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**PANAMA
SYSTEMATIC COUNTRY DIAGNOSTICS UPDATE 2023 (P500142)**

September 8, 2023

**Central America and the Dominican Republic Country Management Unit
Latin America and the Caribbean Region**

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Panama Systematic Country Diagnostics Update 2023 (P500142)

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Acknowledgments

We would like to thank the members of the World Bank Group's Global Practices, the staff of the International Finance Corporation (IFC), and the Panamanian authorities, partners, and other stakeholders who contributed to the preparation of this Systematic Country Diagnostic (SCD) Update.

The SCD Update team was led by Hulya Ulku (Senior Economist) and Javier Romero (Economist) under the leadership and guidance of Carlos Felipe Jaramillo (Regional Vice President), Michel Kerf (Country Director), Robert R. Talierno (Regional Director), Doerte Doemeland (Practice Manager), Carlos Rodriguez Castelan (Practice Manager), Pedro Rodriguez (Program Leader) and Joelle Dehasse (Country Manager). The core team members include Rafael Amaral Ornelas (Economist), Kiyomi E. Cadena (Consultant) and Angela Rocio Lopez Sanchez (Consultant). Additional guidance was provided by Martin Spicer (Former Director, IFC), Manuel Reyes-Retana (Director, IFC), Hiroyuki Hatashima (Chief Evaluation Officer, MIGA), and Sanaa Abouzaid (Country Manager, IFC). The team is grateful for the valuable contributions made by Meilyn Gem (Operations Officer), Luis Anibal Cano de Urquidi (Senior Operations Officer) and Janibeth Miranda (Senior External Affairs Officer).

Sector-specific knowledge, inputs, contributions, and guidance were provided by Cornelia Tesliuc (Social Protection and Jobs), David Olivier Treguer (Sector Leader, Sustainable Development), David Vilar (Program Leader, Infrastructure), Diego Arias Carballo (Agriculture Practice Manager), Fabian Hinojosa (Senior Transport Specialist), Federica Secci (Senior Health Specialist), Felipe Montoya Pino (Urban Specialist), Julian Najles (Digital Development), Katharina Siegmann (Senior Environmental Specialist), Leah Arabella Germer (Agriculture Specialist), Maria Camila Padilla Gomez (Senior Procurement Specialist), Maria Elena Garcia Mora (Senior Social Development Specialist), Maria Jose Vidal Roman (Consultant, Digital Development), Marie Caroline Paviot (Senior Agriculture Economist), Mia Rodriguez (Country Officer, IFC), Patrick Wieland (Senior Environmental Specialist), Suhas D. Parandekar (Senior Economist, Human Development), Ursula Martínez (Social Protection Specialist), Nicholas Timothy Smith (Senior Financial Sector Specialist), and Yara Esquivel (Senior Financial Sector Specialist).

The team would like to thank the peer reviewers Kinnon Scott (Resident Representative), Nataliya Mylenko (Country Lead Economist, Equitable Growth, Finance, and Institutions) and Ana Paula Cusolito (Senior Economist) for their comments and suggestions. In addition, Barbara Cunha (Senior Economist), Gabriel Lara Ibarra (Senior Economist, Poverty and Equity), and Lourdes Rodríguez-Chamussy (Senior Economist, Poverty Equity) provided useful insights during the preparation of this report.

The team is grateful to Sara Esther Paredes Ponce (Senior Executive Assistant), Benjamin Vuilleminroy (Program Assistant), Elizabeth Sanchez (Program Assistant), Pamela Gunio (Program Assistant), Desiree Gonzalez (Program Assistant), Ana Carolina Leguizamo (Program Assistant), and Jonathan Alexander Bello Sangronis (Team Assistant, LCCPA) for their assistance with the preparation of the report. Finally, the team would like to thank the Panama Country Office Administrative and Client Support staff for making all the necessary arrangements for the extensive series of virtual mission meetings that informed this SCD Update and for providing critical administrative support throughout the process.

Abbreviations and Acronyms

ADs	Afro-Descendants
ACP	Autoridad del Canal de Panamá
AMPYME	Micro, Small and Medium Enterprise Authority (Autoridad de la Micro, Pequeña y Mediana Empresa)
ASEP	National Authority for Public Services (Autoridad Nacional de los Servicios Públicos)
CEDLAS	Center of Distributive, Labor and Social Studies (Centro de Estudios Distributivos, Laborales y Sociales)
CICYT	Interministerial Council for Science, Technology, and Innovation (Consejo Interministerial de ciencia, tecnología e innovación)
CONAGUA	National Water Council (Consejo Nacional del Agua)
CONADES	National Council for Sustainable Development (Consejo Nacional para el Desarrollo Sostenible)
DISAPAS	Directorate of Drinking Water and Sanitation (Dirección del Subsector de Agua Potable y Alcantarillado Sanitario)
ECLAC	Economic Commission for Latin America and the Caribbean
ERCE	Regional Comparative and Explanatory Study (Estudio Regional Comparativo y Explicativo)
EML	Labor Market Survey (Encuesta de Mercado Laboral)
EU	European Union
FATF	Financial Action Task Force
FFL	Family Farming Law
FTZ	Free Trade Zone
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GCI	Global Competitiveness Index
GHG	Greenhouse Gas
HLO	High Level Objectives
ICT	Information and Communication Technologies
IDAAN	National Institute of Water and Sanitation (Instituto de Acueductos y Alcantarillados Nacionales)
IDB	Inter-American Development Bank
ILO	International Labour Organization
IMF	International Monetary Fund
INEC	National Institute of Statistics and Census (Instituto Nacional de Estadística y Censo)
IP	Indigenous Populations
IPCC	Intergovernmental Panel on Climate Change
ITBMS	Tax on Property Sale and Service (Impuesto a la Transferencia de Bienes Muebles y Prestación de Servicios)
JAAR	Rural Water Administrative Boards (Juntas Administradoras de Acueductos Rurales)
LAC	Latin America and the Caribbean
LAYS	Learning-Adjusted Years of Schooling
LPG	Liquefied Petroleum Gas
IRENA	International Renewable Energy Agency
LULUCF	Land Use Land Use Change Forest
MEF	Ministry of Economy and Finance (Ministerio de Economía y Finanzas)
MEDUCA	Ministry of Education (Ministerio de Educación)
MiAmbiente	Ministry of Environment (Ministerio de Ambiente)
MINSa	Ministry of Health (Ministerio de Salud)
MIVIOT	Ministry of Housing and Territorial Planning (Ministerio de Vivienda y Ordenamiento Territorial)
MSMEs	Micro, Small and Medium-sized Enterprises
NDC	Nationally Determined Contribution
Non-IP-AD	Non-Indigenous People and Afro-Descendants
NECI	National Entrepreneurship Context Index
OECD	Organization for Economic Co-operation and Development

PDIPIP	Indigenous Authorities for the development of an Integral Development Plan of Indigenous Peoples (Plan de Desarrollo Integral de Pueblos Indígenas de Panamá)
PEG	Government Strategic Plan (Plan Estratégico del Gobierno)
PENCYT	National Science, Technology, and Innovation Strategic Plan (Plan Estratégico Nacional de Ciencia, Tecnología e Innovación)
PISA	Programme for International Student Assessment
PIT	Personal Income Tax
PPP	Purchasing Power Parity
PPP	Public-Private Partnership
PPS	Programa Panama Solidario
RdO	Opportunity Network (Red de Oportunidades)
R&D	Research and Development
SFP	School Feeding Program
SENACYT	National Secretariat for Science, Technology, and Innovation (Secretaría Nacional de Ciencia, Tecnología e Innovación)
SCD	Systematic Country Diagnostic
SEDLAC	Socio-Economic Database for Latin America and the Caribbean
SINAPROC	National Civil Protection System (Sistema Nacional de Protección Civil)
VAT	Value Added Tax
WIPO	World Intellectual Property Organization
WDI	World Development Indicators

1. Executive Summary

This Systematic Country Diagnostics (SCD) Update assesses the evolution of Panama’s development challenges and policy priorities since the publication of the SCD in 2015. During the last seven years, Panama has experienced three major changes in its economic and social landscape: (i) economic growth, though still high, has structurally slowed down, affecting job creation and employment quality; (ii) human capital formation has not improved substantially, and the country is struggling to address the significant deterioration in education and health indicators that occurred due to the Covid-19 pandemic; and (iii) the government has demonstrated an increasingly acute awareness of the country’s vulnerability to climate change. In addition, Panama's income per capita had the highest level of convergence within the region reflecting its strong economic performance over the last three decades. However, the country’s remarkable gains in per capita income have not been accompanied by a commensurate improvement in economic inclusion and institutional quality. In this context, the SCD Update begins by providing an overview of Panama’s recent growth dynamics and poverty trends before analyzing the country’s development challenges and discuss key policy priorities for achieving sustainable, inclusive, and resilient growth.

1.1. Drivers of Growth and Poverty Reduction

Panama has experienced remarkable economic growth and poverty reduction over the last three decades, but important challenges persist. The GDP growth rate averaged 5.8 percent between 1990 and 2019, and Panama’s per capita GDP rose from 17 percent to 47.6 percent of the US level (Figure 1).¹ Meanwhile the headcount poverty rate fell from 50.2 to 12.1 percent, and the share of vulnerable households declined as the middle class expanded (Figure 2).² However, average GDP growth has slowed since 2015, falling from 7.8 percent during 2010-2014 to 4.6 percent in 2015-2019, and due to its highly open economy and big share of services sector in GDP, the country experienced one of the sharpest economic contractions in the world during the COVID-19 pandemic. In addition, persistent challenges with human capital formation, market competition, and entrepreneurship threaten the country’s long-term growth trajectory. Moreover, despite its rapid growth, Panama’s net greenhouse gas (GHG) emissions remained negative due to the country’s vast forest in the Darien area.

Figure 1. Panama has achieved the greatest degree of per capita income convergence with the United States of any country in the LAC region.

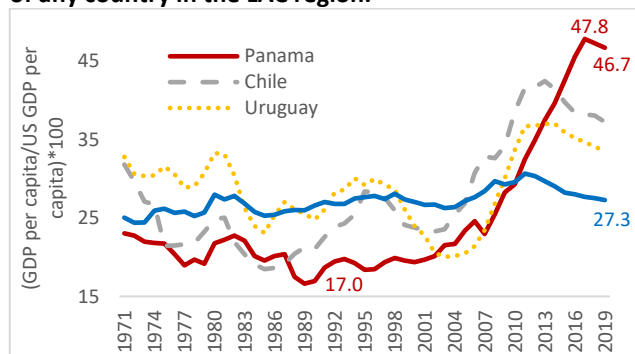
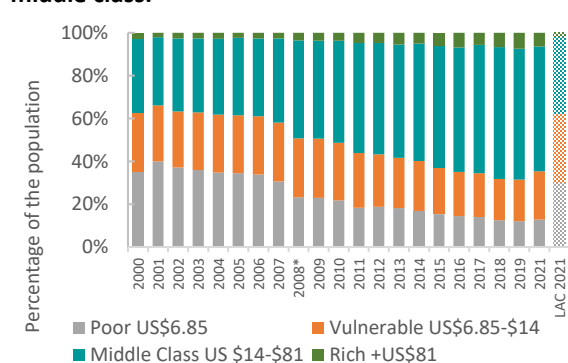


Figure 2. Panama’s rapid growth has sharply reduced the poverty rate while expanding the middle class.



Source: World Bank Staff computations based on GDP per capita data in 2017 PPP from PWT (Figure 1) and Socio-Economic Database for LAC (SEDLAC), Centro de Estudios Distributivos, Laborales y Sociales (CEDLAS) and the World Bank (Figure 2). Note: Household income includes imputed rent since 2008. Due to the pandemic, Panama did not collect the HH data in 2020.

Despite the strong poverty reduction, Panama remains one of the most economically unequal countries worldwide. Multiple factors contribute to inequality, including the deep deprivation of households in Indigenous regions (*comarcas*), weaknesses in public-sector institutions, such as inadequate evidence-based policy, low level of revenue mobilization which impedes fiscal redistribution, and constraints in institutions managing social and infrastructure programs.

Three key factors have driven Panama's success:

- ***An outward-looking economic model centered on the Canal and associated activities, Colon Free Trade Zone (FTZ), construction, finance, and tourism.*** This approach has transformed the country into an international hub for trade, transportation, and logistics. The Panama Canal handles about 6 percent of global trade³, while the Colon FTZ is the world's second-largest free trade zone and accounted for about 36 percent of exports and 5.3 percent of GDP during 2015-2019.⁴
- ***Consistently high rates of private and public investment both in existing and emerging sectors.***⁵ Private investment increased from 34.4 percent of GDP in 2008-13 to 41.1 percent in 2014-19, with foreign direct investment (FDI) inflows amounting to 8.6 and 8.3 percent of GDP, respectively, over the two periods.⁶ Robust investment has spurred the growth of tourism, commerce, finance, real estate, and the country's nascent agribusiness sector, in addition to port and logistics activities.⁷ Moreover, public investment averaged about 7.4 percent during 2008-19, driven by megaprojects such as the expansion of the Canal and the construction of Tocumen Airport. Between 2008 and 2017, Panama experienced one of the highest rates of capital accumulation worldwide, and the construction sector's share in GDP rose from 5 percent in 2006 to 16.7 percent in 2017 before declining in recent years.⁸
- ***A well-established and credible macroeconomic policy framework, coupled with political stability following the restoration of democracy in 1989.*** Panama traditionally has low public debt, fiscal deficit, and inflation.⁹ The dollarization has been in place since 1904 and has anchored fiscal policy, helping to keep inflation and sovereign risk ratings low.¹⁰ These policies have reduced the cost of capital both for the public and private sectors. Panama is one of only five countries in LAC, along with Chile, Peru, Mexico, and Uruguay, with an investment-grade sovereign risk rating, and in 2021 its spread was just 5.2.¹¹

Sustained growth has led to exceptional rates of employment creation, yielding a steep decline in poverty and broad-based gains in living standards.¹² Between 1991 and 2019, over 1.2 million new jobs were created in a country with a population of just 4.3 million, which almost tripled the number of employed workers. Population growth more than doubled the size of the working-age population (ages 15 years and older) from 1.5 million in 1991 to 3.1 million in 2019, but a dynamic private sector fully absorbed the influx of new workers, and the employment rate rose from 48 to 63 percent over the period. While the male labor-force participation rate remained broadly unchanged at about 80 percent, the female labor-force participation rate expanded rapidly from 34.1 to 55.5 percent. Favorable conditions for private-sector growth, including ample credit access (albeit mainly for large firms) and the creation of government-supported Special Economic Zones,¹³ provided stable, well-paying jobs. While employment grew fastest in construction, retail and other services became the single largest sector and employed many workers in the bottom 40 percent of the income distribution who were transitioning out of the primary sector. Although Panama has attracted numerous highly skilled workers from overseas, particularly in recent years, migration played a limited role in the expansion of the labor force. Overall, economic growth and increased labor income have driven poverty reduction in Panama.

Despite these impressive gains, low job quality has limited progress in reducing inequality, and labor-market constraints have prevented certain groups from fully benefitting from Panama’s recent growth.

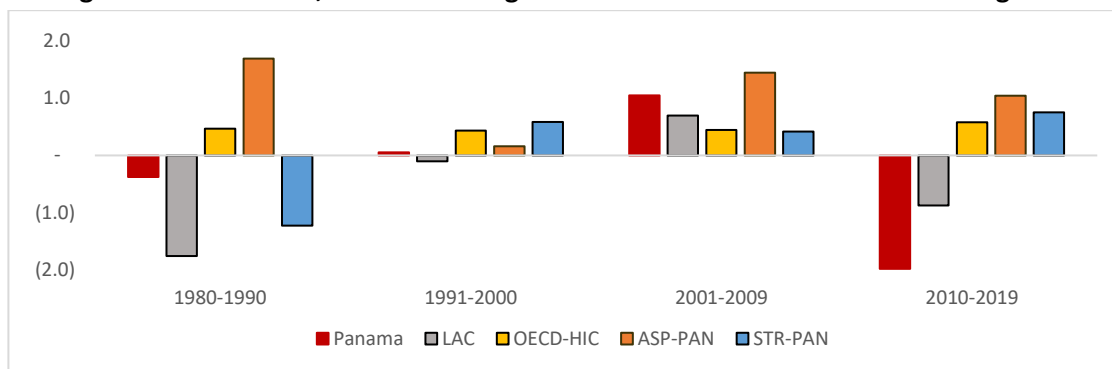
One-third of the jobs created in the last 30 years were in the informal sector, and this rate rose sharply during 2013-2019, with three-fourths of new jobs being informal.¹⁴ Panama’s high informality rate contributes to wide gaps in labor income, particularly in the *comarcas*, home to 6.5 percent of the population in 2019.¹⁵ While the overall informality rate for Panamanian workers is 50 percent, it rises to 80 percent among workers in the bottom 40 percent of the income distribution. On average, informal workers earn less than half of what formal workers earn. In addition, as Panama’s urbanization rate rose from 55 percent in 1991 to 70 percent in 2019, a significant urban-rural disparity in labor earnings persisted, due in part to the (relative) remoteness of the remaining rural households.¹⁶ Agricultural workers receive one-fourth of the average labor earnings among urban workers, and many of the rural jobs created in recent decades have been of low quality. In the *comarcas*, the share of unpaid¹⁷ workers is 43.8 percent, up 14-percentage points since 2001.¹⁸ These deep disparities in labor earnings make Panama one of the most economically unequal countries in the region, and structural barriers in the labor market and beyond contribute to high poverty rates among certain groups, especially in the *comarcas*, where the poverty rate remains extremely high at 70 percent.

1.2. Panama’s Slowing Convergence

The completion of infrastructure megaprojects, combined with declining FDI and exports, have slowed the growth of Panama’s economy since the second half of the 2010s.¹⁹ Construction’s share in GDP has declined since 2017, and between 2013 and 2019 the sector’s contribution to growth fell reaching close to zero in 2019, indicating diminishing returns to construction projects. FDI inflows also fell, dropping from 10 percent of GDP in 2014 to 6 percent in 2019, as foreign investment in the transportation and financial sectors decreased.²⁰ In addition, re-exports from the Colon FTZ fell from 36 percent of GDP in 2012 to 13 percent in 2019, due largely to reduced demand from Venezuela, Colombia, and other countries in Latin America and the Caribbean (LAC). Goods exports, excluding re-exports from the Colon FTZ, dropped to 3.9 percent of GDP in 2016 before recovering to 6.5 percent in 2019.²¹ Panama cannot sustain an economic model based on the accumulation of capital and labor indefinitely, given that diminishing returns will limit growth as output levels increase. Instead, sustainable long-term growth will require greater efficiency in the use of productive factors—i.e., gains in total factor productivity (TFP). However, TFP growth has been historically anemic and turned negative during 2010-19 (Figure 3).

As economic growth slowed, the labor market began to weaken, compromising efforts to reduce poverty and vulnerability while hindering the expansion of the middle class.²² Overall job creation decelerated, as the annual growth rate of the employed population fell from 3.5 percent during 2008-2012 to 2.5 percent during 2013-19. Employment growth in the construction sector, a major source of job creation, slowed from 7.0 percent in 2008-2012 to 0.6 percent in 2013-2019. Consequently, the share of self-employed workers rose, while the share of salaried workers declined. The informality rate reached 49.5 percent in 2019, its highest level in 15 years, while the unemployment rate hit 6.6 percent, another 15-year high in the same year.²³ During the years leading up to the pandemic, real labor earnings in sectors that had previously driven poverty reduction and the growth of the middle class, including construction, transportation and logistics, and retail and wholesale, started to plateau. Although poverty reduction continued over this period, driven by improvements in rural areas,²⁴ the Panamanian labor market lacked the dynamism to quickly recoup the income and employment losses caused by the pandemic without relying heavily on social assistance programs.

Figure 3. For decades, Panama’s TFP growth rates have been either low or negative.



Source: PWT and WDI. Note: ASP-PAN refers to Panama’s aspirational, which include Estonia, Hong Kong SAR, China, the Republic of Korea, Lithuania, Singapore, Taiwan, China, and the United Arab Emirates; STR-PAN refers to Panama’s structural peers, which include Bulgaria, Costa Rica, Croatia, the Dominican Republic, and Uruguay.

Despite its robust growth, Panama’s key social and economic indicators are low relative to those of its income-group peers. With a Gini coefficient of 0.509 in 2021, Panama remains one of the most unequal countries in LAC, with deep territorial, ethnic, and vertical disparities. Education outcomes are comparable to those of lower-middle-income economies, mainly due to the insufficient coverage and quality of public investment in education.²⁵ Indicators of innovation and entrepreneurial capacity also lag those of upper-middle-income economies, reflecting inadequate workforce skills, low levels of private investment in research and development, limited access to finance among micro, small, and medium enterprises (MSMEs), and an insufficient supply of physical and digital infrastructure. In addition, Panama’s public institutions suffer from weaknesses in public service delivery, evidence-based policy due to scarcity of and limited access to data, transparency, and revenue mobilization. The country also faces significant challenges from climate change, including risks generated by the increasing frequency and severity of natural disasters, the forced relocation of coastal communities due to rising sea levels, and sustainability concerns related to water management, deforestation, and mining.

