to poverty reduction and also to the improvement in the supply of adequate employment opportunities, which rose from 23 percent to 55 percent between 2004 and 2019. However, despite all the progress, the labor informality rate only dropped 7 percentage points, from 80 percent in 2007 to around 73 percent in 2019. In some sectors, such as agriculture, which employs a quarter of all workers, the rate reached 96 percent. This means that, even before Covid-19, 12.5 million workers did not have access to social benefits, such as health insurance, paid vacations, or pensions, and were experiencing greater instability. Labor informality does not necessarily take place within the informal sector alone.[57] Almost a fifth of informal workers are employed in the formal sector, where registered businesses have unregistered workers, pay off-the-books wages, or fail to comply with regulations. This is particularly worrying because the labor informality rate is higher in Peru than the average in developing countries at similar income levels, and the informal sector is estimated to produce less than 20 percent of total GDP, evidencing its lower productivity.[58]

During the years of economic expansion, productivity increased little in Peru compared with other upper-middle-income countries. The increase in nonwage labor costs over the past three decades does not reflect an increase in productivity. In particular, the share of the cost of salaried labor in Peru is among the highest in the world, about 70 percent of the average wage of formal workers. Furthermore, labor productivity—measured as output per worker—barely increased compared with other upper-middle-income countries during 2000–19. It rose only from 10 percent to 13 percent of the labor productivity of high-income countries (Figure 35). Moreover, most Peruvian workers are employed in low productivity firms.

57. The extensive margin of informality differentiates the formal and informal sectors of the economy. In this margin, firms may decide to become formal or remain informal and small to avoid detection by tax authorities. However, the intensive margin of informality exists within the formal sector (Perry et al. 2007; Ulyssea 2018).
58. See INEI (2022a). The Central Bank of Peru estimates that, since 2010, the contribution of total factor productivity to GDP growth has decreased significantly because of growing labor rigidity, excess regulation, and the absence of structural reforms in the labor market, education, infrastructure, and institutional quality. See BCRP (2018).

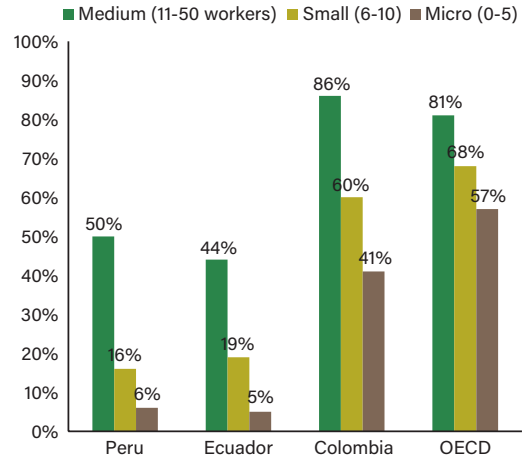
Microenterprises in Peru, which employ about 73 percent of all workers, are only 6 percent as productive as large firms, while, in Colombia, the average productivity of microenterprises is 41 percent of the productivity of large firms (Figure 36). Meanwhile, in the Organization for Economic Co-operation and Development (OECD), the share stands at 57 percent.

Figure 35. Comparison of labor productivity
share of high-income country labor productivity



Source: World Bank elaborations based on data of the International Labor Organization.
Note: Labor productivity is measured as output per worker in constant 2010 US dollars.

Figure 36. Productivity, by firm size, 2018
% of large firm productivity

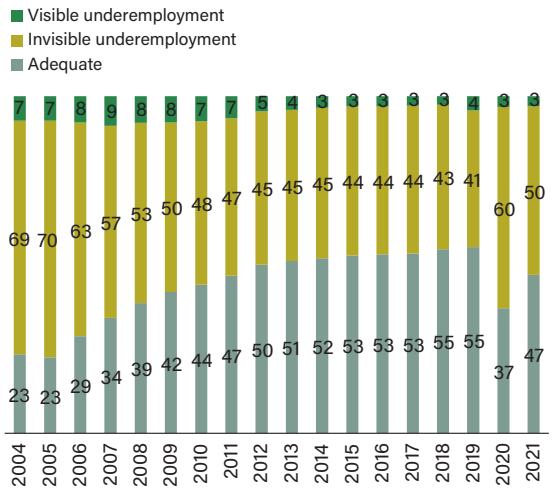


Source: (Ruiz-Arranz & Deza, 2018).
Note: Elaboration based on OECD (2015) (Colombia); variables from the Ecuador Business Directory (dashboard), Global Database, Global Data Intelligence Limited, Northampton, UK, https://www.globaldatabase.com/ecuador-companies-database (Ecuador); ECLAC (2017) (Peru and selected OECD countries).

During the COVID-19 pandemic, a decade of gains in the labor market was lost, disproportionately affecting the most vulnerable. During the COVID-19 lockdown, most economic activities were restricted, causing a loss of around 6.7 million jobs during the second quarter of 2020.[59] Moreover, a downward trend had been reversed in 2016, and labor informality reached its highest level in 11 years after an increase to 75 percent (Figure 38). Total employment experienced a decline of 13 percent.[60] The share of adequate jobs fell from 55 percent of total employment in 2019 to 37 percent in 2020 (Figure 37). However, the impact on employment was heterogeneous and depended mainly on formal-informal segmentation. For instance, in the Lima Metropolitan Area, self-employed workers and employees in businesses with fewer than 10 employees (mostly informal) reported the largest drop in employment (63 percent and 66 percent, respectively).[61] Similarly, workers who were able to work at home and had internet connectivity (mostly formal) and workers employed in essential sectors were less likely to lose their jobs in 2020.

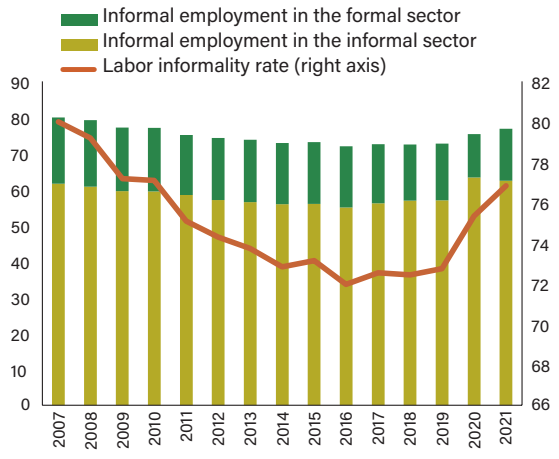
59. INEI (2020b, 2020c).
60. In 2020, although the share of informal workers shrank by 10 percent, total employment shrank by 13 percent relative to 2019.
61. INEI (2020d).

Figure 37. Employment by type, 2004-2021
% of total employment



Source: Based on data of the National Household Survey.

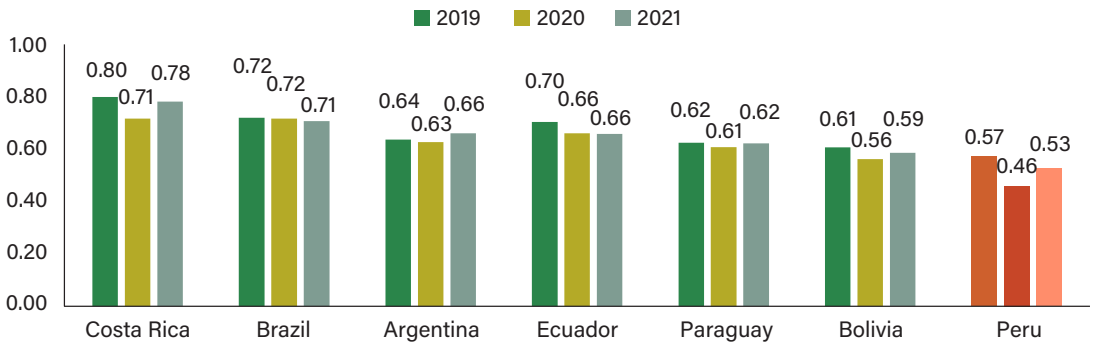
Figure 38. Labor informality by sector, 2007-2021
% of total employment



Source: Based on data of the National Household Survey.

In 2021, despite the economy's gradual recovery, including in employment, the quality of jobs had not yet returned to pre-pandemic levels.[62] Following the recovery in employment (by 15 percent) in 2021, adequate employment recovered slightly, but it remained at levels of a decade earlier. As a result, more than half of the workforce was underemployed (visible or invisible).[63] Moreover, labor informality continued an upward trend and rose to 77 percent. Thus, 13.2 million workers are informally employed in 2021. This translated into lower quality jobs relative to the situation before the pandemic. Before the crisis, Peru was already among the countries with the lowest job quality index in the region. With the shock, this coefficient fell drastically, from 0.57 in 2019 to 0.53 in 2021.

Figure 39. Job quality index, by country, 2019–21



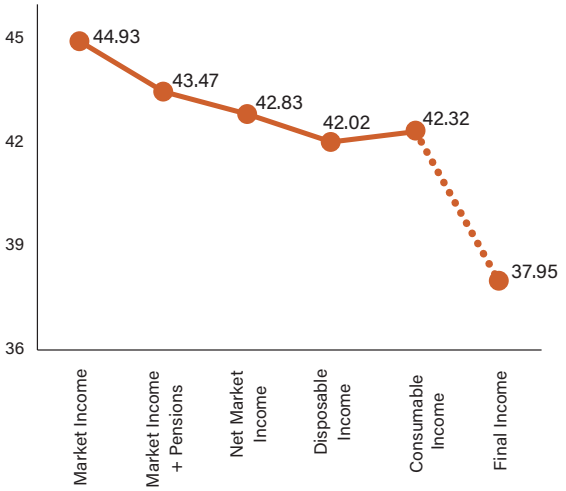
Source: Elaboration based on SEDLAC data of 2019–21 and the methodology of Brummundi, Mann, and Rodriguez-Castelan 2018.
Note: The dimensions considered in the job quality index are benefits, income, satisfaction, and security. Benefits include access to health insurance or a retirement pension. Income considers whether the wage paid is above the minimum welfare need. Satisfaction is approximated by the lack of a second job. Security refers to access to a contract or permanent employment or employment with a long tenure.