Panama’s response to the COVID-19 pandemic was generally strong, but the crisis highlighted the country’s structural challenges. Panama’s GDP growth rate decreased to -17.9 percent during the pandemic, and unemployment increased to 18.5 percent.²⁶ The government responded to the crisis by investing in digital infrastructure, particularly in health, education, and social protection.²⁷ The authorities established a robust emergency cash-transfer program, *Panama Solidario* (PS), which helped mitigate the pandemic’s impact on poverty and inequality.²⁸ However, structural inequalities—including low rates of internet coverage and limited digital literacy in rural areas—limited the effectiveness of some of the government’s pandemic-response initiatives. Educational outcomes deteriorated, threatening students’ future productivity and income levels. Under immense pressure, the health sector struggled to deliver essential services, especially in remote rural areas. The pandemic also highlighted weaknesses in public institutions and data-driven policymaking, such as the lack of a national social registry for emergency cash-transfer programs. The crisis severely affected the labor market, with especially negative consequences for low-skilled and female workers, leading to greater inequality, poverty, and food insecurity.

Panama experienced an unprecedented economic decline during the pandemic, while wide fiscal deficits drove a sharp increase in the public debt stock. Mounting debt-service payments have substantially reduced the available fiscal space. Although the fiscal deficit narrowed and the public debt stock decreased in 2021 and 2022, both remain above the pre-pandemic levels. At the same time, the ongoing recovery has increased demand for public investment and services, as the government strives to rebuild a sustainable, inclusive, and resilient economy. Due largely to weaknesses in tax administration

and regulatory framework, Panama's tax revenues are among the lowest in the world, and the country has considerable potential to mobilize additional tax revenue to finance productivity-enhancing investment.

Furthermore, climate change presents a significant threat to Panama's development. The country ranks among the highest in the world in terms of exposure to multiple hazards, and crucial economic assets and sectors, such as the Canal, rely on the responsible and sustainable management of natural resources. Changing climatic conditions poses particularly a serious threat to the most vulnerable groups, as they are more likely to be exposed to natural hazards given that their livelihoods heavily depend on agriculture. Indigenous people in coastal regions are already being severely affected by climate change: members of the Guna ethnic group are being relocated due to rising sea levels. Forest management, ecotourism, and sustainable agriculture will be important sectors to continue improving the living standards of the rural poor in an environmentally sustainable manner. The government has taken important steps to promote environmental sustainability and resilience through several initiatives to manage forests, biodiversity, water, among others.²⁹

1.3. The SCD Update Framework

This SCD Update builds on the analysis and policy priorities presented in the 2015 SCD for Panama. The 2015 SCD highlighted the country's rapid and inclusive growth, discussed in detail the areas that needed attention, and identified five priorities for the country to sustain its performance (Table 1). While most of the priorities of the 2015 SCD remain relevant, the rapidly evolving external and domestic factors described above have substantially altered Panama's economic context and reshaped its development challenges. In addition, Russia's invasion of Ukraine disrupted the global wheat and oil supply, and tensions between the United States and China have cast doubt on the expected future growth of the Canal's activities. Climate change and rapidly rising demand for fresh water by the population also threaten the Canal's operations, underscoring the critical importance of implementing climate adaptation policies in the Canal and other sectors, and to introduce cost recovery policies for the water sector.³⁰ Informed by the latest data and extensive consultations with domestic and international stakeholders, the SCD Update assesses and, to the extent needed, reframes the development challenges and recommendations set forth in the 2015 SCD.

Most of the key priorities identified in the 2015 SCD remain relevant, with some exceptions. The 2015 SCD highlighted education, the inclusion of Indigenous people, the protection of water resources, improvements in the energy supply, and gains in public-sector efficiency as key priority areas to promote sustainable growth. The SCD Update analysis commends the energy sector reforms, which have attracted investments to address the country's energy bottlenecks (Table 1).³¹ It also finds that human capital, including public health and social safety nets, in addition to education identified as a priority in the 2015 SCD, deserves utmost attention by the Panamanian authorities over the next decade. Another related priority area is institutions for innovation, entrepreneurship, and research and development, as well as addressing labor-market and human capital/skills challenges. These priorities are crucial to increase Panama's productivity and to avoid the "middle-income trap." Like the 2015 SCD, the SCD Update continues to emphasize the urgent development priority of addressing economic and social exclusion of Indigenous peoples, rural communities, and women, among other vulnerable groups. Finally, the SCD Update fully incorporates Panama's vulnerability to climate change, including not just water resources and forests management issues, but also increasing the resilience of households, firms, and public sector's assets to natural disasters—an area with numerous data and analytical gaps. Table A4 in the appendix presents detailed policy recommendations under each priority area. Table A5 describes progress made since the publication of the 2015 SCD, and Table A6 lays identifies priority knowledge gaps.

The SCD Update used several methods to inform its proposed policy priorities. A benchmarking exercise was used to estimate the productivity gap between Panama and its structural and aspirational peers using a comprehensive macro level data. Also, an analysis of microdata shed light on the specific drivers of poverty, vulnerability, and inequality, although a full-fledge analysis of this microdata will be performed in the context of a new Poverty Assessment. Key data sources for benchmarking and analysis included household and labor-force surveys, administrative data on health and education, firm-level surveys, and phone surveys conducted during the pandemic. Finally, armed with benchmarks and analysis, an in-depth consultations process was followed, both with key Panama stakeholders and World Bank experts from all Global Practices.³²

The remainder of the SCD Update is organized into four sections. Section 2 describes Panama’s current macroeconomic and poverty context. Section 3 analyzes the country’s key developmental challenges as it strives to achieve sustainable, inclusive, and resilience convergence with high-income economies. Section 4 presents policy priorities, recommendations, and high-level objectives (HLOs).

Table 1. Priority Policy Areas Identified in the 2015 SCD and SCD Update

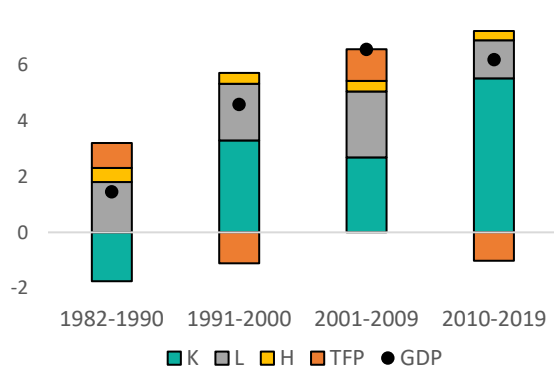
	2015 SCD	SCD Update 2023
Priority areas	<ul style="list-style-type: none"> -Education -Inclusion -Energy -Water -Public-sector efficiency 	<ul style="list-style-type: none"> - Human capital - Innovation and entrepreneurial capacity of firms and quality of Jobs - Inclusion - Resilience and environmental sustainability - Public institutions, with a focus on accountability, evidence-based policy, service delivery, and revenue mobilization
Source: See Tables A2a-A2b in the appendix for the findings of benchmarking analyses using different methodologies and data.		

2. Growth and Poverty Context

Over the last several decades, Panama’s growth has been driven by the accumulation of capital and labor, with a low total factor productivity growth. Partly due to its historical comparative advantages in sectors built around the Canal, and partly due to its outstanding developmental challenges, Panama’s economic model is based on sectors that utilize large amounts of capital and labor but relatively limited technology and workforce skills (Figure 4). However, since the mid-2010s several factors have begun undermining the effectiveness of this model, leading to a decrease in the average growth rate in 2010-2019. The construction sector’s contribution to growth steadily waned during 2013-17, and its share in GDP began to decrease in 2017 following the conclusion of the Canal expansion and other megaprojects. Similar trends are evident in other key sectors, such as finance, manufacturing, and commerce, suggesting broad-based diminishing returns to factor accumulation. Meanwhile, Panama’s rising per capita income has increased labor costs,³³ weakening its competitiveness in low-value-added production.

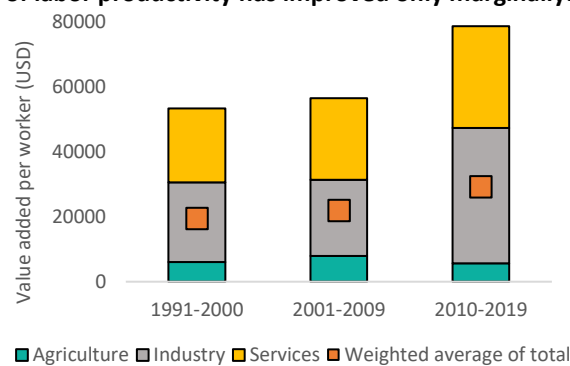
In addition to low rates of TFP growth, weighted average of labor productivity has increased only marginally over the last three decades (Figure 5). Weak total factor productivity growth is driven by structural issues, including the slow growth of human capital, limited entrepreneurial and innovation capacity among MSMEs, and high rates of informality. Panama’s education indicators are closer to those of lower-middle-income countries than to those of upper-middle and high-income economies. Students in Panama learn less than their counterparts in other countries, limiting their contributions to the economy and their potential income as adults.³⁴ The average adult in Panama receives 10.7 years of education, but this figure drops to 6.4 years when adjusted for the knowledge acquired.³⁵ In addition, about half the labor force is informal, and many workers are employed in low-productivity MSMEs. Several of these issues represent longstanding developmental challenges for Panama, and they are especially acute in rural areas and *comarcas*. These challenges must be addressed if the country is to transition to a higher-value-added economic model based on sustained productivity growth.

Figure 4. The contributions of TFP and human capital to growth have been very low or negative.



Source: PWT. Note: figure shows the contribution of capital (K), labor (L), human capital (H) and total factor productivity to real GDP growth (in 2017 PPP).

Figure 5. Although simple average of labor productivity increased substantially in the last decade, weighted average of labor productivity has improved only marginally.



Source: WDI. Note: Unlike simple average of labor productivity, weighted average of labor productivity factors in the size of sectors.

Gains in rural labor income allowed Panama to continue reducing poverty despite its macroeconomic slowdown, but significant pockets of poverty and vulnerability remain. Panama’s growth has remained pro-poor: between 2013 and 2019, income among households in the bottom 40 percent of the distribution grew by 5.0 percent, significantly exceeding the national average of 4.6 percent. Poverty

dynamics were different in rural and urban areas.³⁶ In the first half of the 2010s, the urban poverty rate declined to about 5 percent, driven by rising labor income, and it has since remained at around that level. Meanwhile, the growth of labor income in rural areas started to accelerate after the second half of the mid-2010s, driving poverty reduction—especially in the *comarcas*, where the poverty rate fell by about 15 percentage points but remains very high at 70 percent.³⁷ Growth in rural areas was led by rising employment and earnings in the agriculture sector.³⁸

Despite significant progress in poverty reduction over the last several decades, Panama remains one of the most unequal countries in LAC. The Gini index fell from 56.6 in 2000 to 49.8 in 2019, driven by a narrowing but still large gap in labor income. Recent evidence suggests that this process was due in part to a decline in the returns to education over the last two decades, reflecting the weakening quality of higher education, a growing mismatch between educational curricula and the requirements of the labor market, and a shift in demand from skilled to unskilled workers due to the expansion of labor-intensive sectors.³⁹ Nevertheless, by 2019 Panama’s Gini index was still among the highest in the region—surpassed only by those of Brazil and Colombia—and well above the levels of its structural and aspirational peers.⁴⁰ Section 3.2, below, details the causes of income inequality in Panama.

Lack of productive assets, unequal access to labor markets and basic services, and limited social support prevent people from escaping poverty and vulnerability.⁴¹ Poor and vulnerable households in Panama are characterized by very low levels of human capital. Heads of poor households have an average of just 5.8 years of completed education, just over half the middle-class average of 10.4 years. The school enrollment rate among poor adolescents ages 12-18 is just 77.6 percent, versus 93 percent among their middle-class peers. Insecure land tenure remains a serious challenge for Indigenous people,⁴² and indicators of financial inclusion are weakest among poor and rural households.⁴³ In addition to limited access to electricity, water, and sanitation, only 55 percent of poor households have access to roads, and just 58 percent have internet access, which constrains their ability to find high-quality jobs.⁴⁴ Consequently, the poor face higher rates of unemployment (11 percent) and informality (92 percent), and their labor income is seven times lower than that of the middle class. While social protection programs have played a significant role in reducing poverty in Panama, their coverage and adequacy remain low.⁴⁵ In 2019, the Opportunity Network (*Red de Oportunidades*, RdO) program reached only 20 percent of households in the bottom income quintile, while transfers from the program represented an average of just 10 percent of the beneficiaries’ total income.⁴⁶

The income of poor and vulnerable households is especially susceptible to shocks. Between 2019-2021, workers with low education levels suffered a disproportionate 81 percent of all job losses during the pandemic. In 2022, the fallout from Russia’s invasion of Ukraine drove up global fuel and food prices, which hit lower-income households the hardest. Lower-income households are also more vulnerable to climate shocks, and their capacity to adapt is often limited. About 19 percent of the poor report having been affected by natural hazards in the last 12 months, compared to 8 percent of the middle-class.⁴⁷

Changing climatic conditions and physical damage from floods and hurricanes pose an especially serious threat to the ability of poor rural households to generate income, secure food, and build human capital.⁴⁸ Agriculture accounts for two-thirds of labor income in the *comarcas*, versus less than half in other rural areas.⁴⁹ Communities in the *comarcas* are especially dependent on agriculture because they tend to be physically remote from the country’s growth corridors and because local workers often lack the skills needed for jobs in other sectors.⁵⁰ Indigenous people, especially those in coastal and agricultural regions, face additional challenges.⁵¹ For example, members of the Guna ethnic group are being relocated from their ancestral islands to the mainland due to rising sea levels and other climate hazards.

Panama needs to address key development challenges if it is to maintain strong, inclusive, and resilient growth. Key priorities include investing in human capital, improving vital public institutions, increasing access to quality jobs and basic services, expanding physical and digital infrastructure, and upgrading the entrepreneurial and innovation capacity of firms and workers. In addition, climate change poses serious economic, social, and environmental challenges, and climate resilience must be at the center of the government’s policy agenda. The following section examines how policymakers can promote sustainable, inclusive, and resilient convergence with high-income economies.

3. Development Challenges to Promote Sustainable, Inclusive and Resilient Convergence

3.1. Productivity

Panama’s current model will not sustain the country’s growth indefinitely, as diminishing returns to capital and labor accumulation are already noticeable. Although Panama became a high-income economy in 2018, driven by the shipping and logistics sector developed around the Canal, megaprojects, Colon Free Trade Zone (FTZ), finance and tourism, its economic model is based on factor accumulation. Meanwhile, indicators of human capital, social development and institutional quality are closer to those of upper-middle-income countries than high-income countries—and in some cases Panama lags even the middle-income group. Promoting the growth of TFP and labor productivity across all sectors will be vital for the country to transition to a sustainable and equitable growth path. To achieve this, Panama will need to boost the productivity of capital and labor, enter higher-value-added production segments, and strengthen environmental sustainability and resilience to natural disasters.

3.1.1. Human Capital

Panama’s human-capital indicators remain low by the standards of regional and international comparators. All else being equal, a healthy and well-educated individual will tend to enjoy better employment prospects, higher productivity, increased future earnings, greater civic agency, and improved wellbeing. Similarly, a healthy and well-educated society leads to a more productive, innovative, and cohesive labor force.⁵² In 2020, Panama’s Human Capital Index score was just 0.50, indicating that a child born in the country today will achieve only 50 percent of her potential lifetime productivity. This score is below the averages for high-income countries, structural and aspirational peers, the LAC region, and even lower-middle-income countries such as El Salvador (Figure 6). The poor quality of the education system undermines the accumulation of human capital (Figure 7). Although Panama’s health indicators are relatively strong by regional standards, they lag those of structural and aspirational peers, and significant disparities are evident across areas of the country. The pandemic further eroded Panama’s human capital: public schools closed for two years, resulting in substantial learning losses,⁵³ and the crisis placed enormous pressure on the health system, exacerbating service gaps in remote areas.

Weak educational attainment and high dropout rates continue to hinder the development of labor-force skills. Despite recent improvements in school infrastructure and primary education coverage, indicators of educational attainment and workforce skills remain inadequate and uneven. Only 58 percent of Panamanians between the ages of 25 and 64 have completed secondary education, far below the high-income OECD average of 83 percent.⁵⁴ Expanding secondary education and restructuring conditional cash transfers to adequately incentivize school enrollment and retention will be crucial to develop a highly skilled workforce. Secondary enrollment rates have not improved over the past few decades, and even though the returns to education have increased in very recent years, the system continues to fail at retaining students throughout the entire education cycle.⁵⁵ Significant inequalities are evident even

among the youngest age groups: only 63 percent of pre-primary-age children are enrolled in education, far below the averages for LAC and high-income countries.⁵⁶

Figure 6. Panama’s Human Capital Index scores are low by international standards...

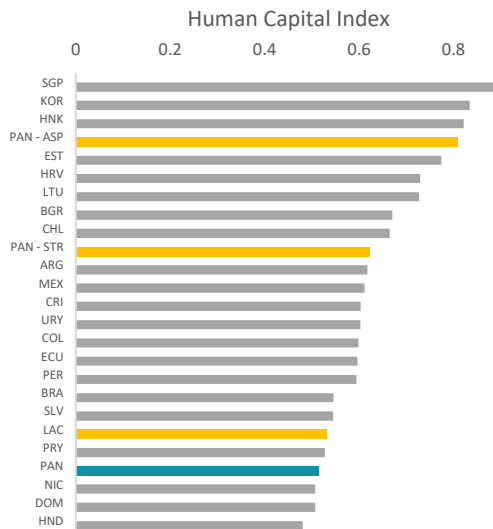
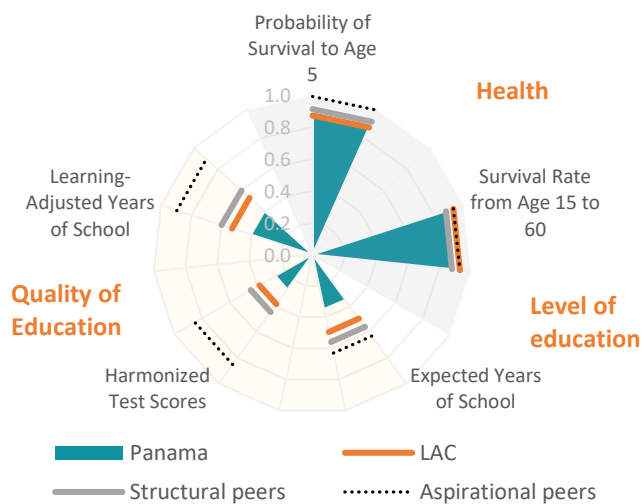


Figure 7. ...and the country’s education system faces severe challenges with enrollment, retention, and learning outcomes.



Source: World Bank Human Capital Project (2020). Note: Index ranges from 0 (low) to 1 (high). Data is collected in 2018. Figure 6 shows countries in LAC and Panama’s aspirational and structural peers.

Standardized test scores are alarmingly low, especially among ethnic minorities. Students in primary and secondary school perform poorly on international standardized tests such as the Program for International Student Assessment (PISA) and the Regional Comparative and Explanatory Study (*Estudio Regional Comparativo y Explicativo*, ERCE).⁵⁷ According to the 2019 ERCE, 59 percent of third-grade students do not meet the minimum reading standards, and 68 percent fail to meet minimum standards in math, far above the LAC averages of 44 and 48 percent, respectively. Education quality worsens in secondary school, where 83 and 97 percent of sixth-grade students do not achieve the minimum learning outcomes in reading and math, respectively, the second-poorest performance in the region. The 2018 PISA evaluation showed few gains since the 2009 evaluation, with more than 70 percent of 15-year-olds failing to reach the basic-level proficiency in reading, math, and science, versus just 25 percent in high-income OECD countries. The deficiencies in education are even worse in the *comarcas*.⁵⁸ On the 2018 CRECER national assessment, more than 75 percent of third graders in the *comarcas* had a low or very low score in math.⁵⁹ And according to the 2018 PISA results, the gap in reading performance is larger between those who speak Indigenous languages and those who speak other languages at home: the disparity in the average score is approximately 80 points, which is equivalent to nearly three years of schooling according to the OECD.⁶⁰

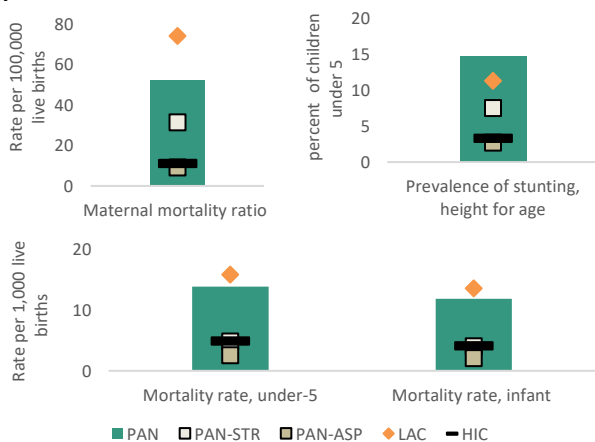
An outdated K-12 curriculum hinders student learning and competitiveness. The development, dissemination, and implementation of relevant, inclusive, and effective pedagogical materials underpinned by clear educational objectives is essential to improve teaching and learning, but Panama has been slow to update its K-12 curriculum.⁶¹ The revised curriculum should be more flexible for secondary students, incorporate more digital tools, and consider cultural differences across the *comarcas*. The current curriculum does not establish minimum learning outcomes or skills goals for each subject level, nor does it promote a results-driven culture to evaluate student and teacher performance.