62. More detail on the impact of the pandemic is also found in the forthcoming World Bank Peru Poverty Assessment, chapter 2.
63. The visibly underemployed are employed individuals who usually work fewer than 35 hours a week in their main and secondary occupations, who want to work more hours, and who are available to do it, but do not because they are unable to find additional paid or independent work. The invisibly underemployed (the income underemployed) are employed individuals (salaried or self-employed) who normally work 35 or more hours a week, but whose income is less than the value of the minimum household consumption basket.

c. The tax and transfer system: limited redistribution capacity

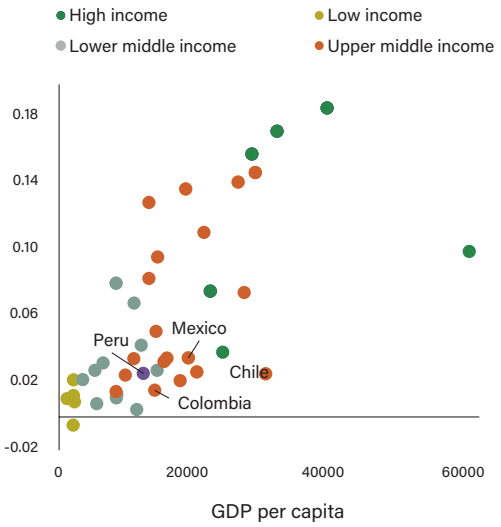
Although a tax and transfer system is a powerful tool in the redistribution of the benefits of economic growth among the poorest and most vulnerable, the system in Peru has only a modest impact on inequality. The analysis of the distributional impact of taxes and the public spending to shape poverty and inequality in Peru follows the Commitment to Equity (CEQ) methodology for 2018, developed by the CEQ Institute.[64] In 2019, the tax and transfer system in Peru contributed to a reduction in inequality of 2.6 Gini points, from 44.9 to 42.3, between market and consumable income (Figure 40).[65] However, inequality increased slightly if indirect taxes are included (between disposable and consumable income), which is explained by the regressivity of these taxes. In contrast, direct transfers (from net market income to disposable income) had only a slight impact on inequality (0.8 Gini points). Furthermore, the overall impact increased to 7 Gini points if the monetized value of education and health care is included (the dashed lines in Figure 40). However, even though education and health services provided by the government can be monetarized, this does not accurately reflect the low quality of provision.

Figure 40. Gini index, by income concept
0 = perfect equality



Source: Based on data of the National Household Survey.

Figure 41. Redistributive effect from market income to consumable income
Gini points, GDP per capita



Source: CEQ and World Bank data.

64. The methodology uses a framework that is comparable across countries and over time whereby specific fiscal policy elements, programs, expenditures, or revenue collections are focused on individuals and households according to the results of a micro-level socioeconomic survey (Lustig 2018).
65. Under the CEQ methodology, market income refers to earned income and income from capital (rents, profits, dividends, interest, and so on), private pensions, private transfers (remittances and other private transfers, such as alimony), imputed rent for owner-occupied housing, and the value of own production. Consumable income refers to the last income category, which includes all taxes and transfers before the inclusion of the monetized value of public health and education services as well as copayments. For more information on the methodology and results, see the forthcoming World Bank Peru Poverty Assessment, chapter 3.

Fiscal policy in Peru involves only a limited redistributive capacity relative to fiscal policy in other upper-middle-income countries. Figure 41 displays the reduction in inequality, measured in Gini points, from market income to consumable income (excluding the monetized value of education and health services). It shows that the impact of the tax and transfer system in Peru is among the weakest in reducing inequality, especially relative to other upper-middle-income countries. Although the impact is greater in Peru than in Colombia (1.6 Gini points), Peru lags with respect to Chile (3.9 Gini points), Mexico (3.5 Gini points), and other countries at similar per capita GDP. This is so even though Peru's peers in the Pacific Alliance start from a higher level of income inequality.[66]

The limited impact of fiscal policy in Peru may be explained by lower tax collection. General government revenue rose by a factor of 4.6 in nominal terms after 2000.[67] However, as a share of GDP, it only grew from 18.9 percent in 2000 to 19.6 percent in 2019, before the pandemic. The share also did not change much between 2017 and 2019 despite several reforms to the tax system aimed at combating noncompliance and expanding the tax base. Thus, Peru's government revenue remained relatively low compared with countries with the same GDP per capita and similar tax rates, such as peers in the Pacific Alliance. In 2021, general government revenues reached 21 percent of GDP, among the lowest levels in the region, despite the recovery in economic activity because of the favorable price cycle affecting mineral exports and the collection of extraordinary revenues (Figure 42).

Figure 42. Latin America and the Caribbean: general government revenue, 2021

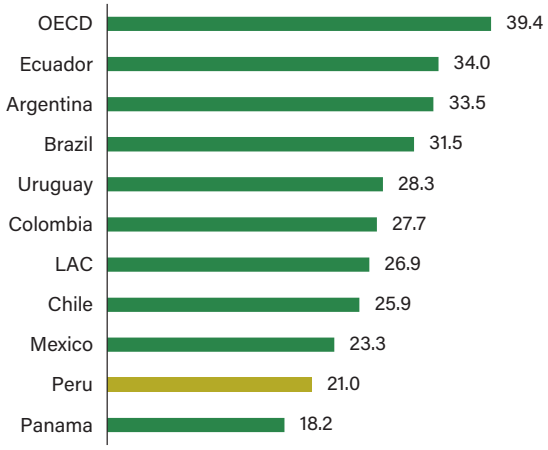
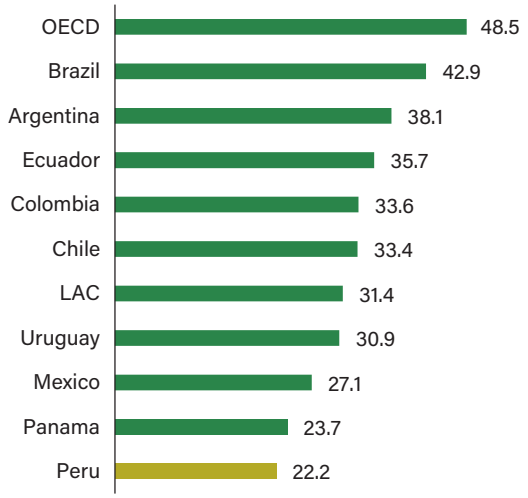


Figure 43. Latin America and the Caribbean: general government expenditure, 2021
% of GDP



Source: Data, Government (dashboard), Organization for Economic Co-operation and Development, Paris, https://data.oecd.org/government.htm; MEF 2022; WEO (World Economic Outlook Databases) (dashboard), International Monetary Fund, Washington, DC, https://www.imf.org/en/Publications/SPROLLS/world-economic-outlook-databases#sort=%40imfdate%20descending.

66. The Pacific Alliance is a Latin American trade bloc, consisting of Chile, Colombia, Mexico, and Peru.
67. Tax revenues also increased significantly, reaching 14.8 percent of GDP.

Total government expenditure is significantly lower in Peru relative to peers. Although general government expenditure, both capital and current spending, rose over 2000–19 (by a factor of 4.5 in nominal terms), it did not change much as a share of GDP.[68] In 2021, it reached 22.2 percent of GDP, which is above pre-pandemic levels, mainly because of higher capital expenditures on health care and to drive the recovery in the activities and projects that had been paralyzed in 2020 (see Figure 43). Nonetheless, government expenditure is much lower in Peru than in peer economies in the Pacific Alliance and in the region. This directly affects the resources available in sectors, such as education, health care, and social security, which account for 43 percent of total government expenditures and are important in addressing the needs of the most vulnerable.

Tax revenues remain below potential for various reasons, including the narrow tax base, the high informality rates, and the low tax collection efficiency. Informality exacerbates the deficiencies in fiscal policy. This is evident in the personal income tax system. Only 30 workers in 100 have formal jobs and are thus potential taxpayers. The high threshold for paying labor income tax causes that only 8 of those 30 workers effectively contribute. Moreover, the rate of tax noncompliance—28.0 percent of the potential tax revenue from the value added tax (Impuesto General a las Ventas - IGV) and 33.1 percent of the potential tax revenue from the third category of impuesto a la renta in 2021—is among the highest in the economies of the Pacific Alliance and cost Peru around 7.5 percent of GDP.[69]

The substantial dependency on regressive indirect taxes and tax exemptions that benefit the upper end of the income distribution also explain the limited redistributive capacity of fiscal policy. In 2019, the total general government tax revenue, including social contributions to EsSalud and the Social Security Normalization Office (Oficina de Normalización Previsional-ONP), represented 16.9 percent of GDP, and indirect taxes accounted for 9.3 percent of GDP.[70] Among indirect taxes, IGV revenue accounted for almost half of total tax revenue. However, the IGV is regressive, corresponding to only 3.9 percent of market income among households in the 10th decile, but 18.8 percent among the poorest decile (Figure 44).[71] If indirect effects are included, the regressivity significantly increases because, relative to the richest households, the poorest households allocate more of their market income to the IGV.[72] Figure 45 shows that IGV exemptions are mostly progressive. Some of them benefit households in the highest decile, and most of the IGV that is not paid by the poorest households corresponds to the share of the IGV forgone because of purchases in informal markets.[73]

72. Because the IGV affects the prices of intermediate goods and services across the entire economy, producer prices are affected indirectly. Producers pass some of the higher or lower input prices on to other intermediate producers or to final consumers (indirect effects). Thus, households bear a higher burden or enjoy a larger benefit than the direct impact might indicate.

73. Without IGV exemptions and the portion of the potential IGV revenue not received because of purchases in informal markets, the market income share of IGV expenditure might reach 50 percent among the poorest decile and 10 percent among the highest decile.

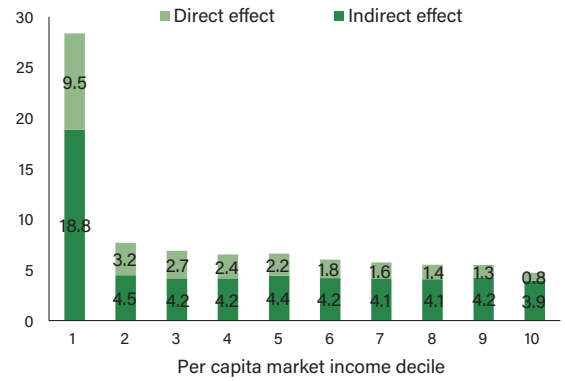
68. Over this period, current expenditure (wages, payments for goods and services, and current transfers) regularly represented more than three-quarters of total expenditure, despite the critical role played by the capital expenditure component in raising productivity, generating employment, and promoting economic growth (BCRP 2021).