Addressing these shortcomings will be crucial to enhance education quality and prepare students to succeed in the modern workforce.⁶²

Panama’s education system suffers from chronic underinvestment. Over the past decade, the government has spent an average of just 3 percent of GDP on education, far below the LAC average of 4.5 percent and the high-income-country average of 4.8 percent. Underinvestment has contributed to disparities in education outcomes among different groups.⁶³ Local socioeconomic indicators are a key predictor of student performance, highlighting the consequences of unequally distributed investment.⁶⁴ Students from rural households face greater challenges, attending schools with poorer infrastructure and fewer learning materials, and they must travel longer distances to and from school. These factors contribute to higher dropout rates and weaker learning outcomes among rural students.⁶⁵ There are also challenges in the quality of education since Panamanian students perform more poorly on international standardized tests than do their counterparts in countries with similar levels of per capita education spending, such as Jordan and Montenegro.⁶⁶

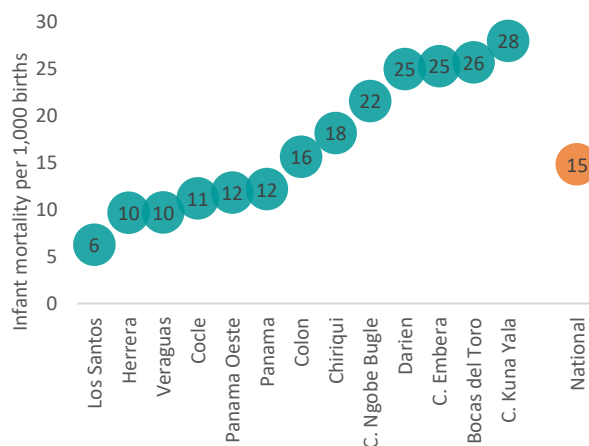
Poor health outcomes in disadvantaged regions slow the accumulation of human capital. While overall health outcomes are relatively strong by regional standards, Panama lags its structural and aspirational peers (Figure 9). Moreover, there are significant regional disparities in access to and quality of healthcare services, particularly between urban and rural areas and between *comarcas* and the rest of the country. Nationwide, life expectancy is 78 years, but life expectancy in Indigenous regions is only 70 years. Infant mortality and stunting rates are also higher in the *comarcas*, as well as in the high-poverty rural regions of Darien and Bocas del Toro (Figure 9).⁶⁷

Figure 8. Panama lags its aspirational and structural peers in health indicators.



Source: WDI

Figure 9. Comarcas and poorer provinces experience significantly worse health outcomes.



Source: Anuarios Estadísticos MINSA, 2019

Information gaps in health sector result in inefficient budget allocations that hinder efforts to improve outcomes. The fragmentation of Panama’s healthcare information systems prevents a timely analysis of the impact of health spending. Not all healthcare facilities have implemented the Electronic Health Information System (SEIS)⁶⁸ due to inadequate staff capacity, unreliable electricity, and limited digital connectivity, while the Statistical Health Records System (SIREGES) continues to rely on paper-based reporting in key areas.⁶⁹ The lack of systematic monitoring of health outcomes across regions hampers the government’s efforts to deliver quality services nationwide.⁷⁰ Although public and private health spending in Panama exceeds the levels of regional comparators, the allocation of public resources is

guided solely by historical budgets, creating few incentives to increase the efficiency, efficacy, and quality of health services.⁷¹

3.1.2. Employment, Entrepreneurship, and Innovation

Panama’s entrepreneurship, innovation, and job-quality indicators lag those of upper-middle-income and high-income countries. As the country approaches the end of its construction boom, and labor costs in all sectors rise, increasing value addition through entrepreneurship and innovation will be vital to remain competitive. In 2019, Panama ranked 76 out of 137 countries in the Global Entrepreneurship Index (GEI) of The Global Entrepreneurship and Development Institute (2020), with a score of 25.5 out of 100, compared to Chile and Uruguay that ranked 19 and 60, respectively (with a score of 58.3 of 30.1, respectively). Among the sub indicators of GEI, in 2019, Panama had the lowest score in technology absorption in 2019 (with a score of 10.5/100), followed by startup opportunity (17.8), process innovation (17.9) and risk capital (18.5).⁷² Several factors contribute to Panama's lower-than-expected entrepreneurial and innovation capacity in relation to its income level. These factors include inadequate education quality, insufficient financial support for aspiring entrepreneurs and micro, small, and medium enterprises (MSMEs), limited availability of private funding for research, and a weak policy framework that does not adequately support entrepreneurial activities.⁷³

Panama’s productive capacity, measured by UNCTAD’s productive capacity index, is above LAC average, however, it lags other comparator economies.⁷⁴ Panama has improved its productive capacity score from 52.6 in 2019 to 53 in 2022, but it still lags OECD average and its regional comparator economies such as Chile and Uruguay. Among the eight sub-indicators of productive capacity index, Panama scores higher than all of its peers in transport and all but OECD in structural change. On the other hand, it scores lower than many of its peers in human capital, ICT, natural capital, and institutions. Furthermore, state interventions and barriers to entrepreneurship are fairly limited in Panama, but obstacles to trade and investment make it less competitive in product markets than the averages for the OECD and aspirational peers, though it remains more competitive than the averages for LAC and structural peers.⁷⁵ In 2022, the rate of new business formation in Panama increased substantially, but this may also indicate a lack of employment opportunities in the post-pandemic economy rather than an improving environment for entrepreneurship.⁷⁶

A persistent mismatch between educational outcomes and labor-market needs is one of the key factors behind Panama’s low levels of entrepreneurship, innovation, and productivity. Higher-quality jobs are associated with greater productivity, poverty reduction, and sustained growth,⁷⁷ but poor and vulnerable workers depend on low-paying jobs that offer no social benefits. Almost half of formal firms in Panama report having difficulty finding workers with the skills they need, compared to 38 percent in OECD countries. In 2019, Panama ranked 66th out of 141 economies in the World Economic Forum’s Global Competitiveness Index (GCI), which measures the drivers of productivity.⁷⁸ Overall, Panama ranked slightly above the LAC average but well below regional leader Chile (33rd) and below Uruguay, Colombia, Costa Rica, and Peru. Some of Panama’s weakest scores were on indicators of labor-force skills (88th), including the difficulty of finding skilled employees (118th), limited access to digital skills (117th), and a lack of on-the-job training (92nd). Investment in workforce skills could facilitate innovation and growth, as skilled workers are more able to take advantage of new technologies and adapt to changing work requirements. Education, training, and innovation are complementary, as are capital investment and labor skills. In the modern workforce, a diverse range of cognitive, socioemotional, and technical skills is increasingly crucial to productivity and competitiveness.⁷⁹

Informality and labor-market frictions contribute to inequality and hinder productivity and entrepreneurship. After declining from 77.5 percent in 1989 to 41.9 percent in 2012, the informality rate has steadily increased.⁸⁰ In 2019, almost half of the workforce was informal, and their average wages was less than half of that of formal workers. Informality contributes to inequality in Panama, which has one of the widest labor-income gaps in the region.⁸¹ Panama's scores very poorly on the GCI rankings for the health of the labor market (92nd), reflecting a gap between wages and productivity (124th), regulatory constraints on hiring and firing workers (118th), and rigid wage determination (103rd). An OECD report found that informality is likely driven by inflexible regulations on hiring temporary workers.⁸² Although minimum wages appear to be only partially binding in Panama, they might represent an important cost to formalization, as over half of informal workers earn less than the average minimum wage.⁸³ Moreover, there is evidence that minimum wages are binding for microenterprises, with over 30 percent citing labor regulations as the main reason for increasing wages.⁸⁴

Panama's economic dynamism is hindered by a limited entrepreneurial capacity among individuals and firms. Although there are examples of an outstanding performance, Panama's overall entrepreneurial capacity, as measured by the Global Entrepreneurship Index (GEI), lags that of its peers. Panama's score on the 2019 GEI was 25.5/100, and it ranked 76th out of 137 countries, far behind regional leader Chile, which had a score of 58.3 and ranked 19th.⁸⁵ Among the three pillars of the GEI, Panama's lowest score was on indicators of entrepreneurial abilities (18.7/100) followed by entrepreneurial aspirations (21.6) and entrepreneurial attitudes (36.2). Out of 14 sub-indicators, Panama scored lowest on technology absorption, process innovation, opportunity startup, risk capital, product innovation, internationalization, cultural support and human capital.⁸⁶ Panama improved its score in the Global Entrepreneurship Monitor's National Entrepreneurship Context Index (NECI) significantly between 2019 and 2022, boosting its international ranking from 44th to 34th out of 51 economies, however, it continues to lag comparator countries, including Colombia, Chile, and Uruguay.⁸⁷ Among the 2022 NECI's 13 sub-indicators, Panama had the lowest scores on entrepreneurial education (2.6 out of 10), government policy support (3.0), entrepreneurial finance (3.1), ease of access to entrepreneurial finance (3.6), and research and development spending (3.7) and the highest scores on physical infrastructure (6.5), social and cultural norms (5.5), and commercial and professional infrastructure (5.4).⁸⁸

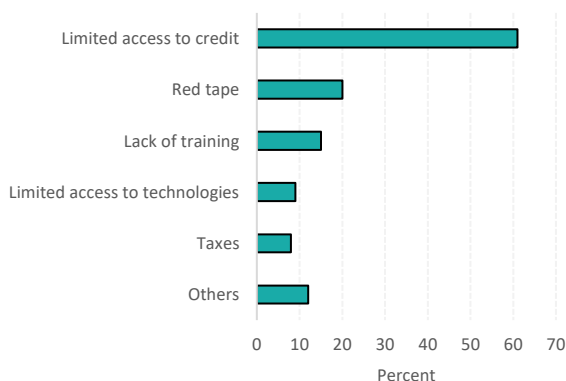
Barriers to financing for MSMEs and aspiring entrepreneurs negatively affect entrepreneurship, productivity, and inclusion. Seventy-five percent of workers in the bottom 40 percent of the income distribution are self-employed or work in firms with fewer than five employees.⁸⁹ MSMEs represent an estimated 95.7 percent of all firms in Panama, yet 61 percent of small business report having limited access to credit (Figure 10).⁹⁰ Important credit constraints include lack of collateral, complex application processes, and insufficient banking services targeting MSMEs.⁹¹ Moreover, only 10 percent of individuals over the age of 15 report borrowing money from formal financial institutions, compared to an average of 30 percent in LAC and 56 percent in high-income countries. Notably, medium and large firms do not report facing significant credit constraints.⁹² Limited financial penetration might help explain why small firms have experienced minimal productivity gains over time (Figure 11). Consequently, while workers in large firms saw their labor incomes increase at an annual rate of 4.3 percent between 2015 and 2019, the labor income of self-employed individuals ticked up by just 0.2 percent.⁹³

Agriculture, tourism, and other services have the potential to enhance inclusion by creating high-quality jobs, but these sectors have yet to reach their potential. According to a World Bank report, approximately 80 percent of Panama's food producers are small family farmers, who face challenges with low productivity and vulnerability to climate-related shocks. The expansion of agriculture into forested areas was largely responsible for the loss of 121,619 hectares of forest cover between 2006 and 2019.

Deforestation undermines the potential for ecotourism, which has not been fully developed despite the significant contribution of business tourism to GDP.⁹⁴ In addition, retail, tourism, hotels, restaurants, and other services have low levels of productivity, with minimal gains observed over the last decade.⁹⁵ Jobs in these low-productivity sectors tend to be informal and low-paying, which contributes to inequality.⁹⁶

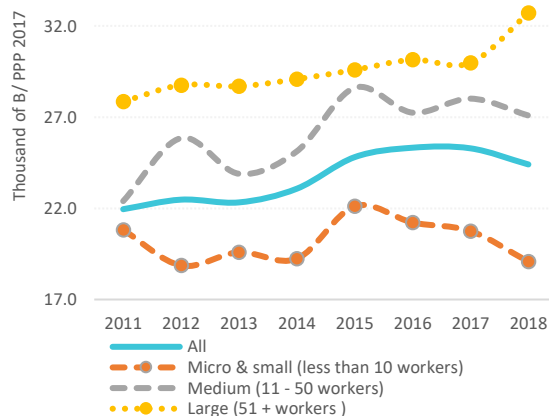
Investment in research and development (R&D) and innovation rates are both far below what Panama’s income level would predict. Panama has the lowest level of R&D investment and the second-lowest innovation score among peer countries (Figure 12). R&D investment fell from 0.4 percent of GDP in 2000 to 0.1 percent in 2013 and remained anemic at 0.2 percent in 2017. By contrast, R&D investment among upper-middle-income countries rose from 0.5 to 0.7 percent of GDP over the same period. Panama also performs poorly in the number of patent applications per capita, which increased from 2.4 per million people in 2013 to 5.1 in 2020 but remains far below the average of 83 for middle-income countries (Figure 13). In 2020, Panama ranked 73rd out of 131 economies in the World Economic Forum’s Global Innovation Index, 45th among the 49 high-income economies, and 8th among the 18 economies in LAC.

Figure 10. The most common barrier faced by informal MSMEs is limited access to credit...



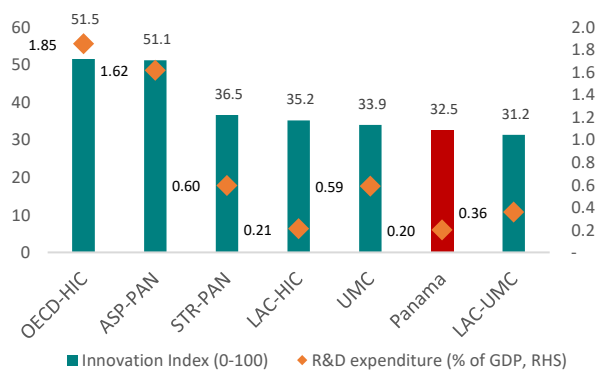
Source: Ampyme (2021)

Figure 11. ...and stagnant productivity growth.



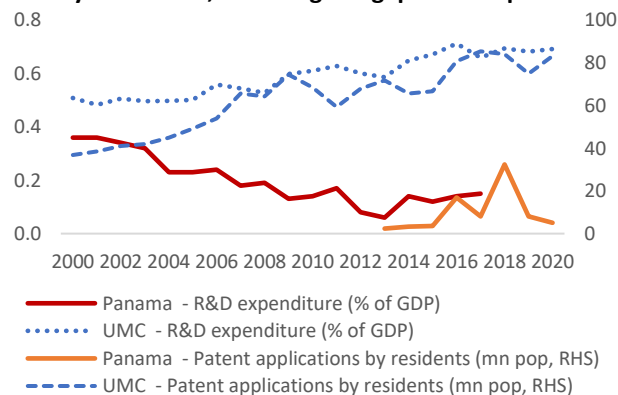
Source: Encuesta a Empresas no Financieras EENF – INEC.

Figure 12. Panama’s innovation and R&D investment levels lag those of comparator groups.



Source: WDI and WIPO. Note: Averages over 2000-2021.

Figure 13. R&D investment in Panama has declined steadily since 2000, widening the gap with its peers.



Source: WDI.

Panama’s science, technology, and innovation policy framework remains weak despite the government’s recent efforts to strengthen it. Most R&D investment in Panama is publicly funded, and the country’s funding levels are among the lowest in the world. Too few researchers and resources are available to undertake research projects, and connections among academia, industry, social institutions, and the government are weak due to the lack of a comprehensive, well-coordinated, and visionary national innovation policy.⁹⁷ Coordination among the institutions related to science, technology, and innovation suffers from a lack of clearly defined responsibilities and strong leadership capable of aligning institutions around a common set of objectives.

3.1.3. Infrastructure and Connectivity

Well-developed physical infrastructure and digital connectivity are vital to a productive economy, as they enable the fast and affordable transportation of goods and services, as well as the transmission of information. Although Panama has seen a significant amount of infrastructure investment over the past three decades and boasts world-class airports and seaports, some of its road and railway systems are not on par with those of high-income countries.⁹⁸ Secondary and rural roads are especially limited, adversely affecting the productivity of a large share of the population, as they face difficulties when taking their products to markets. In 2019, only 44 percent of Panama’s rural population had access to paved roads—and in the *comarcas* this share was just 10.4 percent⁹⁹—well below the average for most of Panama’s peers. While some of the challenges refer to new roads, the existing secondary and rural roads network is also poorly maintained mainly due to lack of resources (or fee-raising policies) at subnational levels of government.

Weak regulatory framework and low technical and human resource capacity undermine major economic gains in air transportation and other service sectors. Panama lacks a Ministry of Transportation, and the Civil Aviation Authority (AAC) is responsible for a wide range of functions, including policymaking, technical regulation, air navigation service provision, airport operations (for smaller airfields), and accident investigation. The AAC lacks the capacity to assume these responsibilities effectively: for instance, the International Civil Aviation Organization (ICAO) has ranked the AAC’s accident investigation capabilities as among the poorest in LAC. The last ICAO audit in 2017 presented a thorough assessment of the sector’s technical regulations. Panama underperformed the global average in seven out of eight categories and lagged its regional peers.¹⁰⁰ Equally important to capacity building is the need to split these responsibilities among different institutions to avoid conflicts of interests.

Digital connectivity has improved significantly in the last decade, but Panama continues to score below the OECD average in all connectivity indicators and below the LAC average in some.¹⁰¹ Although Panama exceeds the LAC average for the number of active mobile broadband subscriptions per 100 inhabitants (79 versus 74), its 3G network coverage is in line with the average (95 percent), and the number of fixed broadband subscriptions per 100 people is below the average (10.8 versus 13.9), as is fixed broadband speed (4 Mbit/s versus 5.1). In addition, while the use of e-government, e-commerce, and other digital services has increased considerably over the past decade, Panama’s indicators remain below the LAC and OECD averages. The high cost of delivering fixed and mobile broadband services to rural and remote areas, where one-third of the population resides, has prevented Panama from achieving the widespread adoption of high-speed internet connections.¹⁰² In 2019, 77.1 percent of urban households had internet access, compared to only 39.8 percent in rural areas.¹⁰³

Cybersecurity must be strengthened to fully leverage the benefits of digital connectivity and increase productivity. Cybercrime and cyberattacks are growing in scale, sophistication, and cost, resulting in

significant financial losses for public and private organizations.¹⁰⁴ The COVID-19 pandemic exacerbated cyber risks and vulnerabilities. On the 2020 Global Cybersecurity Index, Panama ranked 103rd out of 181 countries, behind the Dominican Republic and Chile. However, the government has taken steps to strengthen cybersecurity, creating a National Cybersecurity Strategy and establishing a Cybersecurity Incident Response Team to coordinate responses to cyber threats.

3.1.4. Key Institutions for Productivity

The strong tradition of a stable rule-of-law is undermined by deficiencies in accountability and public service delivery, constraining productivity growth. Weak accountability, limited information sharing and evidenced-based policymaking, high rates of corruption, and a weak judiciary undermine the integrity of the public sector. Meanwhile, inefficiencies in tax administration reduce fiscal revenue, limiting the government's ability to implement productivity-enhancing reforms and investments. Although Panama's public-spending-to-GDP ratio is one of the lowest among its structural and aspirational peers, the public sector's share in employment is among the highest, indicating the importance of the government's activities to the country's economic performance.¹⁰⁵

The regulatory framework for accountability is outdated and needs to be modernized. The General Comptroller's Office (GCO) plays a critical role in public-sector accountability, but its main legislation dates from 1941, and subsequent laws expanded the scope of its responsibilities, which might have undermined their capacity to monitor key risks. For instance, Law 22 of 1976 introduced the need for the GCO to co-sign all central government payments subject to ex ante controls, in addition to fully administering the central government's payroll system. The GCO is also responsible for both internal and external controls of all government processes; it regulates the public sector accounting system; and it directly administers the country's census and compiles its statistics. The biggest modernization challenge facing the GCO is determining how to introduce risk-based methods to implement internal and external controls, both of which could, in theory, be performed ex ante.

The government has long struggled to control corruption. Over the past five years, Panama's scores on most Worldwide Governance Indicators have improved or remained stable. However, its score on control of corruption fell from 35 out of 100 during 2008-2014 to 30 during 2015-2019, well below both the LAC average (40.6) and the high-income OECD country average (72.9).¹⁰⁶ In Transparency International's 2019 Global Corruption Barometer, 51 percent of respondents reported that most government officials are corrupt, and 49 percent said the same about most judges and magistrates. Both shares are above the LAC averages (48 percent and 42 percent, respectively). Similarly, Panama's score for rule of law indicators in the World Justice Project deteriorated slightly since 2015 and is among the lowest worldwide.¹⁰⁷

The judiciary faces multiple challenges, including weak enforcement of property rights. In 2023, Panama scored 51.5 out of 100 on the Heritage Foundation's Judicial Effectiveness Index, lagging other high-income LAC economies such as Chile (88.7) and Uruguay (80.6), as well as the regional average (54). Despite a relatively high degree of statutory independence, the judicial appointment process is opaque, and insufficient funding for training undermines judicial independence. The 2021 Human Rights Report highlighted that while Panama has criminal penalties for corruption, its judicial system lacks credibility and is widely perceived as susceptible to influence from the executive branch, as well as from powerful individuals and businesses, which results in biased rulings.¹⁰⁸ Moreover, the regulations safeguarding judicial independence are not effectively implemented due to the adoption of the Accusatory Penal System in 2011, which allows judges to be dismissed without cause or appeal. The legal framework for property registration is weak, and a significant share of the land outside Panama City remains untitled.

Financial sector regulation and supervision in Panama, while advanced, requires significant strengthening to ensure financial stability. The financial sector is one of the leading sectors in Panama, and also in the region, with assets equivalent to about 210 percent of GDP in June 2022. Government deposits in Banco Nacional de Panama (BNP) which are in turn deposited in foreign banks, serve as international reserves in the absence of a central bank. More broadly, financial sector institutional arrangement has some shortcomings in recovery and resolution, crisis management, and financial sector safety nets (e.g., the country has no industry financed deposit insurance system to protect savers and prevent a financial panic during a crisis). Furthermore, the country is at a nascent stage of mitigating the impact of climate change on the financial sector. Finally, the digital payments space is also underdeveloped: (i) weak institutional arrangements, i.e., no law on regulation/supervision or oversight of the payment systems, (ii) limited settlement risk management; (iii) no interoperability of P2P payments and not sufficient access points; (iv) limited product development; (v) lack of comprehensive financial consumer protection framework; and (vi) minimal digital government payments, which is a key driver of financial inclusion.

Access to financial services, including digital, falls well-behind LAC averages, diminishing household and MSME economic participation. According to Findex, in 2021 only 45 percent of adults have an account at a financial institution or with a mobile money provider, which has been stagnant since 2017), below the 74 percent LAC average. Account ownership is even lower for women (43 percent in 2021), and poorest (32 percent) and rural (37 percent) households. This is inevitably impacted by the underdeveloped payment systems. In addition, 29 percent of adults reported borrowing money, but only 10 percent did so from a formal financial institution or mobile money provider. Furthermore, 7 percent of adults own a credit card (compared to 28 percent in LAC), while only 18 percent made a digital in-store merchant payment in 2021. MSMEs received 15 percent of credit in 2021.

Persistent challenges with financial transparency have led to Panama's inclusion on the Financial Action Task Force (FATF) grey list and the European Union's tax-haven blacklist. Panama has been on the FATF grey list since 2019 due to the high risk of money laundering and terrorism financing. In June 2023, through the Ministry of Economy and Finance, Panama announced compliance with all 15 action points of the International Financial Action Task Force (FATF) Action Plan, leading to FATF's approval for an on-site visit in September 2023. In February 2023, the European Union decided to keep Panama on its list of jurisdictions that do not cooperate in tax matters because the country has not complied with the international criteria on transparency and exchange of tax information, and for having a foreign source income exemption regime considered harmful. The government has committed to complying with OECD recommendations on domestic tax-base erosion and profit shifting in time for the Fall 2023 review.

Panama has one of the lowest levels of tax revenue globally,¹⁰⁹ which limits the government's ability to spend in areas that promote productivity and inclusive development. Weak tax administration, numerous exemptions, and high rates of tax evasion greatly increase collection costs while lowering total tax revenues. In 2019, Panama's tax revenues amounted to 9 percent of GDP, far below the average of 13.3 percent for LAC and 18.5 percent for high-income OECD countries. Moreover, tax revenues steadily declined from 10.4 percent of GDP in 2016 to 9 percent in 2019.¹¹⁰ Forgone revenues from the evasion of corporate income tax, personal income tax, and value-added tax amount to 8.2, 0.5, and 1.8 percent of GDP, respectively.¹¹¹ In addition, tax-collection expenditure was equal to 3.1 percent of GDP in 2019, well above the LAC average of 2.2 percent,¹¹² and consumed 34.3 percent of tax revenue, the third-largest share in the LAC region.¹¹³ While the government offsets its low tax revenues with income from the Canal, greater fiscal resources are vital to improve productivity and promote inclusive development, especially given its limited fiscal space in the wake of the pandemic and the country's increasing demand for education, healthcare, and infrastructure.

3.2. Social Exclusion and Inequality

3.2.1. Vertical and Horizontal Inequalities

Panama's persistent income inequality is due in part to unequal labor earnings, which in turn reflects both the unequal distribution of skills and the sectoral allocation of labor. Labor income ranges from 42 percent of total income for households in the bottom quintile to 71 percent for households in the richest quintile. In 2019, the poorest quintile earned only 1.2 percent of total labor income, whereas the richest quintile reached 32.7 percent. Most individuals in the bottom quintile have primary education or less (88.9 percent), while most individuals in the top quintile have secondary (38.7 percent) or tertiary qualifications (30.6 percent). Labor earnings increase steeply with education: on average, the labor income of someone with tertiary education is 6.5 times higher than that of someone with less than primary. Moreover, 70 percent of workers in the bottom quintile work in agriculture, which offers the lowest average compensation of any sector.

Substantial regional and ethnic disparities contribute to exclusion and inequality, and Panama has some of the region's most extreme ethnicity-based inequality indicators. Indigenous people, particularly the 424,330 living in *comarcas* and other rural areas, lag other groups across a range of monetary and nonmonetary indicators of wellbeing.¹¹⁴ Monetary poverty rates reach an alarming 70 percent in the *comarcas*,¹¹⁵ which have the worst average indicators for education and access to basic services like water, sanitation, and electricity (Figure 16).¹¹⁶ Communities in the *comarcas* have limited physical and digital infrastructure, with 90 percent of households lacking access to quality roads and 55 percent having no internet access. Extreme weather events are negatively and more frequently affecting the livelihoods of people living in lagging regions: about 19 percent of the poor report being affected by a climate disaster compared to 8 percent of the middle-class.¹¹⁷ Indigenous people living in urban areas also experience significant deprivation compared to other groups. The poverty rate among the 207,191 Indigenous people living in urban areas is 15 percent, about three times the aggregate urban poverty rate. In addition, 29 percent of urban Indigenous people lack access to in-home sanitation, and one in four has no access to water (Figure 17). Among the 12 LAC countries with large Indigenous populations, Panama's Indigenous communities have some of the lowest indicators of access to basic public services.¹¹⁸

Gender disparities also contribute to exclusion, particularly among Indigenous women. Despite recent gains, the female labor-force participation rate remains significantly lower than the rate for men. In 2019, 55.5 percent of women participated in the labor force, versus 79.7 percent of men. The pandemic reversed a decade of progress in this area, and in 2021 the female labor-force participation rate was 8.1 percentage points below its 2019 level and close to the level observed in 2011. Gender gaps in the labor market have negative implications for economic growth. In LAC, the economic losses due to the labor-force participation gap are estimated at 23.1 percent of GDP per capita.¹¹⁹ Indigenous women face particularly acute deprivation. In the *comarcas*, they have the lowest levels of education (4.5 years compared to 6.0 years for men) and receive the lowest hourly income (equal to 23 percent of the average income for men at the national level). Four out of ten employed Indigenous women work without pay.¹²⁰ Panama also has one of the highest teenage pregnancy rates in the region at 79.5 births per 1,000 women aged 15-19, versus 60.3 in LAC and just 11.3 in high-income countries.¹²¹ Early childbearing or pregnancy can negatively impact women's education and health status, preventing them from capitalizing on their assets and economic opportunities in the labor market and perpetuating the cycle of poverty across generations.¹²²

Figure 16. Indigenous people in rural areas face high rates of monetary and nonmonetary poverty...

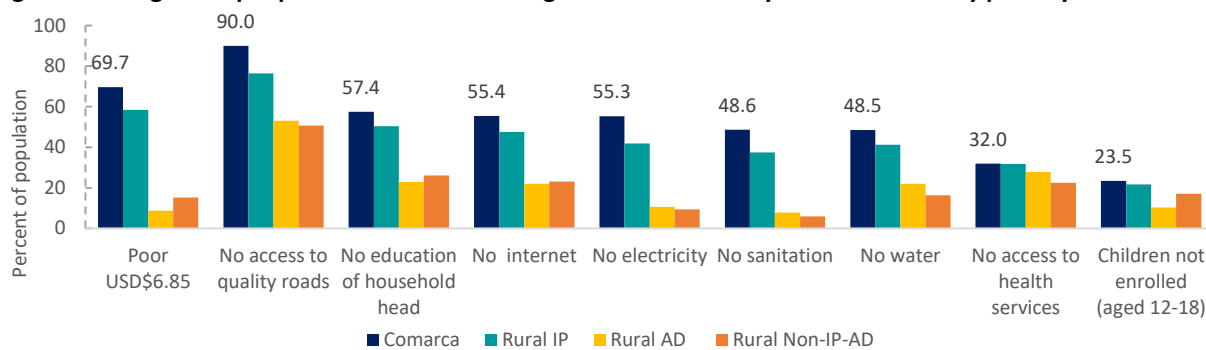
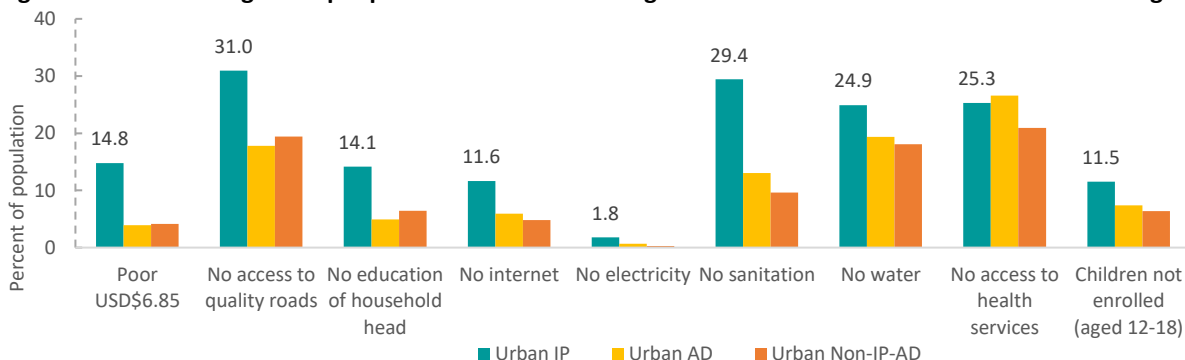


Figure 17. ...while indigenous people in urban areas also lag other communities on measures of wellbeing.



Source: Encuesta de Mercado Laboral 2019 and Encuesta de Propósitos Múltiples 2019. All indicators are measured as a percentage of the population, except “Children not enrolled”, which is the percentage of the population aged 12-18 years.

In addition to Indigenous people and women, other vulnerable groups face social and economic marginalization. Panamanians of African descent, people with disabilities, and sexual and gender minorities might be especially vulnerable to poverty and deprivation. In addition, Panama is experiencing a significant surge in transit migrants, reaching unprecedented levels and encountering significant hardships, which presents substantial challenges for the country. However, information on these groups is limited. Box 2 in the appendix describes these knowledge gaps.

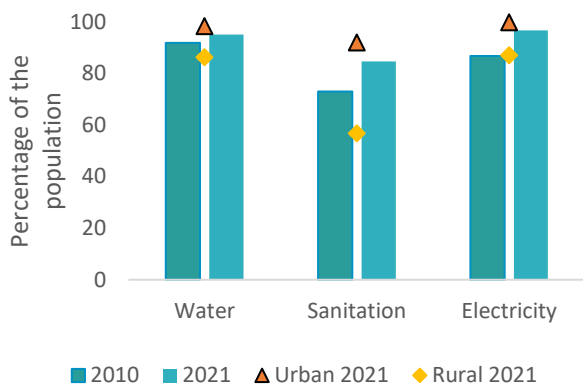
3.2.2. Key Institutions for Inclusion

The provision of basic public services has improved over the last decade, but access and quality indicators still vary significantly across the country. Progress has been made in expanding electricity and sanitation services, but access rates for both remain below the regional average,¹²³ and disparities across areas and socioeconomic groups are substantial and persistent (Figure 18). In some *comarcas*, almost no households have access to electricity. Moreover, sanitation access rates range from less than 50 percent in the *comarcas* to just under 80 percent in Darien and Bocas del Toro and exceed 90 percent in other provinces. Despite recent efforts to ensure universal access to electricity, service quality remains low.¹²⁴ High energy prices and frequent shortages during the dry season caused by transmission constraints and issues in the distribution network highlight the need to diversify the energy matrix away from its dependence on hydroelectric power.¹²⁵ The pandemic posed significant challenges for public service delivery but also encouraged experimentation with the use of information and communications technology (ICT) in the health, education, and social protection sectors.

Panama’s social protection programs have helped reduce poverty and increase human capital, but their efficiency and effectiveness remain limited. During the pandemic, the government introduced the *Panama Solidario* (PS) program, which covered a large share of Panamanian households. The program is estimated to have prevented a more severe increase in poverty rates during the pandemic, but better targeting will be necessary to improve the program’s efficiency as it continues to support vulnerable households. The government has increased social spending over time, but it remains only slightly above the LAC average.¹²⁶ Moreover, the coverage, targeting, and adequacy of social assistance continue to pose challenges, as a significant share of social benefits goes to households in the middle- and upper-income quintiles (Figure 19). In addition, some lower-income elderly individuals in the *comarcas* are excluded from the government’s 120/65 Program, even though some of its benefits reach households in the higher-income quintiles. The targeting of other subsidy programs can also be improved. For instance, the cooking-gas subsidy benefits both rich and poor households alike. In addition, Panama lacks an adaptive social protection system capable of expanding the beneficiary base in response to shocks and crises. Regular and adaptive social protection systems both require a universal registry of potential beneficiaries.

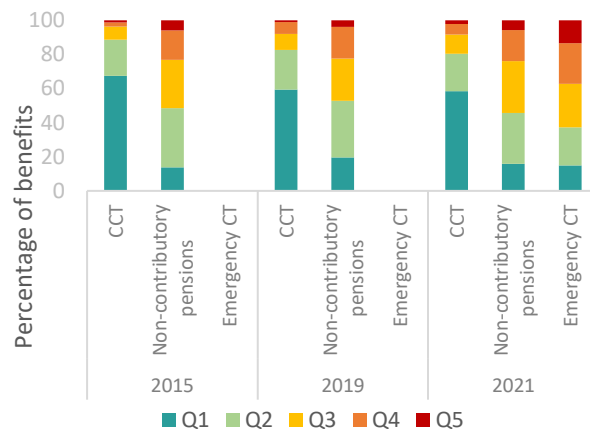
Panama’s fiscal system does not do enough to reduce inequality, and it exacerbates regional disparities in public service provision. The budget for Panama’s provinces is 58 times larger than the budget for the *comarcas*, even though the provincial population is only 16 times larger. This funding gap substantially impacts access to basic services.¹²⁷ In addition, the tax system’s redistributive power is low, reducing the Gini index by just 0.021 points, well below the OECD average of 0.16 and slightly below the LAC average of 0.022.¹²⁸ Redistribution occurs primarily through transfers rather than through taxes.¹²⁹ Recent evidence shows that average tax rates are similar among individuals across the income distribution, highlighting the room for improvement in the progressivity of the tax system.

Figure 18. Access to basic services improved between 2010 and 2021, but territorial gaps persist.



Source: WDI and EML2021.

Figure 19. A significant share of the benefits of social programs does not go to the poorest households.



Source: EML2015-2021. Q1 refers to poorest quintile, while Q5 refers to the richest quintile.

Significant weaknesses in the government’s statistical capacity limit evidence-based policymaking. Statistical performance indicators reveal that Panama’s national statistical system is less capable and mature than the average for any of its comparator groups.¹³⁰ The main factors contributing to Panama’s weak statistical capacity are: (i) the limited availability of resources to generate data,¹³¹ (ii) the limited openness of the available data, and (iii) the limited depth and breadth of available data. Data can play a transformative role in public service delivery and resource prioritization.¹³² Although the government

recognizes the importance of data interoperability and ICT in a modern public administration, it has not fully embraced a culture of data-driven monitoring and evaluation of public services.¹³³

3.3. Environmental Sustainability and Vulnerability to Climate Change

Panama is highly vulnerable to climate change, and the increasing frequency and intensity of natural disasters caused by rising temperatures poses significant risks to the country. Average temperatures have risen by 1–3°C since the 1970s.¹³⁴ Meanwhile, the frequency and intensity of El Niño and La Niña events have also increased, leading to severe floods and droughts.¹³⁵ Panama ranks 14th globally in exposure to multiple hazards based on land area and 35th on mortality risk from these hazards.¹³⁶ The country's major economic assets and sectors, including the Canal, hydroelectricity, tourism, and agriculture, are highly dependent on sustainable water management.¹³⁷ In addition, although the country represented only 0.04 percent of total global emissions in 2019¹³⁸ and net GHG emissions remain negative, owing to its forests, its greenhouse gas (GHG) emissions have been increasing in per capita terms and now exceed the averages of LAC and the OECD.¹³⁹ The energy sector remains the largest contributor to greenhouse gas emissions, accounting for 63 percent of the total in 2017, though since then, the installed capacity of non-conventional renewable energy sources in the country's electricity matrix has increased to 18.22 percent.¹⁴⁰ In 2017, transportation contributed 36 percent of total GHG emissions, of which 30 percentage points came from overland transport and 6 percentage points from maritime and riverine transport, while electricity contributed 12 percent to total emissions.¹⁴¹ It is crucial that the government implement policies that protect its natural resources, population, and economy from the adverse effects of climate change while promoting environmental sustainability.

3.3.1. Water Resources

Panama has the world's 24th largest stock of water per capita, yet it faces important challenges around water sustainability.¹⁴² These include: (i) inefficient water use and management; (ii) increased pressure on water resources; (iii) the effects of climate change and high temperatures, which in 2019 caused a decrease in the Canal's water level and slowed its activities; and (iv) the pollution of drinking water. The hydroelectric sector uses the largest share of fresh water (23 percent), followed by the transportation sector (1.9 percent). Another 20 percent of the available freshwater is projected to be used by 2050.¹⁴³ Nearly half of Panama's water systems (47.5 percent) did not apply tariffs in 2018, far above the levels of regional comparators such as Nicaragua (22.9 percent) and Honduras (4.4 percent).¹⁴⁴ In over 90 percent of the country's water systems, the monthly household tariffs collected were insufficient to cover infrastructure, operations, and maintenance costs.¹⁴⁵

Panama's challenges with water sustainability stem from deficiencies in water management.¹⁴⁶ Although in principle the National Water and Sanitation Utility (IDAAN) covers areas with a population of over 1,500, in practice fewer than half of the *corregimientos* with over 1,500 inhabitants are served by IDAAN.¹⁴⁷ Only half of water users pay tariffs, and the tariff schedule has not been updated since 1982.¹⁴⁸ No new financing programs are available to help fund projects in rural areas. Due to limited budgets, a lack of technical personnel, and inadequate coordination among the authorities in charge of water systems, water projects either do not advance or do not function as intended. Since the basic sanitation program was launched in 2014,¹⁴⁹ only 10 percent of the agreed upon improvements have been implemented. Many facilities and infrastructure projects cannot be used because they were constructed without resolving issues related to water connections, or because treatment plants were not properly established.¹⁵⁰

Pressure on Panama’s water resources is steadily increasing. Water consumption has risen substantially over the past decade, while production has been declining since 2016.¹⁵¹ Low tariffs, high levels of non-revenue water due to inadequate metering and frequent nonpayment, aging infrastructure, increased demand from the Canal following its expansion, increased hydroelectric production, population growth, and high rates of urbanization all contribute to excessive water consumption, making effective water management especially critical.¹⁵²

Water levels are decreasing due to climate change. Panama experienced its most severe drought in 2019, when an El Niño event increased temperatures and reduced rainfall by 20 percent below its historical average, impacting water availability for about half of Panama’s population and the Canal.¹⁵³ The Canal region has already experienced an increase in average temperatures of about 1.1°C, and this could reach as high as 3.6°C by 2100, reducing surface water and causing extreme droughts.¹⁵⁴

Panama’s poor water quality threatens human health, particularly among vulnerable populations and rural communities. Panama’s water quality ranked 100th out of 180 countries in 2022, the lowest in LAC.¹⁵⁵ The leading causes of water pollution and ecosystem damage include agricultural activities, urbanization, mining, and illegal logging.¹⁵⁶ In 2018, 5.9 percent of the rural population did not have access to clean water, down from 7.9 percent in 2015, but at the same time the share of the urban population without access to clean drinking water increased from 1 percent to 2 percent due to disruptions in residential water services. There are also large disparities in water access among the poor, non-poor, and Indigenous populations. In 2018, 80 percent of poor households had access to clean water, compared to 97 percent of non-poor households. In some areas, less than 35 percent of the Indigenous population had access to clean water.¹⁵⁷

3.3.2. Vulnerability to Natural Disasters and Environmental Sustainability

Panama is vulnerable to extreme weather events driven by climate change and intensified during the last two decades, affecting thousands of people and causing millions of dollars in damage.¹⁵⁸ About 15 percent of Panama’s land area and 12.5 percent of its population are vulnerable to two or more natural hazards. Between 1982 and 2008, Panama was struck by 32 natural disasters, resulting in 249 deaths and an estimated US\$86 million in economic damage.¹⁵⁹ Four of the country’s most intense storms and several of the worst droughts in the last 100 years have occurred in the past decade, underscoring the need to prepare for more extreme weather in the future.¹⁶⁰ Extreme rainfall is the leading cause of flooding, followed by poorly maintained infrastructure, deforestation, and garbage thrown into rivers. In addition to floods, storms and droughts, Panama is also vulnerable to wildfires, earthquakes, landslides, tropical cyclones, tsunamis, and El Niño and La Niña events.