69. The IGV In Peru is described as a value added tax in the public finance literature, and the third category of the Impuesto a la Renta is described as the corporate or personal income tax.

70. EsSalud is the contributory health system, and ONP is the contributory pension and social security system.

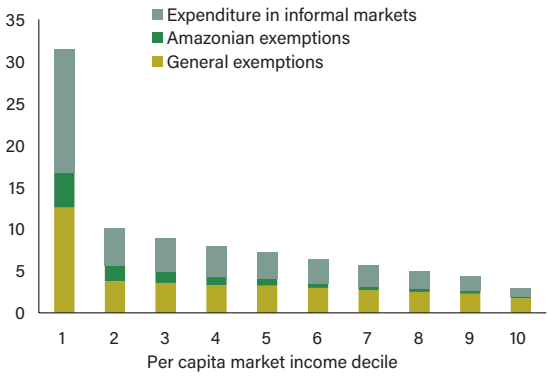
71. Similarly, the ISC, which is an excise tax on goods, such as alcoholic beverages, cigarettes, and fuel, is not progressive. At the highest decile, it is equivalent to 0.1 percent of market income, while, at the poorest decile, it is equivalent to 0.3 percent.

Figure 44. IGV direct and indirect effects, by per capita market income decile, 2019
% of market income



Source: Based on data of the National Household Survey.

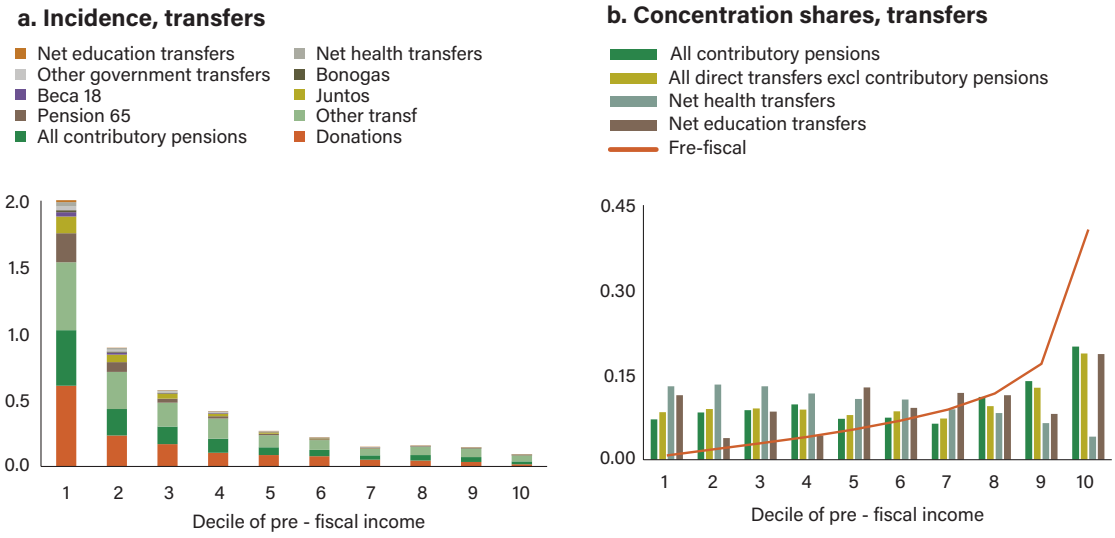
Figure 45. IGV exemption and informal market effects, by per capita market income decile, 2019
% of market income



Source: Based on data of the National Household Survey.

Although all public transfers are clearly progressive, they suffer from leakages to the higher end of the income distribution, reducing their overall impact on inequality. Figure 46, panel a, illustrates the incidence of each direct transfer and shows that, together, they benefit households in the lowest decile relative to households in the highest decile. However, that the concentration shares are not limited only to the lowest deciles shows that leakages in government transfers are reaching the highest deciles.

Figure 46. Tax revenue and expenditure: incidence and concentration shares



Source: Based on data of the National Household Survey.
Note: Measuring the incidence of transfers by decile highlights the size of the total transfer relative to total income, by decile. Incidence thus provides a measure of size and distribution relative to a reference income.

Low execution of the total budget, leading to low-quality public investment, is an important barrier to the effective reduction of poverty and inequality. In 2019, local and regional governments accounted for almost two-fifths of total expenditure, representing 4.3 and 3.1 percent of GDP, respectively.[74] There is evidence that institutional capacity is heterogenous across local authorities, and this may reflect low execution of the budget. Between 2015 and 2019, the national government executed only 78 percent of the public investment budget, while local and regional governments executed only 65 and 62 percent, respectively.[75] Furthermore, the emergence of low-quality pre-investment and technical studies have distorted or paralyzed public works and public investments.[76] Deficient operations and poor maintenance generate great uncertainty and discontent among the population.

d. Excessive exposure to shocks, especially natural disasters, among the poor and vulnerable

Aggregate shocks affect broad economic and social systems, but their effects on assets, socioeconomic groups, and communities are not evenly distributed. Poor and vulnerable households are more likely to be affected by natural hazards because of geographic location and lower investment in mechanisms that improve resilience and reduce exposure. Moreover, in the search for better economic opportunities, land and housing market dynamics tend to push poorer households into areas at higher risk.[77] Poor and vulnerable households often lack the economic and social tools to manage the negative impacts of natural hazards. These conditions include a higher reliance on informal labor markets and informal insurance mechanisms and less access to services, such as safe drinking water, sanitation, education, and health facilities. The combination of these factors poses additional challenges in a context where climate-related risks are expected to increase in the future due to climate change.

Negative income shocks can reverse the gains in poverty reduction by increasing the likelihood that nonpoor households fall back into poverty and by lowering the income of poor households. Designing policies that mitigate risk exposure requires an understanding of the frequency and intensity of shocks, the households more likely to be affected, and the availability and effectiveness of coping mechanisms. ENAHO captures some of these shocks by gathering self-reported household information on exposure to negative events in the previous 12 months and the ways this exposure has translated into income or assets losses and the measures adopted to manage these effects. The surveys consider the following shocks: natural events or natural disasters, crimes, abandonment by the head of household, the serious illness or accident of any household member, bankruptcy of a family business, and loss of employment by any household member.

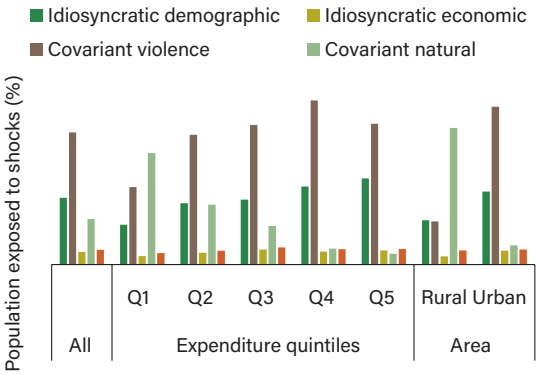
76. According to the Comptroller General (Contraloría General de la República), there are over 2,000 unfinished public works projects throughout the country (CGRP 2022).
77. Hallegatte et al. (2016).

74. This is the result of the decentralization process that started in the early 2000s and was conceived as an opportunity to transfer more functions to subnational governments in a context in which government expenditure was rising by a factor of 4.5 in nominal terms between 2000 and 2019.
75. Subnational governments receive resources through the Canon System. However, the formula of distribution is linked to the proximity of municipalities to mines, which creates an unequal distribution of fiscal resources. The top 10 percent of district municipalities receive a per capita canon that is almost nine times the amount of the median municipality. A recent evaluation of this program by Aragón and Winkler (2022) shows no evidence of significant improvements in access to public services, poverty, or inequality associated with the system.

The shocks may be classified into covariant or idiosyncratic shocks. Idiosyncratic shocks may be demographic, such as abandonment by a household head or the illness of any household member, or economic, such as job loss or bankruptcy. Covariant shocks may affect entire communities and can be classified as violent (such as a crime) or natural (such as a climate shock).

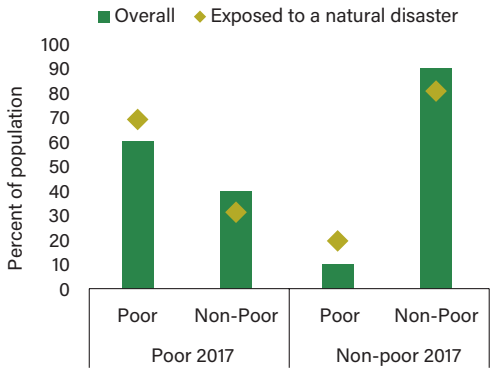
Low-income and rural households are more highly exposed to natural disasters, while urban and more well off households experience more idiosyncratic economic shocks. In 2021, almost 40 percent of households reported at least one negative shock. Idiosyncratic economic shocks showed the highest prevalence (21.7 percent), while covariant shocks, such as natural disasters, were less common (7.5 percent) (Figure 47). However, shocks are not evenly distributed. In any given year, poor and rural households are more highly exposed to natural disasters, while more well off households report more economic shocks. Results show that, in 2021, natural disasters affected 18.3 percent of households in the lowest per capita expenditure quintile and 22.4 percent of rural households. In contrast, urban and more well off households are more likely to report idiosyncratic economic shocks (23.1 percent), such as the loss of employment or the bankruptcy of a family business by a household member in the previous 12 months. Information on large natural disasters shows they tend to be more equally distributed than localized shocks. For example, in 2017, when the last earthquake occurred in Peru, the share of the population that reported they had experienced a natural disaster rose to 11.4 percent, and the reports were relatively equally distributed among urban and rural residents.

Figure 47. Reported shocks, by per capita expenditure quintile and location, 2021



Source: Based on data of the National Household Survey.

Figure 48. Transition in and out of poverty, 2017 – 2018



Source: Based on panel data of the National Household Survey.

Exposure to a natural disaster increases the probability of becoming poor and limits movements out of poverty. Nonpoor households experiencing shocks faced a high probability of falling back into poverty. Among nonpoor households in 2017, the probability of being poor in 2018 almost doubled, from 10 percent in the general population to 19 percent among those reporting they had experience a natural disaster (see Figure 48). Moreover, the probability of escaping poverty among poor households drops from 40 percent in the general

population to 31 percent among those reporting a natural disaster. This information showcases the importance of reducing the incidence of shocks to allow for a more rapid pace of poverty reduction by increasing transitions out of poverty and minimizing the possibility that nonpoor households will fall back into poverty.