Forests play a key role in reducing GHG emissions in Panama, but the country’s forests are under threat.¹⁶¹ In 2017, land-use changes and deforestation were the second-largest source of GHG emissions, accounting for 19.6 percent of the total.¹⁶² More than 70 percent of these emissions were caused by forestlands being converted into grasslands. Darien, Panama, and Coclé provinces have the highest rates of forest conversion into grasslands and croplands.¹⁶³ Although Panama has one of the highest rates of forest cover in Central America at 61 percent,¹⁶⁴ 484,692 hectares were deforested during 2005-2015.¹⁶⁵ Most of its mature forests are in protected areas and Indigenous territories, with forests in the *comarcas* accounting for 34 percent of the country’s total forest cover. Deforestation is driven by the expansion of farming and cattle ranching, as well as illegal logging.¹⁶⁶ Intensive agricultural practices reduce the soil’s ability to store water, which increases the risk of flooding.

In 2019, the opening of the Cobre Panama mine, one of the world’s largest copper mines, created new environmental challenges. The mining sector’s share in GDP rose from 0.1 percent in 2018 to 4.6 percent in 2019. No climate-change legislation has been specifically developed for the mining sector, but the Ministry of Environment (MiAmbiente) is empowered to implement initiatives to address and counter climate change, which may include adopting new rules for the mining sector.¹⁶⁷ According to a 2019 study by the United Nations, since beginning operations Cobre Panama has caused significant environmental damage, including the contamination of rivers due to accidents involving vehicles transporting fuel to mine sites and high sediment movement, which increased water pollution.¹⁶⁸

Historically, fossil fuels accounted for roughly two-thirds of Panama’s total primary energy supply, but the country’s energy mix has been diversified in recent years.¹⁶⁹ Energy production and consumption accounts for 50.6 percent of GHG emissions, of which 56 percent are generated by transportation, which includes civil aviation, land transport and maritime and river.¹⁷⁰ Panama has made considerable investments in renewable energy, and 21.9 percent of the energy consumed now comes from renewable sources, slightly less than the LAC average of 27.9 percent but far below regional leaders such as Uruguay (59.4 percent), Brazil (43.6 percent), and Costa Rica (38.3 percent).¹⁷¹ Although most of the country’s renewable energy is hydropower, the introduction of new renewable-energy technologies has diversified the energy mix. In 2020, 76 percent of Panama’s electricity came from renewable sources such as hydropower, solar, wind, and biomass, surpassing most structural and aspirational peers, though still below the levels of Uruguay (94 percent) and Costa Rica (99 percent).¹⁷²

3.3.3. Key Institutions for Environmental Sustainability and Climate Change

The deficiencies in the water management system identified in the 2015 SCD remain unaddressed. Weaknesses in the regulatory framework for water management, including the tariff schedule, have led to serious challenges in the water sector. These include: (i) the duplication of projects due to insufficient coordination among relevant institutions; (ii) suboptimal implementation of projects in rural and remote areas due to the limited decentralization of decision-making power and financial resources; (iii) noncompliance with regulatory codes for infrastructure due to inadequate monitoring and enforcement; (iv) foregone revenues due to outdated tariffs; and (vi) large amounts of non-revenue water due to aging and poorly maintained infrastructure.

The government created MiAmbiente in 2015 to elevate environmental protection to the ministerial level and developed various environmental projects, but these efforts are insufficient to address the country’s environmental challenges.¹⁷³ The establishment of MiAmbiente increased the financial and human resources allocated to the environment, and the national environmental regulations have been strengthened. As noted above, MiAmbiente has been empowered by Law No 8 of 2015 to foster initiatives to address and counter climate change in Panama, which include the adoption of rules applicable to the mining sector, but there is no comprehensive regulatory framework for sustainable mining activities. On April 30, 2021, the government issued Executive Decree No. 135, which called for creating a platform to collect climate-related data and monitor vulnerability to climate change.¹⁷⁴ However, further regulations will be needed to strengthen the government’s response to climate change and promote decarbonization and adaptation, building on the Paris agreement. Panama also has yet to adopt a comprehensive framework for promoting energy efficiency.

Despite recent improvements, further efforts are necessary to improve the legal and institutional framework for disaster risk management (DRM). In response to increased disasters, Panama has been shifting its focus from centralized disaster response to a more comprehensive and inclusive approach to DRM that integrates disaster risk reduction. In 2010, the government approved the Comprehensive

Disaster Risk Management National Policy to clarify the DRM responsibilities of line ministries. It also provided a DRM legal framework for the Ministry of Economy and Finance that included a comprehensive disaster risk financing strategy and implementation plan with a diverse array of financing instruments. The government has been reorganizing and strengthening the National Civil Protection System (SINAPROC), but further efforts will be required to increase its *operational* efficiency and DRM capacity.¹⁷⁵

4. Policy Priorities and High-Level Objectives

4.1. Build Human Capital

Building the country’s human capital remains vital to promote inclusive income gains and productivity growth. The 2015 SCD emphasized the need to prioritize (i) technical education to better respond to labor-market demand, (ii) monitoring and evaluation systems to improve education quality, and (iii) the grade-based differentiation of Universal Scholarship (*Beca Universal*) benefits to reduce dropout rates in secondary education.¹⁷⁶ The government has made important efforts in all three areas. In 2017, the Specialized Higher Technical Institute (ITSE) was established to meet the demand for technical graduates.¹⁷⁷ To improve monitoring, Panama participated in international and national assessments of student learning (PISA, ERCE, and CRECER).¹⁷⁸ The government also replaced the *Beca Universal* with the Social Assistance Program for Universal Education (*Programa de Asistencia Social Educativa Universal*, PASE-U), expanding its coverage and differentiating benefits by education levels. In addition, Panama is implementing the *Plan Colmena*, a territorial strategy aimed at empowering local communities in the poorest *corregimientos* by strengthening local capacity and increasing community engagement in the delivery of public services, including education. However, low levels of educational attainment, high dropout rates (particularly in secondary education), poor learning outcomes, and skills mismatches continue to pose important challenges.

Improving access to high-quality education should remain a key priority for the government. The education system should update its K-12 curriculum to establish minimum learning goals and foster a results-driven culture for evaluating the performance of students, teachers, and staff. Continue updating the curriculum could help create a more inclusive system that accounts for ethnic differences, offering more flexible and relevant content and teaching methodologies to boost secondary retention and foster skills development.¹⁷⁹ The government should also evaluate, adapt, and strengthen conditional cash transfer programs, which have been shown to reduce dropout rates in secondary education. In parallel, the authorities should introduce a permanent monitoring and evaluation system to track teacher and student outcomes.¹⁸⁰ Teaching and learning models should be updated to allow for distance learning and other flexible modalities facilitated by technology. The Digital Equity Law¹⁸¹ offers scope to enable the creation of new educational platforms. However, to achieve its goals the government will need to strengthen education financing and focus on improving the quality and equity of service delivery.

Beyond fundamental education reforms, addressing skill mismatches requires coordinated action. The government must strengthen the operations and management of higher education and vocational institutes by enhancing coordination, establishing common standards, and updating curricula to align with evolving private sector needs and emerging technologies.¹⁸² Increased funding, enhanced research institutes, stronger public-private coordination, and revised curricula at the K-12 and higher education levels should be complemented by career guidance during secondary education to better align student choices with labor-market needs.

Improving the quality and coverage of healthcare services will contribute to the development of human capital in underserved areas and marginalized communities. To address disparities in service provision, the government can implement incentives and adopt a result-based resource allocation system.¹⁸³ The effectively implement these measures, the authorities must strengthen and standardize procedures for utilizing the Electronic Health Information System (SEIS), which will require training healthcare personnel and ensuring access to digital resources in remote areas. The government can also promote the development of traditional medicine in the *comarcas*.¹⁸⁴ As ICT connectivity expands throughout the country, remote health services (telehealth) will become increasingly viable. The authorities can help ensure access to affordable, high-quality medications by bolstering the supply chain through the integration of improved information systems. Establishing a strategic price-regulation framework, streamlining strategic procurement processes, and harmonizing the procurement procedures of the Ministry of Health (MINSA) and the Social Security Fund (CSS) will allow for consolidated procurement while improving the efficiency with which medicines are distributed.¹⁸⁵

Increasing public investment in education and health systems could accelerate human capital accumulation and improve access to quality services for vulnerable groups. In addition to direct investments in health and education infrastructure, complementary investments in roads, electrification, sanitation, water, and digital services will be crucial to enhance equity and boost workforce productivity. While the COVID-19 pandemic and the economic fallout from Russia's invasion of Ukraine have put additional pressure on the public budget, the public-private partnership law offers an opportunity to co-finance infrastructure projects.

4.2. Increase the Innovation and Entrepreneurial Capacity of Firms and the Quality of Jobs

The government has taken significant steps to boost national innovation capacity and promote entrepreneurship, but the national innovation system remains weak. In 2007, the Science, Technology, and Innovation National Secretariat (SENACYT) was created to lead science and technology policy, and the Inter-ministerial Council for Science, Technology, and Innovation (CICYT) was established in 2011 to coordinate and promote science-related policies, plans, and programs in collaboration with ministries across different sectors. In 2015, Panama developed its first 25-year science policy, along with a strategic plan for 2015-2019. More recently, in 2019, the new Council for the period 2019-2024 was installed. SENACYT developed the National Strategic Plan for Science, Technology and Innovation (PENCIYT) for 2019-2024, whose approval was recommended by CICYT.¹⁸⁶ In 2017, the government launched the *Panama Emprende y Crece* program to promote MSME productivity, and in 2021 it enacted a law to promote entrepreneurship.¹⁸⁷

Remaining weaknesses in the institutional framework of the national innovation system must be addressed to promote productivity growth and entrepreneurship.¹⁸⁸ These include: (i) a lack of scientific funding, particularly from the private sector; (ii) inadequate coordination across the institutions involved in science and technology policy, which causes inefficiencies in balancing strategic objectives, activities, resources, and responsibilities; (iii) insufficient funding and policy support to empower public and private universities to improve education quality, train technical professionals, and conduct research; (iv) constraints on access to finance among aspiring entrepreneurs and MSMEs; and (v) the limited coverage, quality, and security of digital services, as well as disparities in access to these services across social groups.

Developing digital infrastructure and services should be an integral part of the government's economic and scientific policies. The government aims to promote digital transformation through various initiatives,

including two comprehensive strategic plans: the Strategic Plan of the Government 2019-2024¹⁸⁹ and the Annual Digital Agendas.¹⁹⁰ Both plans highlight the importance of transitioning from partial e-government systems to a fully digital government. Digital policies focus on establishing online processes for government entities, promoting the use of e-signatures, and protecting sensitive data.¹⁹¹ Although the government and private sector have both made efforts to increase cybersecurity, the country still faces challenges around data protection and cyberattack preparedness.¹⁹²

Panama needs a robust and comprehensive legal framework to improve digital infrastructure and services. This includes regulations to promote equal access, accelerate digital public service delivery, and protect citizens and businesses from cyberattacks through PPPs, subsidies, and the use of universal service funds. Adopting a unique interoperability platform, strengthening the regulatory framework for data protection, approving laws on cybercrime, and developing a directive for crisis management are all important to strengthen the digital economy.

To develop a strategic vision and effectively mobilize resources to build innovation capacity, the government should consolidate and strengthen the institutional and regulatory frameworks for science and technology. Under the leadership of SENACYT, each of the ministries involved in the CICYT should develop a strategic vision for innovation in its respective sector and mobilize the resources necessary to implement that vision. These plans should be developed in close collaboration with academia, the private sector, non-governmental organization, and other ministries and agencies to ensure their relevance and maximize their impact.

The government must focus on alleviating constraints on employment growth and MSME productivity. The authorities should analyze the impact of labor regulations on the ability of firms to hire temporary workers and the effect of minimum wages on informality and productivity. Increasing the number of workers with higher education can boost productivity, but only if the quality and relevance of education align with the needs of the growing economy. Priority should be given to training technicians, engineers, and workers in skilled trades. In addition, investments in vocational education, digital literacy, and on-the-job training can help upskill the existing labor force. Engaging in a dialogue with the private sector can help ensure that graduates possess the necessary skills.¹⁹³ In parallel, improving access to credit and simplifying the formalization process for entrepreneurs and MSMEs is vital to productivity growth. Continuing and expanding programs like Panama Entrepreneurship and Growth 2017-2022 and the National Policy for the Development of Micro, Small, and Medium Enterprises 2017-2022 can contribute to creating a more favorable environment for entrepreneurship and innovation.

Policy reforms should aim to drive growth in sectors that promote economic inclusion among disadvantaged groups. Strengthening the rural territorial development approach¹⁹⁴ can promote sustainable and inclusive socioeconomic development by unlocking opportunities in the agriculture and ecotourism sectors while leveraging synergies with the National Protected Areas System (SINAP) and forest conservation policies.¹⁹⁵ Sustainable agriculture can incorporate emerging technologies, climate-smart practices, and digital solutions, and offers opportunities both in domestic and international markets.¹⁹⁶ The nearly 340 agro-industrial companies currently operating in Panama already generate about 32,000 full-time jobs, accounting for 8.5 percent of total employment. The tourism sector is growing, and rural tourism and ecotourism offer significant opportunities for Indigenous people and Afrodescendants to benefit from their lands, industries, traditions, and cultures. Further developing the logistics and infrastructure connecting urban and rural areas will be necessary to realize the potential of rural tourism and ecotourism. In addition, expanding service exports could drive productivity growth and support the creation of high-quality jobs.¹⁹⁷

To remain competitive, Panama will need to accelerate productivity growth and transition to higher-value-added production. The contributions of services and industry to GDP have increased substantially over time, while the contributions of manufacturing and agriculture have decreased.¹⁹⁸ However, structural economic transformation has not been accompanied by sustained improvements in skills and productive capacities, resulting in a less sophisticated production structure with a rising share of low-complexity goods and services exports.¹⁹⁹ Productivity growth will require greater investments in human capital; digital infrastructure and technologies; innovation and the entrepreneurial capabilities of individuals and firms; enabling economic diversification; and facilitating the transition to more sophisticated forms of production with higher added value. Sectors with untapped potential for more complex production include vegetables and foodstuffs, transportation and logistics, chemicals and plastics, ICT, financial intermediation, insurance, and ecotourism.

4.3. Ensure the Inclusion of Indigenous Communities, Rural Populations, and Women

The adoption of the Integral Development Plan of Indigenous Peoples (PDIPIP) was an important step in promoting social and economic inclusion. The PDIPIP is based on a dialogue began between the government and the Indigenous Authorities that began in 2012. The plan presents a strategic vision to guide the design of public policies and programs in Indigenous communities formed with their active input. The National Indigenous Peoples Council provides a permanent platform for dialogue and institutionalized coordination between Indigenous people and the government.²⁰⁰ In 2020, Congress approved Law No. 301, which is aligned with international best practices and has set an important precedent for the region. Key elements of the legislation include: (i) the formal adoption of the PDIPIP; (ii) the provision of a framework for the inclusion of all Indigenous peoples, both within and outside Indigenous territories, in planning and implementing policies and public investments; and (iii) the establishment of a monitoring system to track policy commitments and targets.

Further reforms and increased investment will be necessary to provide economic opportunities, social assistance, infrastructure, and legal rights for Indigenous people. To enhance the human capital of Indigenous people, the quality and relevance of educational and health services must be improved in the *comarcas* and other Indigenous territories by continuing with the implementation intercultural bilingual curricula and intercultural health protocols.²⁰¹ The lack of basic services, particularly water and sanitation, is a persistent issue due to the challenges of delivering these services to remote areas and small rural communities, as well as larger inefficiencies in public service delivery. Improving, rehabilitating, building, and maintaining the road system is crucial to connect Indigenous communities with markets and services. Implementing a combination of climate adaptation and social protection policies will be vital to reduce poverty, narrow the urban-rural gap, and mitigate the negative welfare effects of natural disasters. Creating opportunities for Indigenous people to engage in forest management, ecotourism, and sustainable agriculture can raise incomes and improve living standards.²⁰² Establishing and enforcing land rights is vital to the social and economic wellbeing of Indigenous people. The government must continue strengthening its institutional capacity to implement the PDIPIP and coordinate dialogue with the Indigenous Authorities.

Panama has made addressing territorial disparities a key element of its national agenda. The top priorities outlined in the Government Strategic Plan 2019-2024 are reducing poverty and closing regional and ethnic gaps in social and economic indicators.²⁰³ In 2022, the government launched *Plan Colmena*, which is aimed at strengthening local capacity and promoting community participation in the delivery of public services. In addition, the Family Farming Law was approved to address urban-rural disparities and help close income, poverty, and gender gaps. The law sets out important measures to strengthen policies

and institutions, and it explicitly recognizes the contribution of small farmers to the country's food security and cultural identity.

Increasing access to productive resources and economic opportunities among women, particularly Indigenous women, is crucial to reduce gender inequalities. Gender disparities hinder the ability of rural women to access public investment programs or secure private financing to improve their productivity and increase their income.²⁰⁴ Fostering gender equality and women's empowerment is essential to achieve the objectives of the PDIPIP. The government must ensure that public services address the unique challenges faced by Indigenous women, strengthen the capacity of line ministries to incorporate gender into strategic planning and service delivery, and enhance the participation of Indigenous women in the decision-making processes of the Indigenous Authorities.

4.4. Promote Environmental Sustainability and Strengthen Resilience to Natural Disasters

The government has taken important steps to improve environmental and water sustainability in line with the recommendations of the 2015 SCD. The creation of MiAmbiente in 2015 was supported by three strategic plans: the Biodiversity Strategy and Action Plan 2018-2050, the National Environmental Strategy 2021-2050, and the National Forest Strategy 2050. The government has also undertaken numerous initiatives since 2015 to promote environmental sustainability and strengthen resilience to natural disasters.²⁰⁵ In 2015, the High-Level Committee on Water Security was created to prepare the National Water Security Plan 2015-2050. The Panama Canal Authority has implemented incentive programs for environmental protection in the Canal's watershed, including a freshwater fee and measures to promote the use of green technology. IDAAN has implemented several initiatives to reduce leakages from the water system and decrease water contamination. The government also began transitioning the energy sector towards a more diverse energy mix that takes full advantage of the country's significant potential for renewable energy.

To address the remaining challenges to improve water quality and sustainability, the government needs to make progress on six key priorities. Despite the government's implementation of various initiatives aimed at addressing water quality and sustainability concerns,²⁰⁶ the following six areas still require significant attention: (i) investing in upgrading, renewing, and maintaining old water and wastewater infrastructure to improve the storage, delivery, and resilience of the water system; (ii) improving the institutional, administrative, and technical capacity of the agencies involved in the management of water resources; (iii) clarifying the responsibilities of different institutions in charge of water systems and promoting practices and technologies that improve water management; (iv) producing timely, reliable, and standardized information on water resources and improving real-time data collection; (v) developing innovative solutions to increase efficiency, such as water-saving technologies and water recycling and reuse, including investing in smart irrigation systems to increase the efficient use of water for agriculture;²⁰⁷ and (vi) reducing gaps in water quality and accessibility, particularly in rural and Indigenous communities, by expanding water infrastructure and promoting a more equitable distribution of resources.