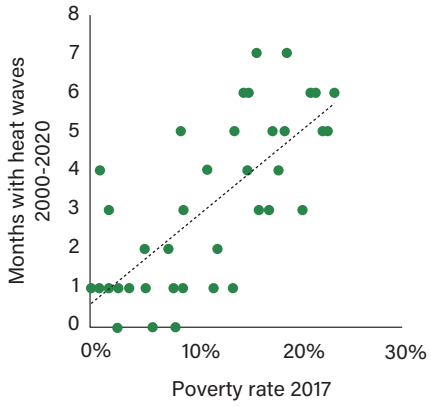
Because of its location and topography, Peru is highly vulnerable to natural disasters, which are likely to become more frequent because of climate change. Peru is located over the Nazca Plate, a tectonic plate. It is in the Pacific Ring of Fire, a highly seismic region in which over 80 percent of the world's earthquakes occur. It is also exposed to the Humboldt Current, which provides the country with rich fishing waters and exposes it to periodic episodes of El Niño.[78] Between 2003 and 2018, the incidence of natural hazards increased by almost 100 percent.[79] The sharpest rise occurred in heavy rains. Between 2003 and 2018, the number of episodes increased from 455 to 1,263. The most common natural disasters reported in Peru are heavy rains and low temperatures, with more than 3,700 and 1,300 episodes of each phenomenon reported in 2019, respectively. The incidence of human-induced disasters has also increased considerably. For example, wildfire exposure rose from 26 episodes a year in 2003 to 248 in 2018. The regions more highly affected by these disasters in 2003–19 were Cusco (wildfires), Ancash and Lima (landslides), Cusco and Huancavelica (low temperatures), and Apurimac and Huánuco (heavy rains). The economic cost of natural disasters is high; for example, the Pisco earthquake in 2007 caused damage valued at over US$2 billion, while the 2017 El Niño episode alone affected 1.3 million Peruvians, and the estimated losses were US$3.1 billion.[80]

In the absence of policy responses aimed at adaptation and the mitigation of damage, climate change impacts by 2050 are expected to lower economic growth and jeopardize the development trajectory. The Peru Country Climate and Development Report (World Bank 2022c) provides a general model to estimate the impacts of climate change on the economy by accounting for the following: (1) more intense and frequent flood events, (2) the impact of heat on general productivity, and (3) the impact of climate change on agricultural and fishery yields. The results show that GDP would drop by 0.8 percent by 2050 if no mitigation measures are implemented.[81] Even under scenarios whereby mitigation measures are implemented, GDP losses would be 0.2 percent a year.[82] As a result of these losses, poverty would increase by 0.22 percentage points by 2050.[83] If additional effects through higher food prices and lower agricultural earnings are included, the model predicts only a one percentage point increase in poverty by 2030.[84]

78. El Niño is a phenomenon that occurs when the surface of the Pacific becomes unusually warm, causing extreme events of rain and drastic climate variations (ECLAC 2014).
79. INDECI (2019). INDECI data for 2019 are available by type of shock as well. However, in 2019, municipalities became required to report emergencies with the Damage Assessment and Health Needs Analysis in Disaster Situations to access management resources. Thus, reporting in 2019 increased, and it became more difficult to compare the 2019 data with data of previous years.
80. Molina et al. (2021); Tolmos et al. (2011).
81. This is known as the business as usual scenario, the warming scenario, or RCP 8.5. The scenario assumes no concentrated efforts to cut back on greenhouse gas emissions. For more on the scenario, see SENAMHI (2021).
82. The GDP loss estimate is based on a general equilibrium macroeconomic model of Peru, augmented by core climate change variables from the Peru Country Climate and Development Report (World Bank 2022c). Losses in GDP through the selected climate change impacts would result in higher poverty by 2050. Under the business as usual scenario, estimates yield the following losses by sector: 4.3 percent in agriculture, 20.7 percent in fisheries, 0.2 percent in mining, 0.6 percent in industry, and 0.3 percent in services.
83. he increase in poverty occurs under the business as usual scenario (RCP 8.5), according to which GDP losses are 0.8 percent. Poverty is estimated using a poverty projection model based on GDP-to-employment elasticities and productivity-to-income elasticities. GDP growth by sector is taken from data of the World Bank Macroeconomic and Fiscal Model, which estimates changes in GDP in the agriculture, fishing, mining, industry, and service sectors. See Burns et al. (2019).
84. The Country Climate and Development Report included a scenario that accounts for the effects of increased food prices and agricultural earnings of between 2 percent and 5 percent. For details, see World Bank (2022c).

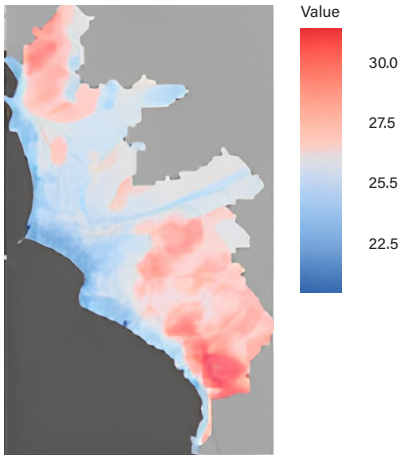
Environmental stressors are not equally distributed across the country, which calls for local studies to capture differences in exposure levels and damage functions properly. Climate information is accessible at a much higher resolution than the resolution available in household surveys. Aggregating climate information at the level where household surveys provide representative statistical numbers loses the nuance climate information can provide. This loss of information is particularly relevant for some types of shocks. Heat waves constitute a good example of an environmental stressor with a high degree of spatial variation that is unequally distributed even in relatively small geographical regions. Leveraging the poverty map for the Metropolitan area of Lima, Map 4 shows that, during a heat wave in November 2016, different parts of the metropolitan area consistently experienced higher maximum temperatures of up to 15°C higher than cooler parts of the city. Counting the number of heat waves each district experienced during 2000–20 and contrasting this with the poverty map information show a consistent pattern: lower-income areas experience heat anomalies more often (Figure 49).[85]

Figure 49. Heatwaves and poverty rate, Lima Metropolitan area



Source: World Bank calculations using 2017 ENAHO and the 2017 National Census. Heat information: National Service for Meteorology and Hydrology (SENAMHI).
Note: Number of times in 2000–20 that a district experienced a maximum temperature two standard deviations above the district-specific temperature in 1980–2000.

Map 4. Average daily maximum temperatures in Lima, 2021



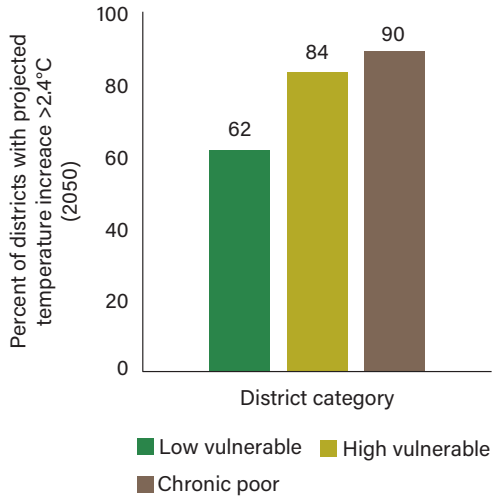
Source: National Service for Meteorology and Hydrology (SENAMHI).
Note: The map shows the average maximum temperatures in October 2016, a month which presented higher than average temperatures in the Lima Metropolitan Area.

Given the unequal geographic patterns involved in natural hazards, the evidence suggests that the poor and vulnerable will face the highest levels of weather variations in the future, increasing climate inequality. Following a scenario of high emissions, the National Service of Meteorology and Hydrology of Peru estimates that, by 2050, precipitation will exhibit local variations that range from increases (reductions) of 45 percent (40 percent). The highest reductions in precipitations are expected to occur in the Amazon, while the most marked increases are expected to be observed on the coast, while regions in the Andes will suffer from both reductions and increases in precipitation. Mapping techniques allow for more granular

85. A heat wave in the Lima Metropolitan Area is defined as a month in which the average temperature is two standard deviations above the historical mean in 1980–2020. A similar result is found by Hsu et al. (2021) who conclude that low-income households are typically located in areas characterized by infrastructure that reinforces the effects of heat waves.

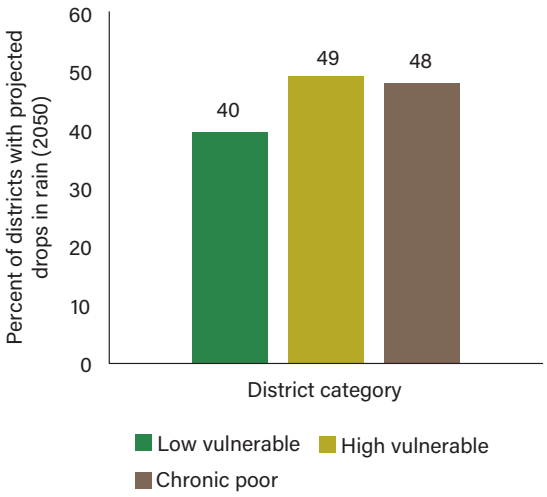
analysis of vulnerability at the local level (see above). Based on their vulnerability rate, districts can be characterized as low vulnerability, high vulnerability, or chronically poor. Drops in precipitation will be more common in highly vulnerable and chronically poor districts (49 percent and 48 percent, respectively) than in low vulnerability districts (40 percent). Annual temperatures are expected to increase by between 1.7°C and 3.5°C nationwide. The Amazon is expected to suffer the biggest changes in temperature (2.8°C to 3.2°C), and the Coast region will experience the lowest, but still significant, increases (2.0°C to 2.4°C).[86] More than 75 percent of districts are projected to exhibit temperature rises of over 2.4°C in the next 30 years. Districts with projected temperature increases larger than 2.4°C are more likely to be categorized as chronically poor or highly vulnerable. About 84 percent of the highly vulnerable districts would register that increase in temperature and that proportion would arise to 62 percent among the low vulnerability districts (Figure 50).

Figure 50. Expected changes in future temperature, by district category



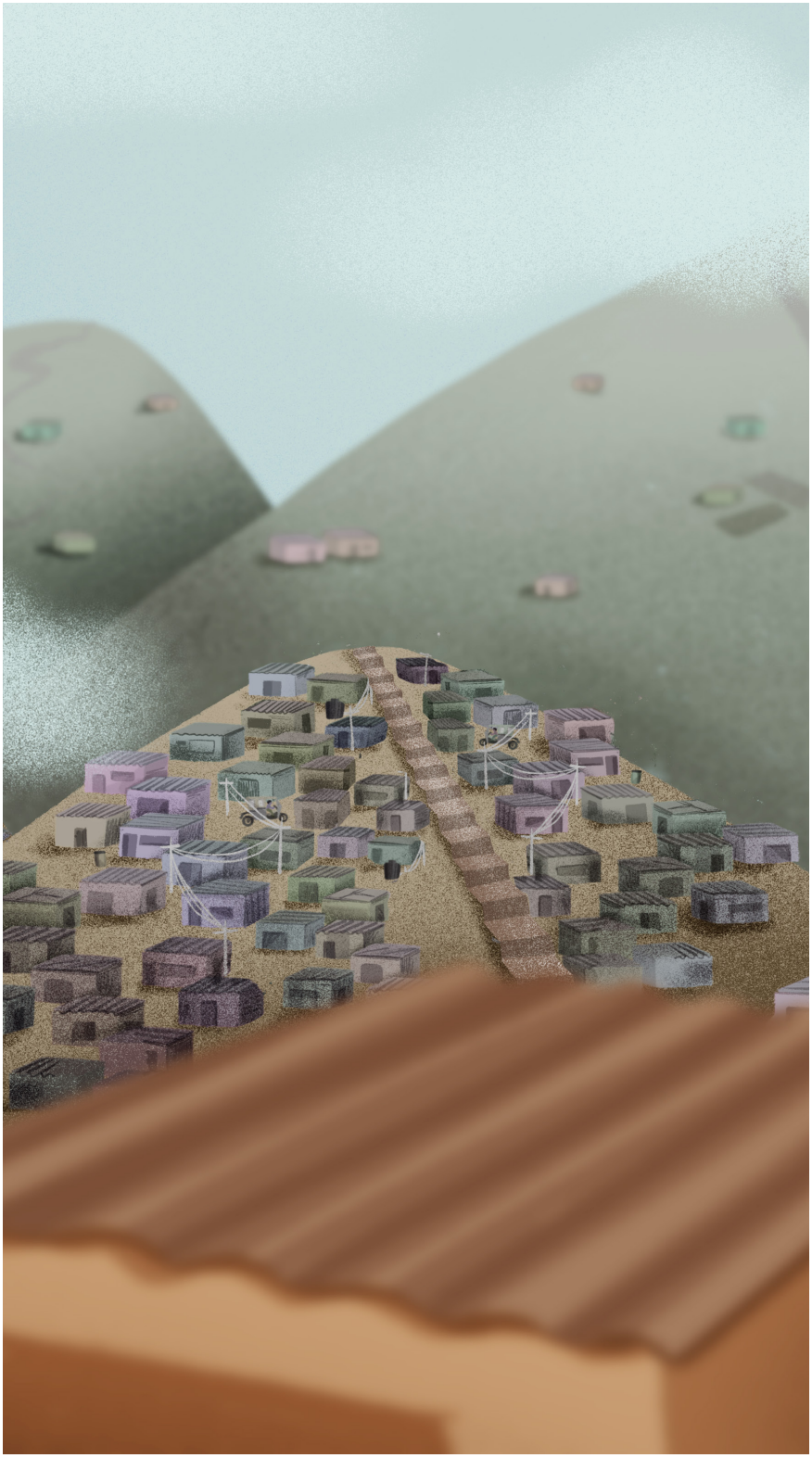
Source: District categories based on 2017 and 2021 data of the National Household Survey and 2017 census data. Changes in temperature from National Service of Meteorology and Hydrology of Peru.

Figure 51. Expected drops in rainfall by 2050, by district category



Source: District categories based on 2017 and 2021 data of the National Household Survey and 2017 census data. Changes in temperature from National Service of Meteorology and Hydrology of Peru.

86. The baseline considered is the period between 1980 and 2005, and the projections refer to the period 2036–65, centered on 2050. Changes in temperature and precipitation are estimated at a spatial resolution of 5 kilometers by 2050. This is the business as usual scenario (RCP8.5). See SENAMHI (2021).



How can peru reduce the fragility of social gains?

03

Peru's challenges ahead involve the need to foster a new type of inclusive and resilient growth that addresses the fragilities highlighted by the pandemic. This report identifies four sources of fragility that should be addressed to recover the gains in poverty reduction and prevent future reversals: the inadequate and unequal access and quality of public services, the low quality of employment, the limited redistributive capacity of fiscal policy, and the unequal exposure to aggregate shocks, particularly climate change.

Fostering more inclusive growth that is equitably shared among Peruvians and promoting poverty reduction will require long-term public goods and service investments. Greater access to and the better quality of public goods and services would improve the living conditions of the poor and vulnerable. This would allow those at the bottom of the income distribution to accumulate productive assets to improve their living conditions and increase their contribution to the country's economy.

While these long-term development outcomes occur, two urgent action are merited to ensure that the postcrisis period is more resilient. The first is to remediate the losses caused by the pandemic and close existing gaps, and the second is to protect the poor and vulnerable through an updated, resilient, and adaptative social protection system.

Fostering a new type of inclusive and resilient growth

Growth driven by lifting structural impediments in the economy will be key to continuing poverty reduction in Peru. This growth needs to be inclusive and focused on improving the productive capacity of the poor and vulnerable. Efforts need to be directed toward lifting persistent constraints, such as impediments that prevent firms from growing, becoming formal, and raising productivity. For example, the multiple tax regimes according to the various sizes of firms encourage firms to remain small and partition themselves as they grow larger to avoid moving up from one tax regime to another. Thus, promoting firm growth requires unifying tax regimes.[87] Moreover, 76.8 percent of workers are informally employed. To hire formally, employers must comply with complex labor legislation and pay up to an additional 68 percent of a worker's wage in nonwage costs. Thus, reducing informality requires more flexibility in labor laws and a reduction in the costs associated with formalization, both the initial and recurring costs.[88]

Efforts need to be prioritized to favor high-potential growth sectors. Betting on sectors such as agriculture, forestry, and tourism would unleash their potential across the country and achieve climate-resilient growth to prepare for the future (Box 2). For example, agricultural exports have increased 10-fold in the past two decades and continue to have growth potential. Investments in improving roads that connect the Andes and Amazon with the coast, where most agroexport firms are concentrated, would allow more agroexporters to emerge because more fruits and vegetables would reach customers fresh and make exports more inclusive. Similarly, investment in agro-specific infrastructure and services, such as cold-chain facilities, collection points, and traceability technology, would also more inclusion of farmers into export value chains.[89] Exploiting the country's adventure tourism potential may reap significant returns.

87. See World Bank (2017), (2022d).
88. See World Bank (2017), (2022d).
89. IFC (2023).

Investing in road and air connectivity, undertaking actionable market research that considers both profits and conservation efforts, and developing a management plan involving protected areas would promote nature-based, adventure tourism, as well as tourism in natural areas outside the typical regions currently attracting tourists to Peru.[90]

Box 2. The challenges and opportunities in accelerating economic growth

General economic progress during the last two decades preceding the pandemic, coupled with well-targeted social programs, translated into substantial reduction in the poverty rate. Especially between 2002 and 2013, GDP growth was stellar, averaging 6.1 percent annually, driven by good economic reform and favorable external conditions. The macrofiscal reforms initiated during the 1990s were consolidated in the 2000s, improving macroeconomic stability, strengthening trade openness, and enhancing investor confidence. Capital accumulation, mainly linked to the mining sector, was the main source of growth during this period, representing 60 percent of total growth between 2002 and 2013. The export-oriented growth model also spurred the development of modern agriculture, which benefited from the conjunction of trade agreements, new irrigation infrastructure, a more flexible labor regime, and good prices. In this context, agricultural exports rose in value from US$758 million in 2000 to more than US$8.8 billion in 2021, growing at an average annual rate of 12.4 percent.

Then, between 2013 and 2019, the economic growth rate fell by more than half, to 3.1 percent, reflecting a less benign external environment characterized by lower commodity prices and higher volatility in global financial markets. The effects generated by previous reforms faded appreciably. The less favorable external environment during this period also highlighted the more profound structural challenges in the country's growth model. As illustrated in the Systematic Country Diagnostic Update, productivity continued to be low, thinning out economic growth.[a] More than 70 percent of labor was either self-employed or working in firms with 10 employees or fewer, among which estimated labor productivity was at only around 10 percent of that among firms with more than 50 workers. Regional disparities were sizable, and exports were highly concentrated in mining and other extractive activities, rendering the economy vulnerable to terms-of-trade shocks and climate change impacts. The limited progress in addressing these challenges was correlated with the weak capacity of public institutions. Institutional instability has substantially increased since 2016, further weakening the capacity of the government to design and implement needed reforms and deliver quality services across the country.

In this challenging environment, the government and institutions need to find new drivers of growth for the coming decades. A sector with good potential is forestry. According to the Peru Country Climate and Development Report (World Bank 2022c), investing US$6 billion between 2023 and 2050 in forest landscape interventions could create close to 85,000 jobs a year, multiply the sector's contribution

90. IFC (2023).
a. World Bank (2022d).

to the economy seven-fold, and raise the sector's contribution to GDP from 1.9 percent in 2023 to 5.5 percent by 2050. However, accelerating long-term economic growth requires improving the connecting infrastructure and public services, raising human capital, and streamlining rigidities in the markets for factors and products. Accomplishing these goals requires raising the capacity of the government to regulate and enforce the law effectively, provide quality services, and cope with diverse shocks.

The above policies should be considered for their potential to foster more inclusive growth by engaging people at the bottom of the welfare distribution and removing the constraints that prevent them from becoming more productive, even if the policies take longer to implement. While these recommendations are not new, little progress has been made in generating inclusive and resilient growth and increasing productivity because of implementation difficulties and political challenges in advancing the agenda. Even so, it is necessary to keep them in the public policy discussion to reinforce the need to prioritize them and produce change, even if the change is slow.

Improving long-term investments in services and assets

To foster a more inclusive growth that allows Peruvians to accumulate productive assets, there is a need for the government to enhance the provision of higher-quality public goods and services. One of the key sources of fragility in Peru is the inadequate and low-quality provision of public services. Despite sustained growth in the two decades before the pandemic, the government has not prioritized sufficient investments in quality goods and services. Low investments in education and health services and inadequate investments in road and air connectivity and communication services have limited the capacity of the people to accumulate productive assets. As a result, workers have low human capital and labor productivity.