To sustainably manage and conserve the country's forests—which play vital role in managing water resources and offsetting GHG emissions—the government must enforce sustainable forestry practices and promote reforestation and restoration efforts. Coordinated action will be necessary to reduce the impact of economic activities on forests. Improved monitoring and surveillance tools can help identify areas of deforestation and illegal logging, and the government can do more to raise awareness among the public regarding the importance of forests and the damage caused by illegal logging. Efforts to prevent deforestation and watershed degradation can also support sustainable agricultural livelihoods in

Panama's poorer rural areas. A large share of forest losses during 2012-2019 occurred in the country's poorest and more agriculturally active areas. Through several programs, government is committed to protect and restore forests.²⁰⁸

To limit the impact of climate change on household welfare, natural resources, and macroeconomic prospects, the government must invest both in adaptation and mitigation measures. Adaptation measures should focus on making infrastructure more resilient by assessing its vulnerability to disasters, investing in upgrades and maintenance, and developing appropriate land-use plans. Establishing and strengthening early warning systems is crucial to protect lives and livelihoods, and promoting the conservation of natural resources and improving the governance of public institutions is vital to reduce risk and increase the effectiveness of disaster response. SINAPROC's institutional, risk assessment, and monitoring capacity must be improved, and the authorities must develop strategies for emergency response and adopt diversified risk-management instruments. On the mitigation side, Panama can significantly reduce GHG emissions in key sectors such as mining, transportation, and energy by accelerating the transition to renewable energy. Strategic PPPs could help the government meet its climate goals while boosting economic growth, creating employment opportunities, and enhancing welfare. Panama submitted its Nationally Determined Contribution as part of the Paris Agreement in 2020, reaffirming the country's commitment to place sustainability and climate action at the center of its economic and social policies.²⁰⁹

Strengthening resilience to natural disasters will require upgrading the country's technical and institutional framework for multi-hazard monitoring networks and early warning systems.²¹⁰ Panama possesses essential components to enhance resilience against natural disasters and has taken significant steps in fortifying its resilience, including its insurance partnership with the Caribbean Catastrophe Risk Insurance Facility (CCRIF SPC) and its parametric insurance policy for excess rainfall.²¹¹ Going forward, government could benefit from revising the existing institutional arrangements to effectively address observed and projected climate trends, as well as changes in the natural, agricultural, and built environments. Creating a sovereign insurance strategy for disasters would help minimize their fiscal impact, and the government is assessing which sovereign insurance strategy would give optimal cost/benefit ratio for catastrophic coverage.

Decarbonizing land transportation is critical to meet Panama's emissions-reduction targets. Land transportation is the largest contributor to GHG emissions at the national level, accounting for 30 percent of total emissions and 80 percent of all transport emissions. Panama's efforts to increase renewable energy capacity will have little effect on transportation until the share of electric vehicles in the national fleet becomes significant. In the meantime, improving urban mobility, upgrading and diversifying public transit systems, expanding options for non-motorized transportation, renewing the vehicle fleet, setting more restrictive emission standards, and improving fuel quality could help decarbonize land transportation. Recently, the government has launched several initiatives to promote electric vehicles.²¹²

To support the green transition, the government must develop and implement a comprehensive regulatory framework to promote sustainable practices in all sectors.²¹³ Particular attention should be devoted to the transportation, energy, manufacturing, and mining sectors, which are the largest contributors to GHG emissions. While Panama has made considerable strides in promoting renewable energy production, it could achieve further gains by: (i) forming new PPPs in renewable energy; (ii) establishing technical and vocational training programs focused on renewable energy; (iii) strengthening regional cooperation in renewable energy; (iv) create a green taxonomy to promote investment in green and blue economy (v) investing in R&D for renewable-energy technologies; and (vi) mobilizing green financing.

4.5. Cross-Cutting: Strengthen Public Sector Institutions

The authorities have implemented several reforms to address the policy priorities highlighted in the 2015 SCD, which include increasing transparency, strengthening the regulatory framework, and improving the efficiency of public-sector management. The government has established an Anti-Corruption Prosecutor's Office and a new Judicial Council to address corruption issues. Since 2018, it has improved the public procurement framework, including through the creation of a mandatory open-source platform, PanamaCompra, which has enhanced the transparency, efficiency, and accountability of budget management. While these measures are important, their impact ultimately will hinge on improvements in the quality and accessibility of budget information, the creation of stronger oversight and enforcement mechanisms to combat corruption, and reforms to enhance accountability in the public sector. For example, Panama's outdated accountability framework should be modernized as part of a broader effort to comply with the International Standards of Supreme Audit Institutions.²¹⁴ While Panama remains on the FATF grey list, in June 2023, Panama announced compliance with all 15 requirements of the FATF Action Plan, which led to FATF's approval for an on-site visit in September 2023.

Strengthening the planning, monitoring, and evaluation functions of the Ministry of Economy and Finance and approving pending anti-corruption legislation are vital to improve governance.²¹⁵ The authorities have taken several initiatives to promote transparency and combat corruption²¹⁶ and significantly enhanced the public procurement framework since 2018, including via the creation of the mandatory open-source platform PanamaCompra, which has improved transparency, efficiency, and accountability in public budget management. However, lengthy review times in the Comptroller's office slow the process and weaken the procurement system's efficiency. Investing in public information systems presents a significant opportunity to increase transparency and efficiency in public services while helping to address corruption and bolster judicial independence. The government should strengthen legal protections, increase transparency in the appointment and removal of judges, and ensure that judges have adequate resources and training. Furthermore, although the Panamanian financial system has demonstrated a great stability with a dollarized economy, low inflation, no banking crisis or balance of payments imbalances,²¹⁷ it would benefit from deposit-insurance system to further strengthen its financial stability and protect depositors. Deposit insurance is considered international best practice, even for dollarized economies, to mitigate financial risks during crisis, promote financial inclusion, and increase consumer confidence, among others. When developing the deposit-insurance system, the authorities would need to develop a contingency plan and assess the tradeoffs between the benefits of improved financial stability and the risks arising from moral hazard that the government has pointed out as one of the reasons for not having a deposit insurance.²¹⁸

The government needs to strengthen its statistical capacity and promote a culture of evidence-based policymaking. Despite the weaknesses in statistical capacity described above, Panama has a well-defined legal framework for producing data and compiling statistics.²¹⁹ The government recently implemented IMF recommendations²²⁰ to develop the National Institute of Statistics and Census (INEC) and update the National Statistics Plan,²²¹ and it has taken steps to modernize the National Statistical Office.²²² Policymakers should now aim to close important data gaps by implementing socioeconomic surveys, censuses, and specialized surveys, improving administrative recordkeeping, and ensuring that vulnerable groups and remote regions are accurately captured in the data. Open access to government data is vital to facilitate research, accountability, and data-driven policymaking. Finally, the government should establish a culture of monitoring and evaluation in strategic areas, including health, education, social inclusion, climate change, and private-sector development, to adjust its policies and deliver services more cost-effectively.

Institutional weaknesses in social protection, infrastructure, aviation, and other key sectors must be addressed to increase the effectiveness of public service delivery. The social protection system will benefit from incorporating analytical insights and expanding the use of high-quality program assessments. In addition to improving the regular social protection system, creating an adaptive social protection system will enable the government to swiftly deliver assistance in response to natural disasters and other shocks. The targeting and delivery of social protection programs should be enhanced, especially for the most vulnerable groups and in the most marginalized communities. The government's efforts to create a national registry of beneficiaries are an important and necessary step to improve the management of its social protection programs, and the Ministry of Social Development is currently evaluating the impact of cash transfers. In infrastructure, strengthening the institutional capacity of local agencies can enhance their ability to contribute to project implementation, while clarifying responsibilities in the management system and increasing coordination among public agencies can improve investment efficiency. Developing a comprehensive regulatory framework for aviation and increasing the technical and human resources in the aviation sector are vital to ensure safe and effective operations.

The government must increase tax revenues to undertake reforms to promote inclusion and productivity. Due to the role of low tax rates in attracting investment, the government has been reluctant to raise rates for major taxes. The government, however, requires additional revenues to restore its fiscal space after extensive pandemic-related expenditures and to foster inclusive growth. Policymakers should therefore focus on improving tax and customs collection efficiency and broadening the tax base by reducing exemptions, deductions, and tax expenditures that mainly benefit higher-income households.²²³ IMF recommendations include reviewing tax exemptions and improving the design of excise taxes, adjusting exemptions and deductions from the personal income tax base, and evaluating tax corporate income tax incentives. The digital economy also provides opportunities to improve revenue mobilization and applying value-added taxes to Panama's digital economy could generate up to US\$86 million by 2025.²²⁴ The government has submitted a bill to impose value-added tax on nonresident digital services platforms, which could significantly increase tax revenue. Additional reforms could make Panama's fiscal system more progressive and pro-poor. In August 2023, DGI announced that it will regulate digital platforms to establish a level playing field for all companies and increase tax revenues.²²⁵

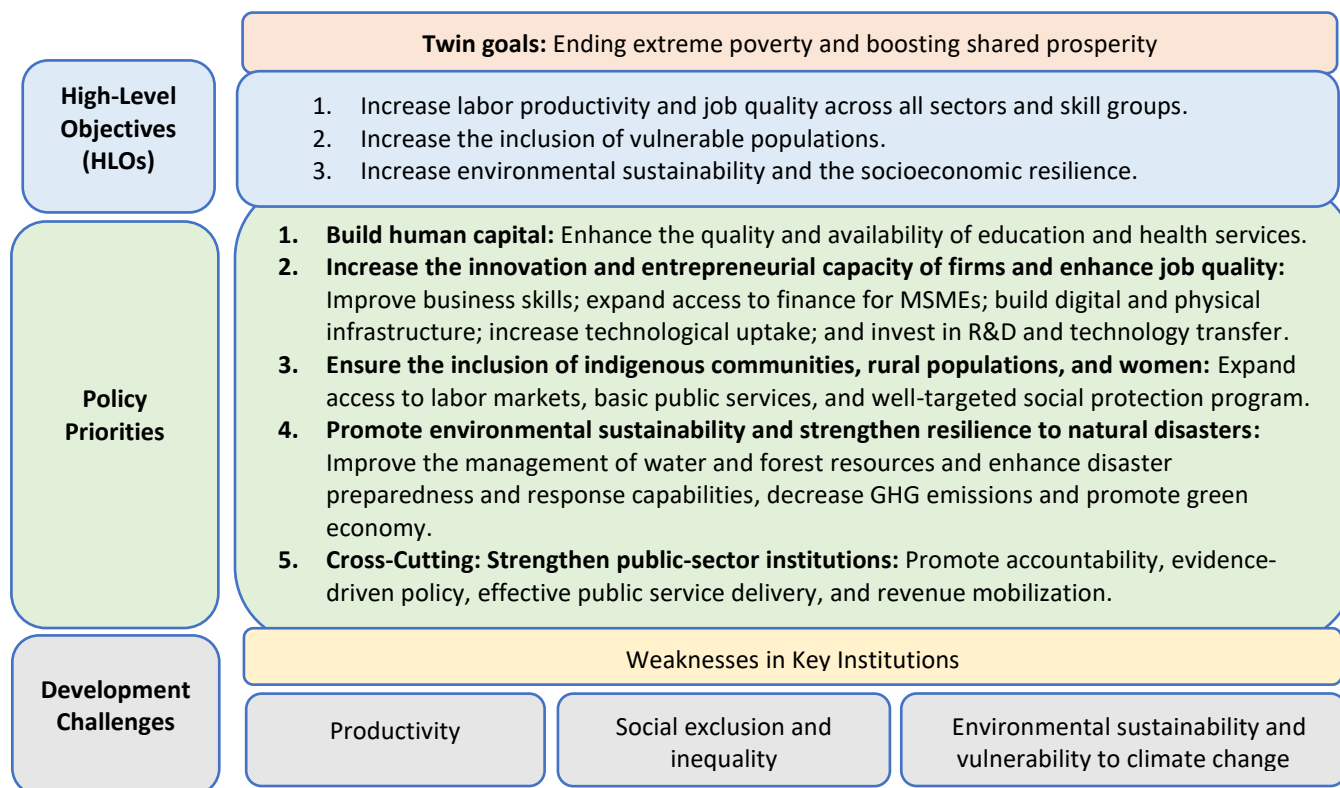
Weak protection of property rights has discouraged businesses and individuals from acquiring and utilizing property. The government has implemented several reforms aimed at strengthening property rights. In 2022, Panama promulgated Law 284, which comprehensively reforms the legal regime for buildings (*propiedad horizontal*). The revised regime also addresses concerns such as biosecurity and emergency funds for contingencies like the COVID-19 pandemic.²²⁶

4.6. High Level Objectives

The policy priorities of the SCD Update aim to promote sustainable, inclusive, and resilient growth to advance towards the twin goals of ending extreme poverty and boosting shared prosperity. The priorities are instrumental to achieving three critical high-level objectives: (i) increasing labor productivity and job quality across the board by building broad based human capital, improving access to productive assets and infrastructure, and increasing innovative and entrepreneurial capacity of firms and individuals (ii) increasing inclusion of vulnerable populations by increasing the access of indigenous communities, rural populations and women to labor markets, public services and well targeted social protection; (iii) increasing environmental sustainability and socioeconomic resilience by improving water management system and forestation, enhancing preparedness and response capabilities of the country to natural disasters, and promoting environmental sustainability by reducing GHG emissions and greening economic

activities. Enhancing the capacity of public institutions is a fundamental priority that intersects with all four policy priorities and aligns with all high-level objectives.

Table 2. Priorities and HLOs



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Appendix I - Figures

Figure A1a. Panama’s real GDP per capita has had an outstanding growth performance since the 1990s.

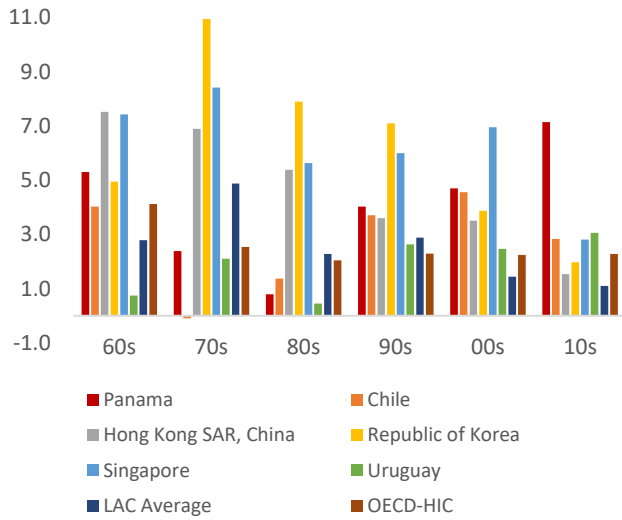
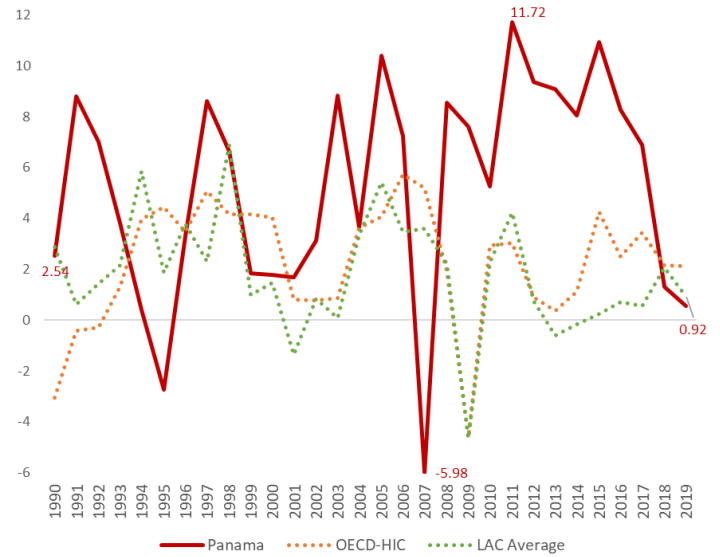
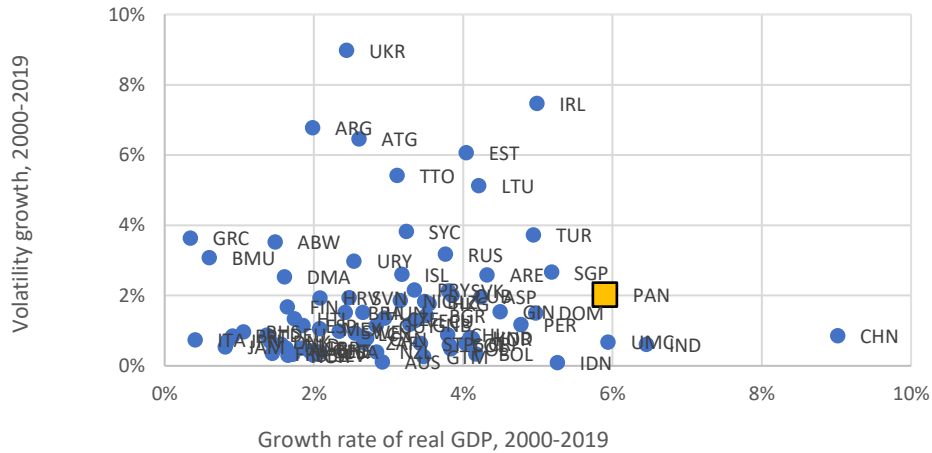


Figure A1b. However, since 2015, the growth rate of real GDP per capita has been decelerating.



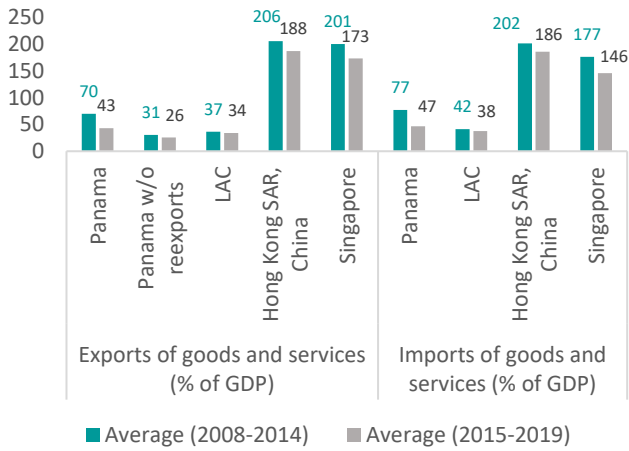
Source: PWT. GDP per capita is in 2017 PPP.

Figure A2. Panama’s growth volatility during 2000-2019 was among the lowest 2000-2019.



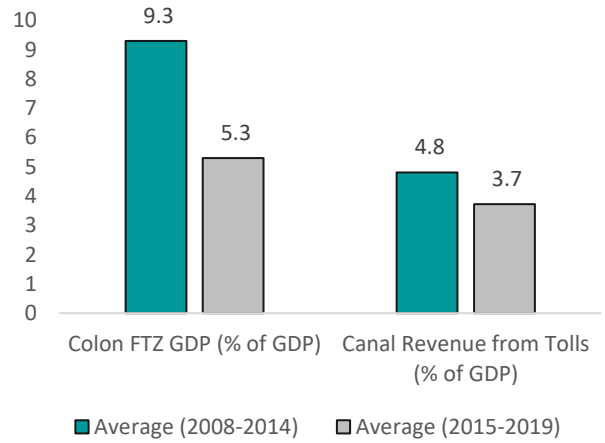
Source: WDI and staff calculations.

Figure A3. Panama's export and import shares of GDP are higher than LAC but lag its aspirational peers.



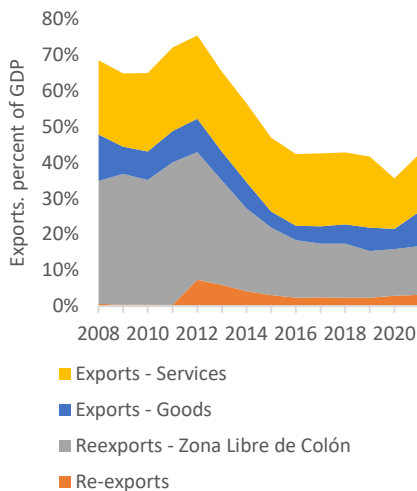
Source: INEC and WDI.

Figure A4. Colon FTZ and Canal play a crucial role in Panama's economy.



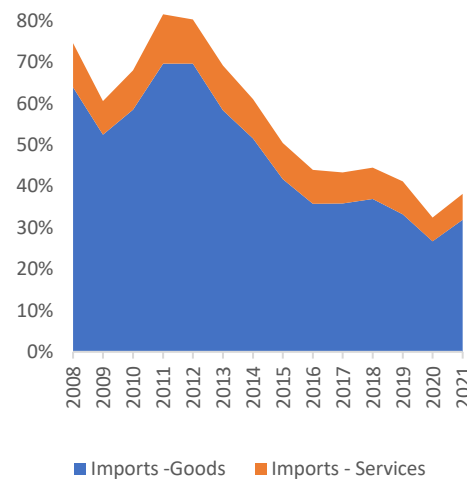
Source: INEC.

Figure A5a. Services have the highest share in Panama's exports followed by Colon FTZ's reexports that have decreased substantially during 2012-2018.



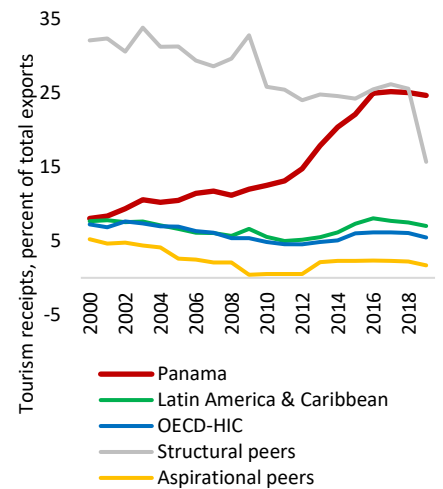
Source: INEC.

Figure A5b. Goods imports have the highest share in Panama's imports, and they have been declining since 2012.



Source: INEC.

Figure A5c. Panama tourism receipts as percent of its exports are among the highest and have been increasing steadily since 2000.



Source: WDI

Figure A6a. Panama's private investment share in GDP is among the highest globally and has increased significantly during 2014-2019.