Peru would require investing about 4 percent of GDP each year to close the long-term quality infrastructure gap. According to Ministry of Economy and Finance estimates, in 2019, the infrastructure gap in providing basic access was US$117.2 billion in the short run (5 years) and US$363.5 billion in the long run (20 years). However, achieving a level of infrastructure quality comparable with OECD countries requires an investment of 4 percent of GDP each year.[91] For instance, it is estimated that achieving basic access for all to safe water and sanitation would require an increase in investment by 18 percent to cover the short-term gap and 24 percent to cover the long-term gap. In the case of telecommunication, the additional investment would have to be 132 percent and 421 percent greater, respectively.

Fostering human capital accumulation requires investments in school infrastructure and technology infrastructure and a special focus on closing educational attainment and educational proficiency gaps between students at different socioeconomic levels, ethnicities, and geographical areas. Only a third of schools in Peru have access to reliable electricity, water, and sewerage. Attendance and learning are more difficult to achieve without basic services. Student safety must also be ensured. The physical infrastructure gap in schools needs to be closed. Moreover, learning can be complemented by technological resources. This is key for delivering education in emergency cases, such as the pandemic, but also

91. Although public investment currently represents approximately 5 percent of GDP each year, this is not necessarily intended to close the infrastructure gap. A complementary analysis is necessary to determine the extent to which public investment contributes to closing the infrastructure gap.

for supporting students who are falling behind by offering them additional resources. For these services to be effective and reach all, greater investments in connectivity, technology training, and hardware and software are required.[92] Learning outcomes in Peru are still low. Only 24 percent of students in primary and 9 percent in secondary reach satisfactory performance in mathematics and reading. Continuing reforms will be crucial, such as the Reforma Magisterial, to ensure that teaching careers are based on merit, but additional resources are required to attract good-quality teachers, especially in remote areas. This challenge is critical because learning and attendance gaps among students in rural areas, students in lower-income households, and indigenous students are persistent and widened during the pandemic.

Delivering high-quality health services requires greater investment in the relevant resources and critical reforms. The pandemic exposed the shortcoming of health services in Peru. The health system's collapse revealed the need to invest in resources, such as better and more resilient infrastructure and more doctors. Peru lags in the per capita number of doctors and nurses recommended by the World Health Organization. The highly qualified health personnel are concentrated in the coastal regions. Higher investments need to be complemented by strengthening health management information.

The investments require a geographic lens because the main infrastructure and service delivery gaps are in remote areas. To reduce the geographic gaps, the government and institutions must prioritize efforts to improve the spending capacities of subnational governments. To improve the spending capacity of subnational governments, which have authority over only limited budget execution, it is necessary to improve the distribution of spending responsibilities and articulate the budgets of entities involved in shared projects. This could be complemented by investment mechanisms that have demonstrated success in promoting spending. For instance, using project management offices for big projects and public-private partnership programs improves the supervision and enforcement because these offices are able to establish high standards and protocols. Improvements in geographic and urban management are also required. This can be achieved by enhancing local capabilities through technical assistance and by updating registries and cadastres.[93]

Better-quality service provision will also require more fiscal resources. Despite the country's outstanding economic growth, revenue collection is still low compared with other countries in the region. A reduced tax base, along with the specific aspects of fiscal policy design, such as exemptions and high eligibility thresholds, explains the limited redistributive capacity of the system. Therefore, to improve the redistribution of the benefits of economic growth among the poorest and most vulnerable, a package of complementary reforms should be applied.

Work toward increasing progressiveness and choosing high-value fiscal policies

The current tax system, which includes multiple tax regimes depending on the size of firms, encourages firms to remain small and partition themselves as they grow larger to avoid moving to a higher tax one regime. This phenomenon, known as shrinking or

92. For more information on these proposals, see World Bank (2021).
93. For more detailed recommendations, see World Bank (2022d).

enanismo, has been well documented in Peru.[94] Under the current tax regimes, firms are not incentivized to grow. Promoting firm growth and formalization requires simplifying tax regimes. This simplification should be done gradually, starting with incorporating new small and medium enterprises into the general regime and merging the other categories, such as the single simplified tax regime, the special income tax regime, and the micro and small enterprise tax regime, into one. Additionally, the announcement of the elimination of special tax regimens should be carried out well in advance to allow firms to adapt to the new general tax regime.

It is necessary to reduce informality so that policies that aim to broaden the tax base achieve the desired effect. Total labor income tax relies on the top 8 percent of the employed population based on the distribution of total personal income).[95] Reform scenarios reducing the tax threshold to five tax units are (US$ 5500 approximately) expected to increase the tax base to cover 15 percent of formal workers. Furthermore, reducing the threshold increases the share of taxable income among all taxpayers, including those in the highest income bracket, which can reduce income inequality. However, the impact of this policy is limited by the extent of labor informality because these measures only correspond to less than a quarter of active workers. Therefore, measures that increase the benefits of formality and strengthen the enforcement of labor regulations are required.[96] Finally, it is important to mention that lowering the exemption threshold may be politically challenging. The first statutory tax rates must be set at low levels to avoid overburdening the middle class.

The increase in tax revenues needs to be achieved without hurting the poor or stifling investments, which could be done by increasing the progressiveness of the tax system. For example, moving personal capital income tax from a flat rate to a progressive regime will improve the progressiveness of the tax system. Income from leasing, subleasing, and the assignment of goods (first category) and profits from the principal, dividends, interest, and royalties, among others (second category), are determined annually by applying a 6.25 percent tax rate on net income (after 20 percent in deductions). This source of income faces a flat rate, unlike labor income which is taxed progressively, and a lower tax rate than the lowest income bracket (8 percent)[97]. According to the Superintendencia Nacional de Aduanas y de Administración Tributaria (National Superintendence of Customs and Tax Administration), the top 1 percent of taxpayers account for 72 percent of total capital gains. Therefore, the inclusion of capital income tax in a progressive system would improve the equalizing effect of the tax system and increase the contribution of the highest income earners. However, to prevent this measure from reducing incentives to invest, it would be indispensable to introduce substantial adaptations of tax policy and administration by, for example, introducing deductions for capital expenditures.

An alternative for increasing revenues without hurting the poor would be to replace tax expenditures with more well targeted support for the poor and vulnerable. Tax expenditures estimates for 2023 reach S/ 20,354 million, representing about 2 percent of GDP, and are expected to increase by 11 percent and 16 percent in 2022 and 2023, respectively. According to the Ministry of Economy and Finance, this is explained

94. IADB (2018) and Private Council for Competitiveness (2019).
95. According to an analysis combining household survey information and tax records and following Blanchet, Flores, and Morgan (2022).
96. Lowering the exemption threshold may be politically challenging, and the first statutory tax rates must be set at low levels to avoid overburdening the middle class (Bérgolo, Londoño-Vélez, and Tortarolo 2023).
97. For more information on this discussion, see World Bank (2015).

by the extension of IGV tax benefits that expired in 2021.[98] Furthermore, the IGV covers 71 percent of total tax expenditure (expected in 2023), mainly explained by IGV exemptions on agricultural products, equivalent to 0.62 percent of GDP, and almost full exemption of the IGV in the Amazon. Removing tax exemptions would likely increase the burden of the IGV on the poorest. However, the direct allocation of public spending to finance public investment is more efficient than offering tax benefits, as demonstrated by the experience in the San Martín region with a significant impact on GDP growth. Likewise, another alternative includes compensating poor and vulnerable households for their losses through a well-targeted transfer system.

Acting quickly to recover from the losses of the pandemic and close existing gaps

The losses caused by the pandemic require immediate action. A first and more immediate step in the plan to establish resilience would involve recovering from these losses. It will be difficult to achieve progress in poverty reduction. The long-term impacts of the losses could set back development efforts. COVID-19 has negatively affected health, school attendance and learning, the quality of employment, and employment among youth. It is important to address these losses before they become entrenched and have had long-lasting impacts on well-being.

The mental and physical health of those affected by COVID-19 has been severely compromised and requires immediate attention. Target interventions are required for those whose health has deteriorated because of the pandemic. This could be done by providing follow-up care to ensure that individuals fully recover from the disease. In addition, investing in mental health programs that support individuals who suffer from anxiety, depression, and stress will be crucial because, as the incidence of mental health conditions has increased among the population.[99]

Support must be provided to those who lost a primary caregiver. COVID-19–related deaths increased the number of orphans. In some cases, the only household caregiver died, which calls for more attention and investment in institutions caring for orphans.[100] In other cases, the income provider died. The absence of income earners will result in a higher incidence of poverty among children and youth. It is essential for the government to provide support to those who have lost a primary caregiver, and to redouble its efforts to provide social assistance to orphans by identifying who the new orphans are and by increasing the generosity and support offered by programs.[101]

Supporting children and youth with learning deficits associated with the pandemic should be a priority in education. The pandemic disrupted the education system by mandating school closures, thereby reducing the time spent on in-person or online classes, reducing the time spent on learning activities with teachers, and broadening gaps among students based on access to learning resources. Given that students and teachers have returned to class, developing safety protocols and measures in schools should be a priority. Schools should provide handwashing

98. About 91 percent of these IGV tax benefits correspond to agricultural products and inputs, followed by the public passenger transport system (except air transport), a first sale of real estate, income received by the Mivivienda Fund (a housing fund), the construction and repair of units of the Navy.

99. According to the World Bank High Frequency Phone Survey, 30 percent of the population had to look for health service support during the pandemic (Mejía-Mantilla et al. 2021).

100. In Lima, 80 percent of the institutional care facilities are informal.

101. In Peru, the orphan of an adult who was enrolled in a public or private pension system has the right to receive a pension. During COVID-19, an additional pension was approved for children whose parents had died from COVID-19. However, the identification of orphans is imperfect and leads to the exclusion of potential beneficiaries.

stations and health and emergency protocols to minimize and control COVID-19 transmission. The return to class is not be enough to recover from the learning losses in a timely manner. To achieve this, additional resources should go to catch-up programs, teacher training, and strengthening digital infrastructure.

Initiatives in other countries have successfully reduced the deficits in learning caused by school closures by complementing the return to classes with a strategy to help students catch up. In Tamil Nadu, India, a government-run after-school remediation program supported by community volunteers offered students between 60 and 90 minutes of instruction daily. The remedial program was effective in reversing learning deficiencies at the cohort-level.[102] Peru could follow this example by implementing after-school or summer school remedial programs. A contextually adapted learning recovery program should include actions aimed at reaching and keeping students in school, assessing their learning levels regularly to identify the magnitude of losses and track progress, a teaching strategy to focus on fundamentals, which requires adjusting teaching methods and curriculums, improving the efficiency of instruction through catching-up activities, technology, and innovation, and developing the psychosocial health and well-being of children.[103]

To address losses in the labor market, especially in terms of the quality of employment, the government could focus on incentivizing better-quality formal jobs. To promote hiring in the formal sector lost in the pandemic, the government could strengthen the role of the National Labor Inspection Office, (SUNAFIL) which targets mainly small and large firms within the formal sector. It thus misses a large share of labor informality. Moreover, although the responsibility for supervising microenterprises was temporarily transferred from regional governments to the National Labor Inspection Office in 2018, only three regions have completed the process. In this sense, it is recommended that SUNAFIL extend its responsibility to both the informal sector and microenterprises. In addition, the lack of inspectors, insufficient infrastructure, and the reactive nature of SUNAFIL's procedures are the reason for the reduced impact on informality. Therefore, it is recommended that the number and capacities of inspectors be increased and that the conditions for the supervision of microenterprises by regional agencies be improved. It is recommended that the institution also include a preventive approach by assisting companies during the inspection process.

Training programs should be set up to support young people who suffered more from unemployment during the pandemic to obtain high-quality jobs. To enhance the employability of young people, training programs with a regional focus in high-growth potential sectors could help minorities foster transferable and socioemotional skills. Although the first wave of youth training programs in Latin America saw little to no effect on employability and the quality of jobs, more recent evidence in the US showed promising results.[104] The novelty of these programs is that they are less focused on technical and vocational skills and more oriented to supporting beneficiaries in developing sectoral skills.[105] The programs also addressed the social capital deficit by acting as an intermediary during the job placement

102. Singh, Romero, and Muralidharan (2022).
103. A complete guide on how to design catching-up programs in schools can be found in the RAPID Framework for Learning Recovery and Acceleration (World Bank, Bill and Melinda Gates Foundation, FCDO, UNESCO, UNICEF, and USAID 2022).
104. Training programs in the 90s and early 2000s in Latin America, such as ProJoven in Peru, Proyecto Joven in Argentina, Chile Joven, and Juventud y Empleo in Dominican Republic, had mixed effects on employability, earnings, and job quality. The cost of implementation was also high, which led to significant losses in cases where positive impacts were not achieved (Almeida et al. 2012).
105. Katz et al. (2020).

process, supporting beneficiaries in finding jobs, excelling at interviews, and keeping their jobs. Positive results of these programs are found in employment, the quality of jobs, and income. Such programs could be replicated and use the ProJoven institutional infrastructure to assemble an upgraded program.

The pandemic exposed and broadened inequalities in access to health care, social services, income, and economic opportunities among minorities, which need to be addressed. Supporting those who were more affected will be crucial for poverty reduction in the short term and avoiding any long-term negative implications for economic growth. The pandemic exposed the unequal division of unpaid household labor and widened this disparity with the additional work of supporting children´s learning activities away from school.[106] This has a direct impact on female labor force participation. It is important to confront negative cultural and social norms to reduce this gap, which can be addressed through more participation and representation and better role models.

To address the increased gap in labor force participation, policies should be implemented that level the playing field between men and women, such as by allowing parental leave to be shared between both parents and increasing access to and the quality of childcare for working parents. There is no shared parental leave, and paternity leave remains relatively short. New fathers working in the formal sector receive two weeks off, which is still far below the OECD average. Furthermore, mothers have a right to 14 weeks of maternity leave, equally divided between prenatal and postnatal days. However, women working in the informal sector cannot access these benefits. Moreover, in Peru, public early childcare provision starts at 72 months, which makes up for a childcare policy gap of 68.4 months.[107] The Cuna Más Program provided some of the most at-risk families a combination of out-of-home care and home visits for children ages 6–36 months. Still, the program remains limited and concentrated in rural areas. Evidence from different countries shows that access to quality childcare can significantly benefit women's labor market participation (especially full-time work), increase household earnings, and have strong economic spillovers in society and the economy.[108] Access to maternity leave should be free and universal for all female workers, independent of their formality condition. Achieving universal maternity leave would require significant long-term investment, but efforts can begin on a smaller scale by extending social programs, such as Cuna Mas, to increase access to family benefits.

To support women's agency and voice, policies aimed at improving the capacities of public entities to address gender-based violence and ensure parity in democratic institutions are effective. Many of the institutions responsible for addressing gender-based violence (police, health workers, the judiciary, and so on) often leave women and girls in situations of abuse unprotected. For instance, there is evidence of resistance to assisting adolescents seeking information on family planning. Women often report that they do not have any confidence in institutions, such as the Armed Forces, the police, Congress, the government, the judiciary, or political parties. Training for the service providers in these institutions is necessary to meet the needs of the most vulnerable women.

106. According to the High Frequency Phone Survey (Mejía-Mantilla et al. 2021), 51 percent of women in Peru experienced an increase in the time spent home schooling their children, relative to 39 percent of men.
107. The time difference (in months or years) between the end of paid leave available to households and the right to free and universal early childhood care and education or primary education is referred to as the childcare policy gap.
108. Pimkina and De la Flor (2020).

The presence of Peruvian women in decision-making in the public sphere also remains limited. Even though 38 percent of the seats in the national parliament were occupied by women in 2022, above the Latin America and Caribbean average of 34 percent, only 4 out of 100 Peruvian women stay in politics longer than five years.[109] This is related to the high prevalence of political violence, which 25 percent of the female candidates declared they had experienced in the 2018 elections. The share of female ministers is also low and decreased substantially during the last mandate (from 42 percent in 2020 to 16 percent in 2022). Furthermore, in the latest 2022 regional elections, only 5 of the 42 districts in Lima elected a women mayor, and only 2 of the 26 elected regional governors are women. To fight women's underrepresentation, quotas have proved to be effective. However, in Peru, these need to be enforced to work.

Although the inflow of Venezuelan migrants and refugees has posed many challenges, international experience shows great benefits in economic growth and development if the social and economic integration of migrants is guaranteed. The vulnerability and disadvantageous conditions in which Venezuelan migrants and refugees have entered the labor market are explained by their immigration status and their limited ability to certify their degrees. Likewise, despite being among the most vulnerable populations during the pandemic, Venezuelans did not receive government cash transfers. Integration policies should shift away from the humanitarian action perspective to a more proactive approach that recognizes the rights of these populations and their immediate needs and funnels their capacities to participate in the country's development actively. Such policies include the integration of migrants through regular educational, health, and social services; implementing geographic perspectives in integration policies; and strengthening labor regulations to promote decent work and their inclusion in the labor market.

Protecting social gains by transitioning to adaptative social protection systems

Reducing the high vulnerability to poverty will be crucial for protecting social gains. Despite advances in poverty reduction and shared prosperity, Peru has not successfully sustained these social gains in the face of shocks. While sustained, inclusive growth and targeted antipoverty programs have proven effective in poverty reduction, reducing vulnerability requires other social programs, such as improving insurance and programs to manage risks. The incidence and prevalence of shocks are expected to increase, mainly because of climate change, placing additional pressure on the capacity of households to respond, cope, and adapt to shocks.

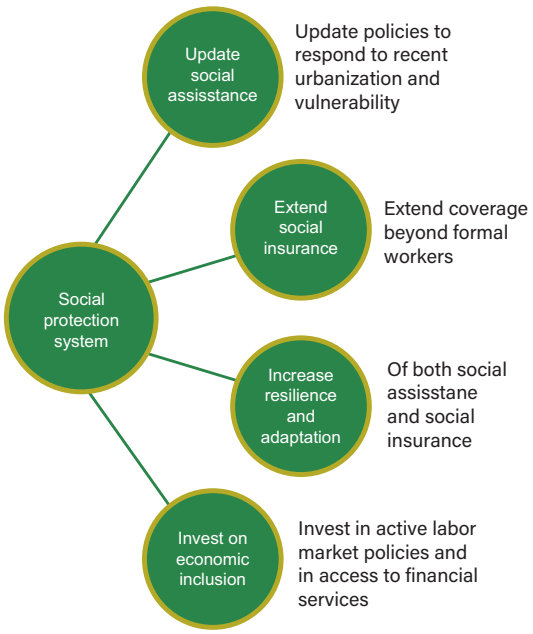
Becoming more resilient will require transitioning to an up-to-date and more adaptative social protection system. Beyond remediating losses from the pandemic, ensuring that social gains are protected from future shocks will be crucial. This would entail updating social protection systems to respond to the current reality of the country, as well as making them more flexible and responsive to risks and the impacts of future shocks (Figure 52).

Since Peruvians are not equally exposed to shocks, a menu of different policy options must be designed for different groups and types of shocks. Shocks are not evenly distributed across the country. In any given year, poor and rural households are more highly exposed to natural

109. Data of the National Electoral Court.

disasters, while more well off households report more economic shocks. A menu of policy options to protect different groups should include social assistance policies to reduce poverty, social insurance policies to protect the vulnerable, and increased economic opportunities to improve the population's capacity to manage risks and cope with shocks.

Figure 52. Policies required to transition to an adaptative and resilient social protection system



Source: World Bank elaboration.

Current social protection systems are unprepared to respond to the urbanization of poverty and to high vulnerability. Peru's biggest social assistance program, Juntos, was created in 2005 to fight rural poverty. The demand for an urban cash transfer system during the pandemic forced the government to update its household registry quickly. Although effective, the transfers suffered from serious leakages that could have been avoided if the systems had been prepared to identify vulnerable and poor urban households.

To address the increasing urbanization of poverty, it is necessary to reformulate the social assistance policies in Peru. A first step would be to improve the identification of new poor and vulnerable households, especially in urban areas. For this, the National Household Registry must be updated to cover urban households more effectively. The updating of this registry is currently done mainly through face-to-face interviews. Thus, a key step in this process is introducing technological solutions, such as high-frequency phone surveys, to monitor household needs more often. More frequent monitoring would allow more rapid responses in case of natural hazards.

A second step would be to redefine the households that require assistance to include the vulnerable and recently poor urban residents. Poor households are identified in the

National Household Registry through individually surveyed and administrative variables. However, these variables were selected to predict poverty, specifically, rural poverty. The increasing urbanization and the size of the vulnerable class call for reforming beneficiary criteria. As the pandemic has shown, in times of crisis, the vulnerable also need social protection to avoid falling into poverty. In normal times, protecting the vulnerable could help ensure progress on social issues.