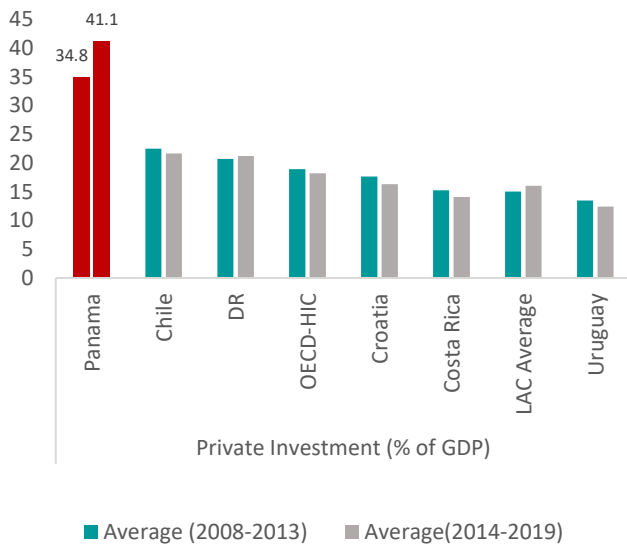
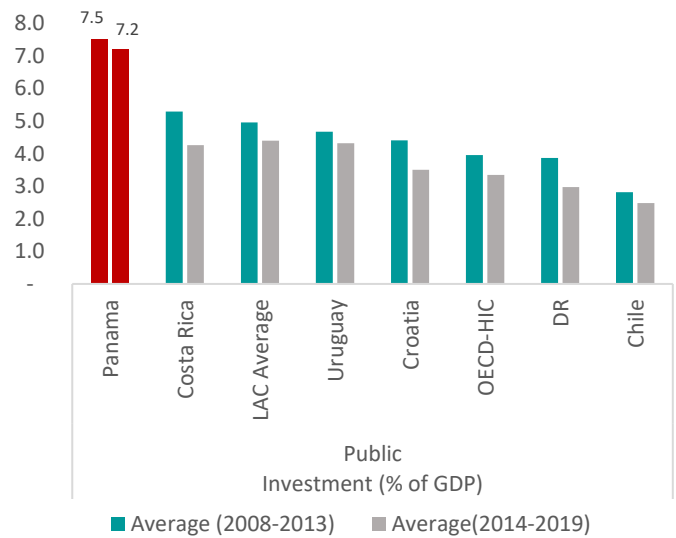
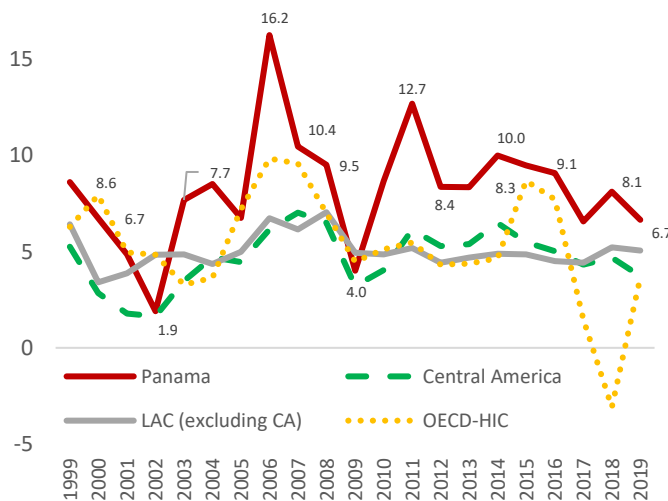


Figure A6b. Panama's public investment share in GDP is also among the highest globally, but it has decreased slightly during 2014-2019.



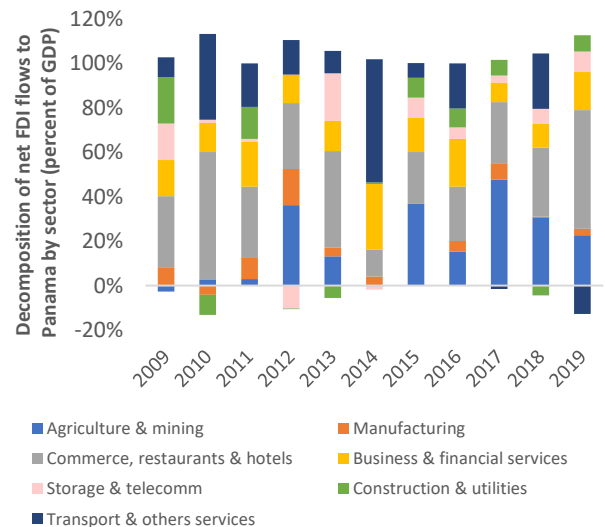
Source: WDI, Macro-Poverty Outlook (MPO) and INEC. Panama's data is from INEC.

Figure A7a. Panama's net FDI inflows as share of GDP were among the highest globally before the COVID-19 pandemic.



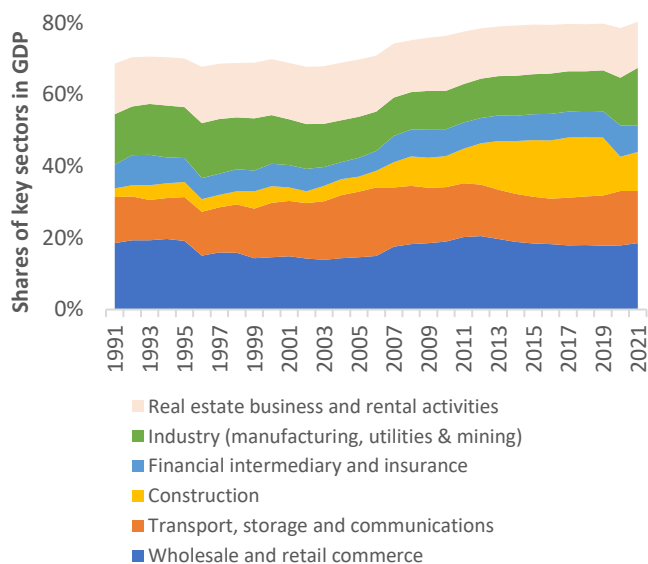
Source: WDI.

Figure A7b. In 2019, Commerce, restaurants and hotels had the highest share in Panama's FDI inflows, followed by agriculture and mining and business and financial services.



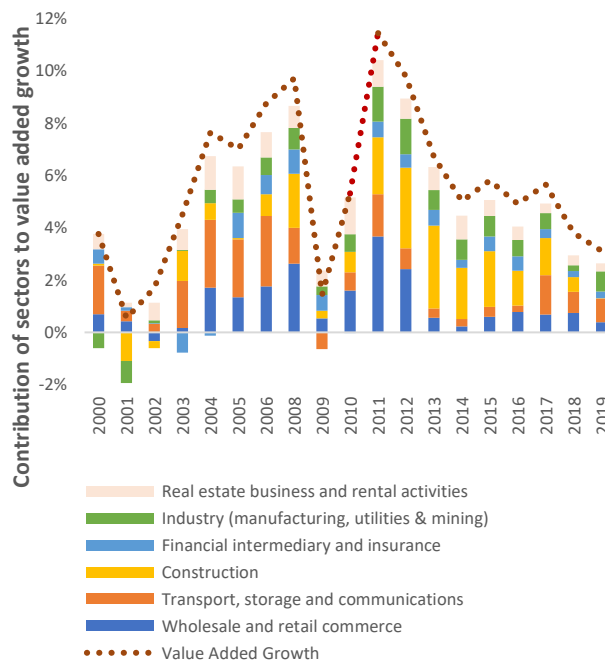
Source: Consejo Monetario Centroamericano.

Figure A8a. During 2014-2019, wholesale and retail commerce; construction; real estate business; transport, storage and communication; industry; and financial sector had the highest share in Panama's GDP, in the same order.



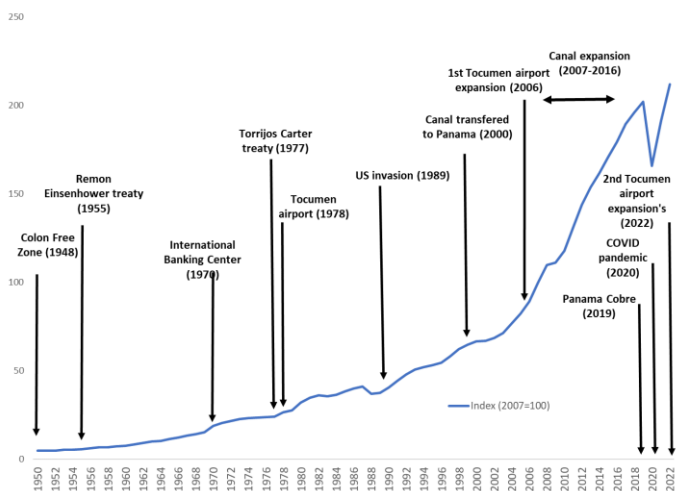
Source: INEC.

Figure A8b. In 2019, Transport, storage and communication and industry contributed the highest to value added growth.



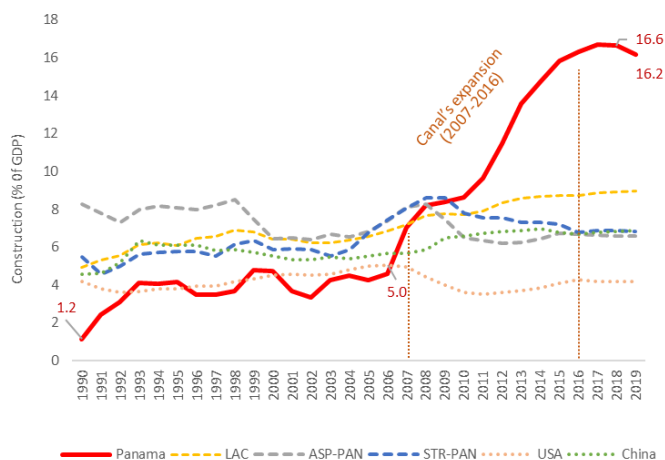
Source: INEC.

Figure A9. GDP index of Panama has had an outstanding steady increase since the transfer of the Canal to Panama.



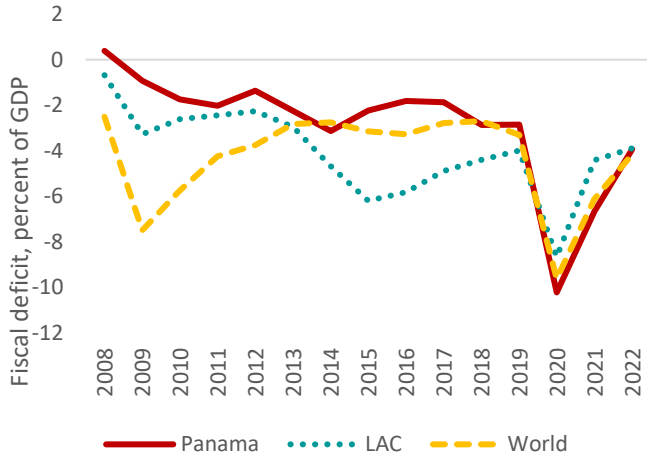
Source: PWT. INEC after 2019.

Figure A10. Share of construction in GDP has increased substantially since 2006, but it has been decreasing since 2018.



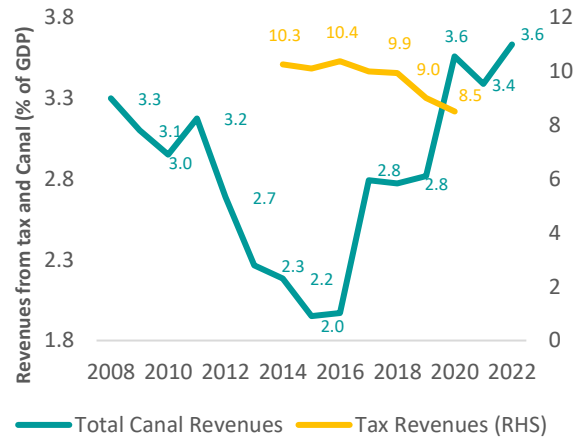
Source: INEC and Nation Master. Note: Panama's construction increased 14-fold between 1990 and 2017.

Figure A11a. Panama had maintained a small fiscal deficit, prior to the pandemic. Even though the pandemic caused a surge in the fiscal deficit, since 2021, there has been a consistent improvement.



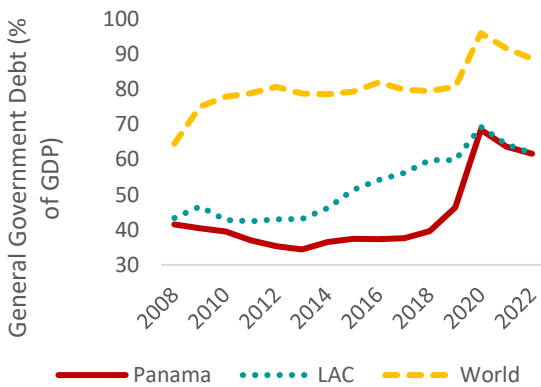
Source: MPO.

Figure A11b. Panama's tax revenues are among the lowest globally. Low tax revenues have been compensated through the revenues from the Canal.



Source: INEC and MPO.

Figure A12a. Panama traditionally has had low public debt.



Source: INEC and WDI.

Figure 12b. Inflation rate of Panama has also been among the lowest.

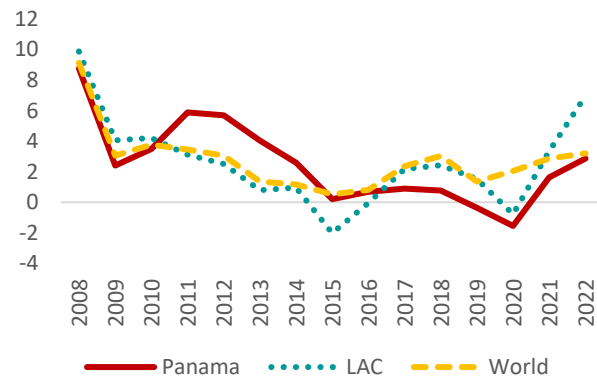
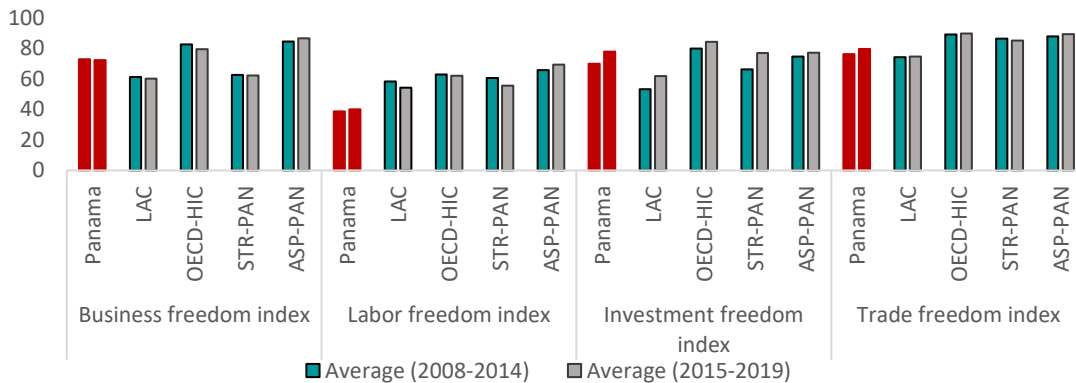
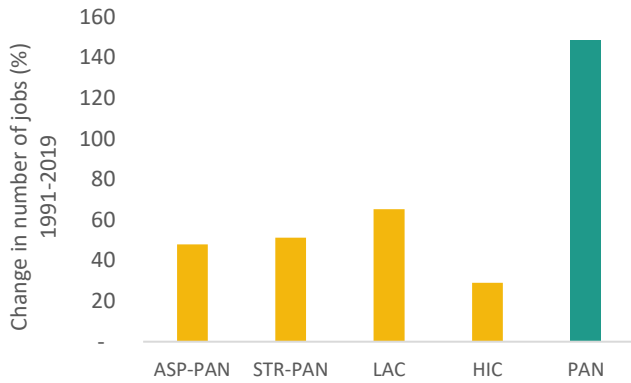


Figure A13. Generally, Panama has a good regulatory business environment with few exceptions.



Source: The Heritage Foundation.

A14a. Panama created many more jobs than comparator economies in the last 30 years.



A14b. The working age population of Panama grew at a fast rate during this period (1991-2019)

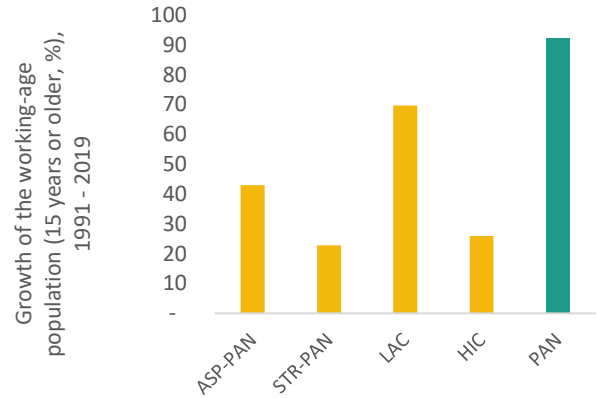
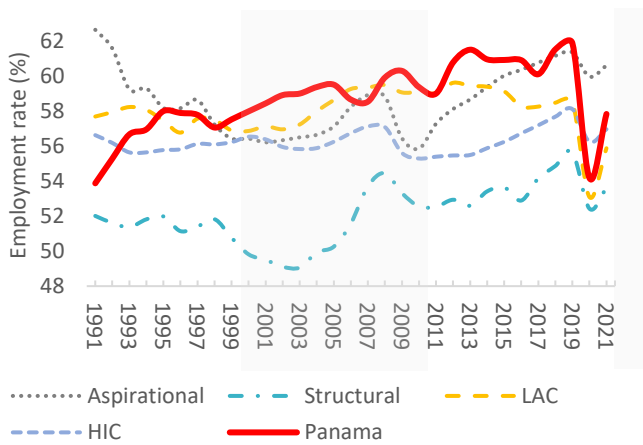
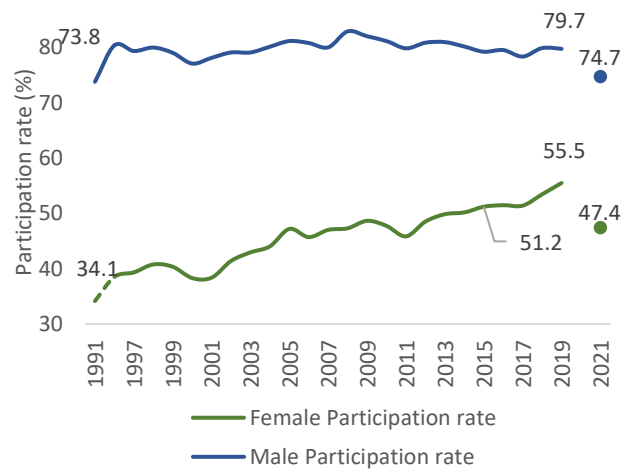


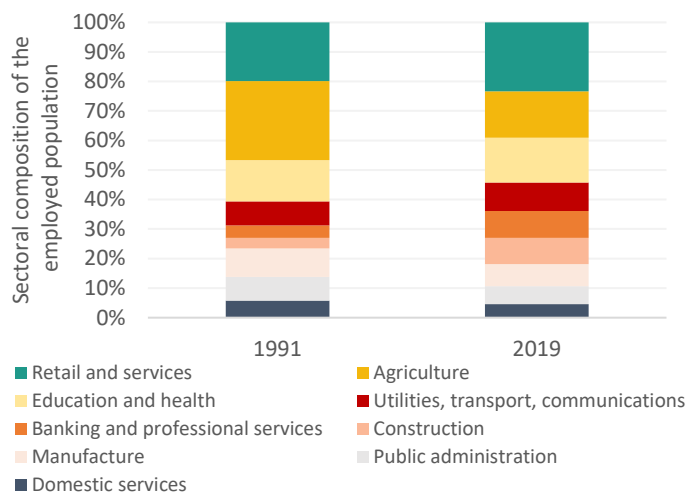
Figure A14c. And the labor market was able to absorb the new working age population and even increase the employment rate faster than comparator economies.



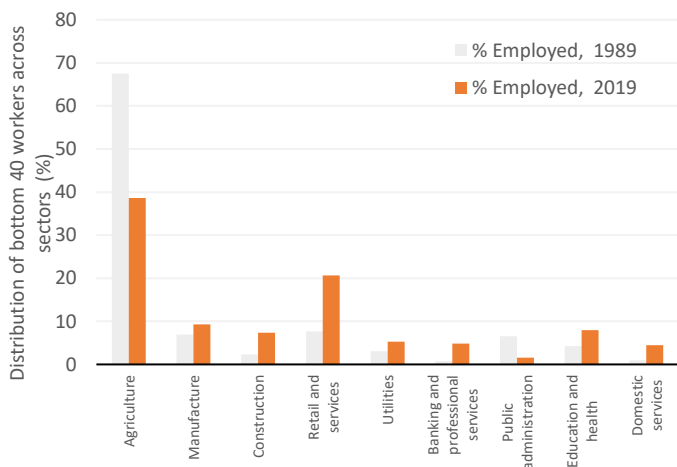
A14d. Thus, in the process, many women joined the labor market.