To address the high vulnerability to poverty, it is necessary to extend social insurance coverage. Currently, in Peru, social insurance is targeted mainly on formal wage workers and their families because the protection against unemployment—which, in Peru, takes the form of monthly contributions (the Contribución por Tiempo de Servicios)—and the contributory pensions are linked to the formality status of workers.[110] In urban areas, 87.7 percent of the poor are informal, and 41.8 percent are self-employed, which showcases the low capacity of social insurance to cover the poor in urban areas.

Access to social security must be separated from the employment status of workers. A clear example of the need to separate these is the case of health insurance. The health system for formal and public workers and their families (EsSalud) has collapsed in terms of visits. Still, it is efficient in the purchase and delivery of medicines. On the other hand, the public system (SIS) that covers anyone without insurance has a greater capacity to absorb patient visits, and its facilities are more well distributed throughout the country, but the quality of the services offered is heterogeneous.[111] By separating the system's financing from its service delivery, a more efficient system can be established. Such a system would require interoperability between SIS and EsSalud. SIS affiliates would gain access to EsSalud hospitals (the second and third levels of care for highly complex cases), and EsSalud affiliates could access Ministry of Health hospitals (first level and regional establishments). A unified health system would also allow resources to be pooled and avoid the duplication of expenses.

Social assistance and social insurance systems need to become more resilient to protect the poor and vulnerable against aggregate shocks. Peru is highly vulnerable to natural hazards, but these are unequally distributed. A first step to preparing for the future would be to improve the identification of areas and populations exposed to shocks, especially from climate. Peru is rich in geographical data, including exposure to natural risks, poverty incidence, and the quality of public services. Integrating these data to guide policy on preparedness for future shocks would be advisable. In Mexico, for example, the government created an Atlas of Vulnerability to Climate Change at the municipality level based on available data and on expertise in local governments through a participative process.[112]

The social protection system should also become more flexible and adaptative to external shocks. This implies increasing the coverage in urban areas because poverty is now an urban phenomenon; institutionalizing flexible arrangements that can be expanded quickly if needed; improving data interoperability; and increasing digital payment coverage.

112. INECC (2018).

110. The Contribucion por Tiempo de Servicio is a benefit for formal wage workers, whereby employers make a monthly contribution equivalent to one wage per year to an individual account. The accounts are available to employees when their contracts are terminated. As workers have access to the accounts if they are fired, the accounts act as a form of unemployment insurance. Workers can also access the accounts in case of special emergencies. For example, during COVID-19, workers were allowed to withdraw form their accounts.
111. Ibañez and Ruiz (2021); Seinfeld and Salomón (2019).

Adaptation also implies aiming to reduce informality because the vulnerability of informal workers is higher than that of their formal counterparts. The government could promote greater flexibility in job separation, facilitate temporary hiring such as seasonal agricultural workers, and unify the tax regime for small and medium enterprises.[113]

Improving coordination and accountability to climate and disaster risk management will make social protection systems resilient and adaptive. Currently, regional and local governments are responsible for implementing climate change policies, but the coordination and direction mechanisms to align their efforts with national objectives are limited, and few have the necessary implementation capacity. For instance, fewer than a quarter of municipalities have risk maps, and this share is only 27 percent in districts with poverty rates higher than 50 percent. Regional and local government budgets are allocated at the beginning of the year. A policy option would be to condition the allocation of resources on the formulation and regular updating of risk management plans and on improving the geographic targeting of resilient investments.

Similarly, the government could improve the access to resilient infrastructure and better public services to complement the social protection efforts. Peru has one of most unequal distributions of infrastructure in the Latin America and Caribbean region. Poor connectivity greatly amplifies the cost of external shocks. Entire communities can become cut off from markets if roads are damaged. This is especially relevant for small farmers in the Amazon and the Andes who see their entire production (and potentially their incomes) diminished because they are unable to reach consumers on the coast. Also, because climate change can overwhelm the health care system, it must be prepared to respond to surges in demand. In particular, the sector must increase the proportion of doctors and nurses to World Health Organization recommended levels and improve the spatial distribution of health services, which are currently only concentrated on the coast.

Economic inclusion programs are necessary to enable individuals to invest in their future and improve their productivity. These programs should focus on fostering new skills to help individuals find better jobs or grow their businesses, as well reducing credit market failures that prevent households from investing in education, health, and other productive assets. By providing individuals with the necessary skills and resources, these programs can help promote greater economic opportunity and mobility.[114]

The country should invest in active labor market policies, such as skills training, to increase employability in new sectors, improve matching between workers and jobs, and prepare workers for future jobs. As countries increase their efforts to fight climate change, Peru must become prepared to respond to a reduction in productivity in intensive emissions activities. Currently, only 1 percent of Peru's exports would be subject to Europe's emission ban. However, if the ban is extended to minerals, estimates show that an additional 6 percent of exports might be affected.[115] Thus, the promotion of green jobs and green activities could serve as insurance against future regulation changes in importing countries. Active labor market policies such as reskilling programs can be implemented to accomplish this. Evidence shows that interventions to overcome sectoral and geographical mismatches

113. World Bank (2022c).
114. World Bank (2022c).
115. World Bank (2022c).

are the most effective type of active labor market intervention.[116] Thus, these programs can focus on supporting workers trapped in 50 occupations that are not as highly in demand to cross over into new occupations and offer information and opportunities for workers to look for jobs in other areas.

Increasing financial inclusion among the population would also increase their capacity to cope with future shocks and become more resilient. Access to financing services is still low in Peru compared with the rest of the region and with advanced OECD economies. In 2021, only 57.5 percent of adults had a bank account and 35.7 percent had a debit card; in the rest of the region, these shares are above 70 percent and 50 percent.[117] Access to borrowing is also limited: 12.9 percent of adults have credit cards to smooth consumption, and 22.1 percent have borrowed from a financial institution. Moreover, financial inclusion is not equally distributed across income levels and geographical areas, which excludes crucial economic groups. Increasing access to financial services can be achieved by allowing new and more digital competitors to enter the financial system. More competition and the greater use of technology would lower the costs of being included, which is one of the main impediments for the unbanked. The greater and wider presence of financial institutions would also improve access in the country. Finally, changes in financial regulations are required to increase the provision of loans to small and medium enterprises, such as by reducing collateral requirements.

116. McKenzie (2017).

117. The Findex Dataset is a World Bank Dataset on financial inclusion. Data is collected in 140 countries, surveying over 150,000 people on topics of access and use of financial services. This is the only worldwide survey on financial inclusion. At the country level, the survey distinguishes between rural and urban, gender, levels of education, and range of ages.

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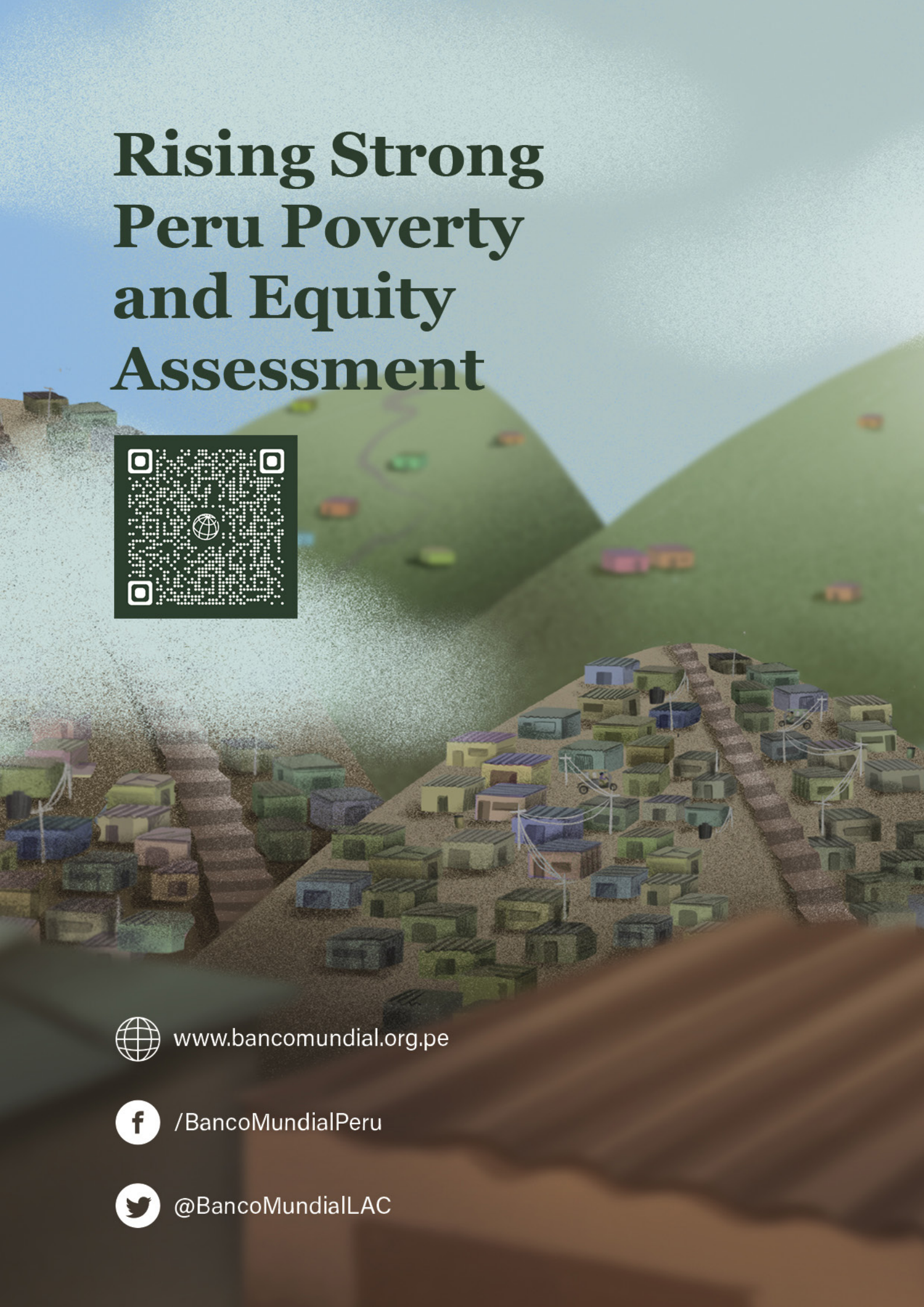

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