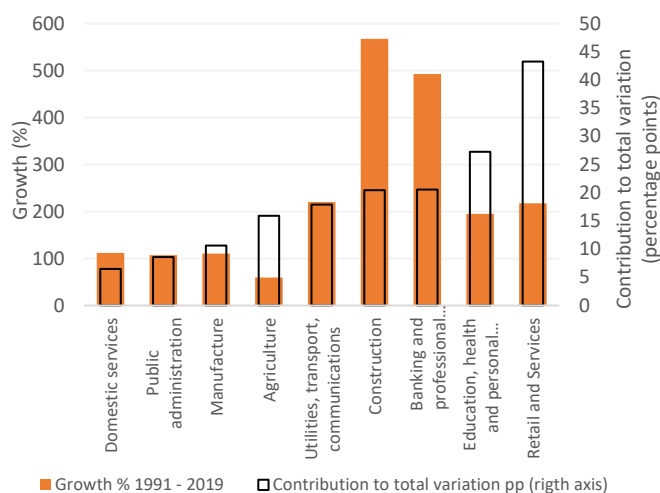
A14e. The sectoral composition of employment changed between 1991 and 2019: the employment share of agriculture shrank, while the employment shares of construction, retail and services, banking and professional services, and education and health increased.



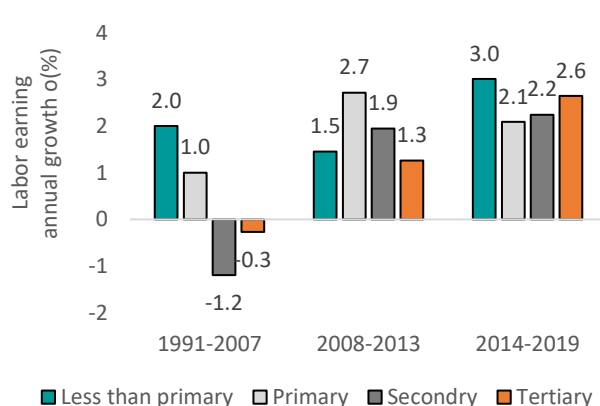
A14g. The fastest growing sectors also benefitted the bottom 40: many transitioned from agriculture to construction, retail, and services.



A14f. Construction was the fastest growing sector, while retail and services explained most of the growth in employment.

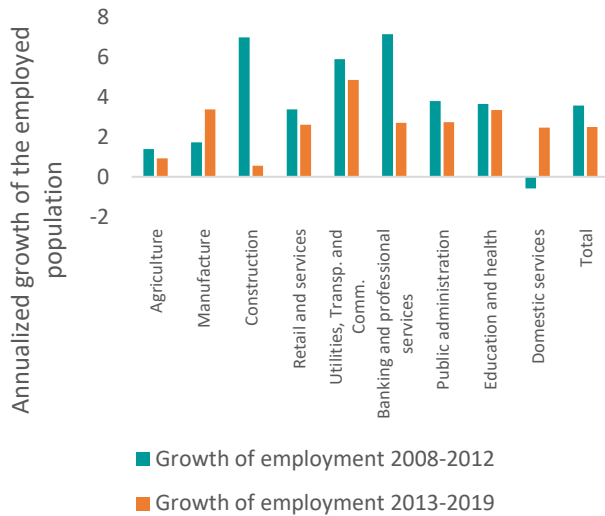


A14h. And labor earnings growth was positive across the distribution of skills.

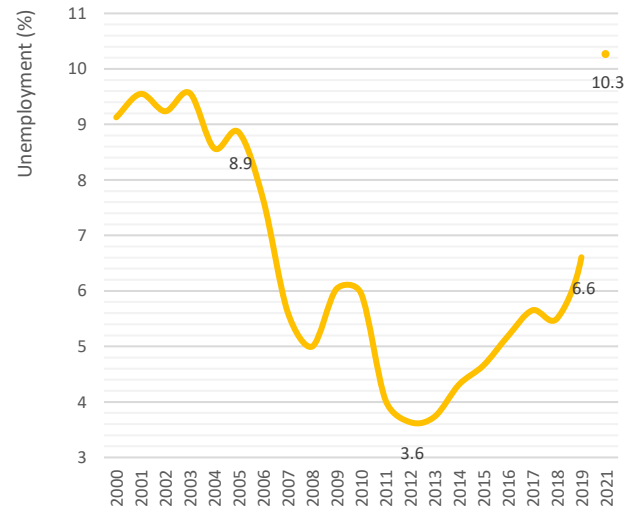


Sources: a and b: WDI; c, d,e,f,g,h: Source: Socio-Economic Database for Latin America and the Caribbean (SEDLAC) (CEDLAS and the World Bank). Note: Panama's Structural peers include Bulgaria, Costa Rica, Dominican Republic, Croatia, Uruguay. Aspirational peers: Estonia, Lithuania, Republic of Korea, Hong Kong SAR, China, Singapore.

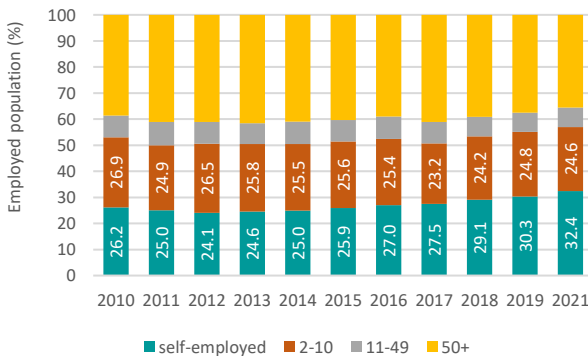
A15. Job creation started to slow down in the second half of the 2010s, including fast growing sectors like construction.



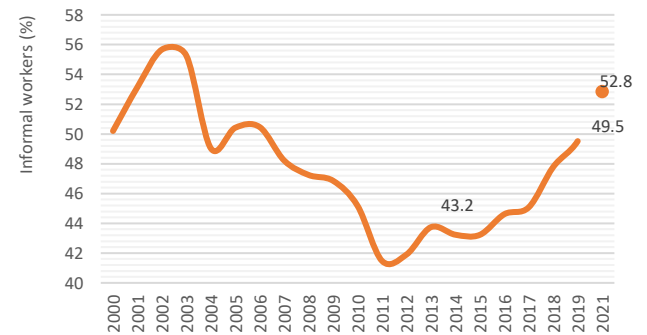
A16. As a result, the unemployment rate increased from 3.6 percent in 2012 to 6.6 percent in 2019.



A17. Job quality started to deteriorate, with more people working as self-employed or in small firms.

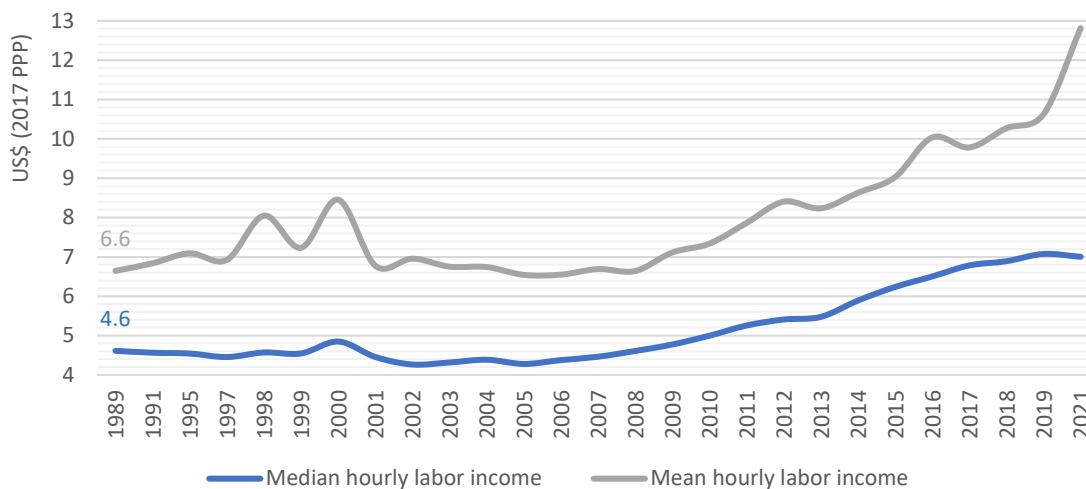


A18. And informality started to increase, reversing the downward trend of the previous decade.



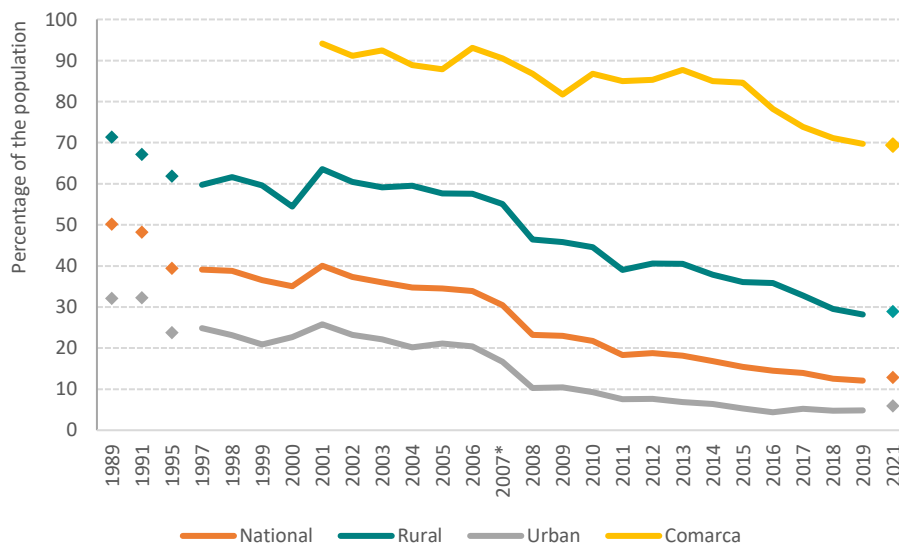
Source for figures A.15, A.16, A.17 and A.18: Socio-Economic Database for Latin America and the Caribbean (SEDLAC) (CEDLAS and the World Bank).

Figure A19. Hourly labor income for the median worker started to plateau in the years leading to the pandemic (2017 PPP).



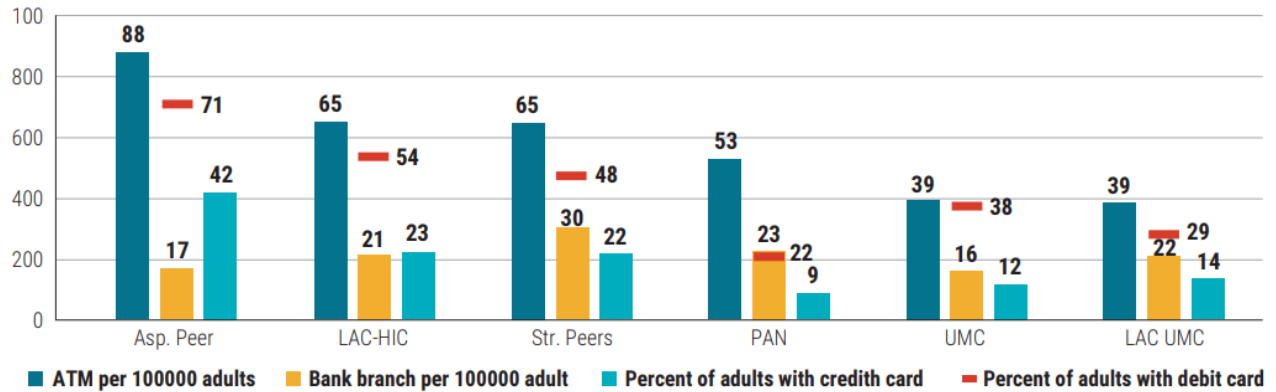
Source: Socio-Economic Database for Latin America and the Caribbean (SEDLAC) (CEDLAS and the World Bank).
 Note: Service sector include Education, health and personal services, banking and professional services, public administration.
 Utilities include Electricity, gas, water, transport, communications.

Figure A20. Poverty in urban areas reached about 5 percent in the mid-2010s and has hovered around that level since then. Meanwhile, poverty reduction in rural areas and Indigenous *comarcas* accelerated in the years leading to the pandemic.



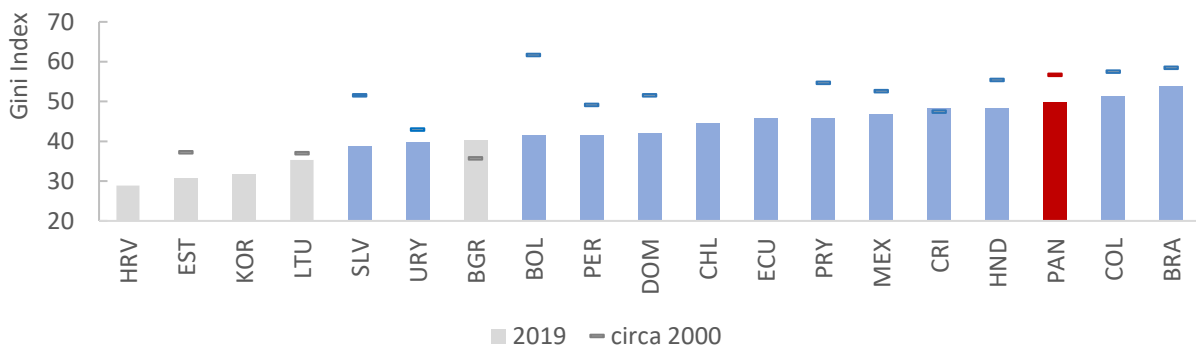
Source: Socio-Economic Database for Latin America and the Caribbean (SEDLAC) (CEDLAS and the World Bank).

Figure A21. Panama's access to finance indicators lag many of its peers.



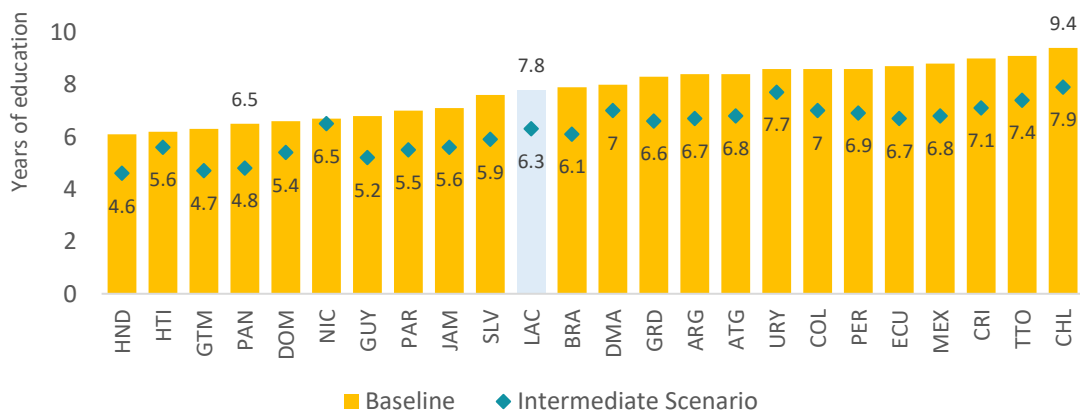
Source: World Bank (2021): Unleashing Central America's Growth Potential, Panama.

Figure A22. Despite impressive poverty reduction, Panama remains one of the most unequal countries in LAC.



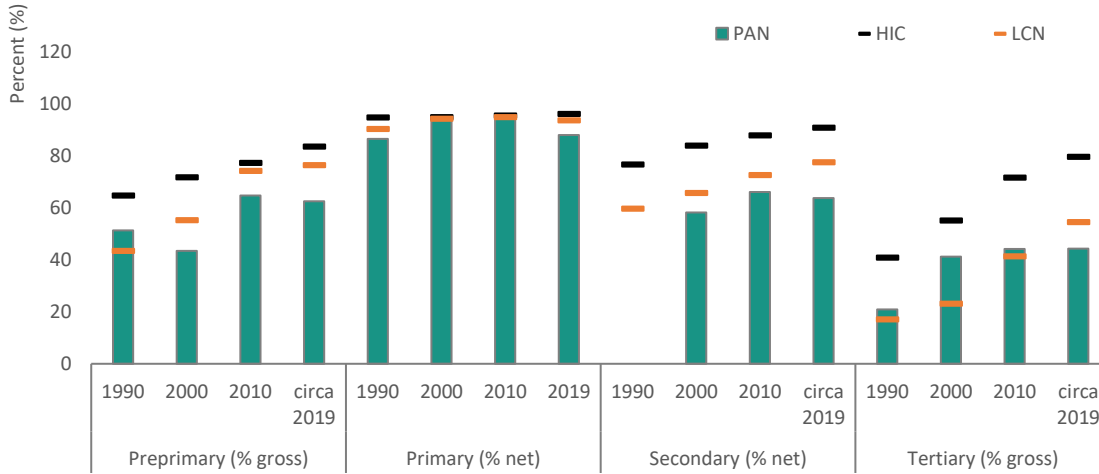
Source: Socio-Economic Database for Latin America and the Caribbean (SEDLAC) (CEDLAS and the World Bank).

Figure A23. School closures brought even further challenges to an already weak education system increasing learning losses among Panamanians.



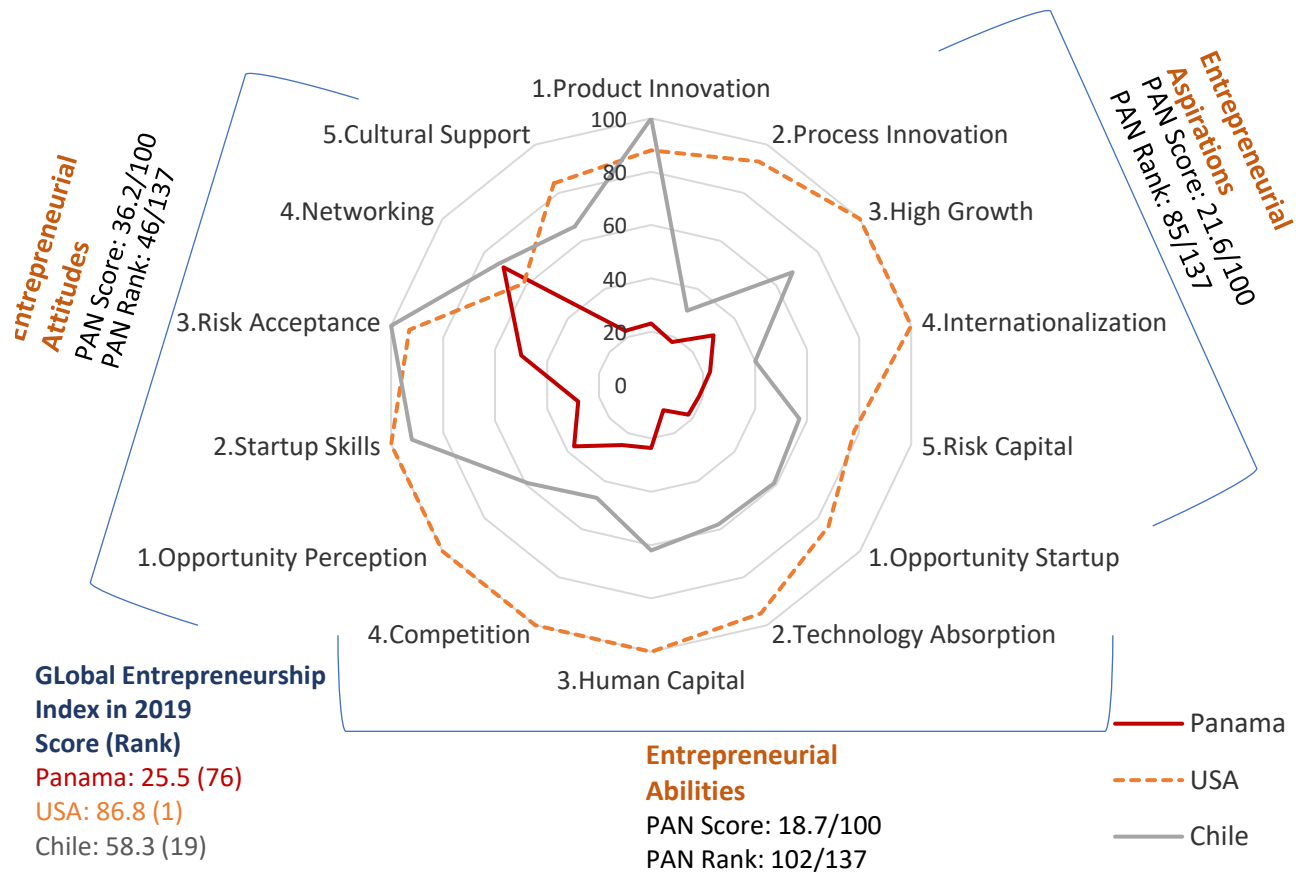
Source: World Bank (2022).

Figure A24. Enrollment rates have shown little improvements in the last decade.



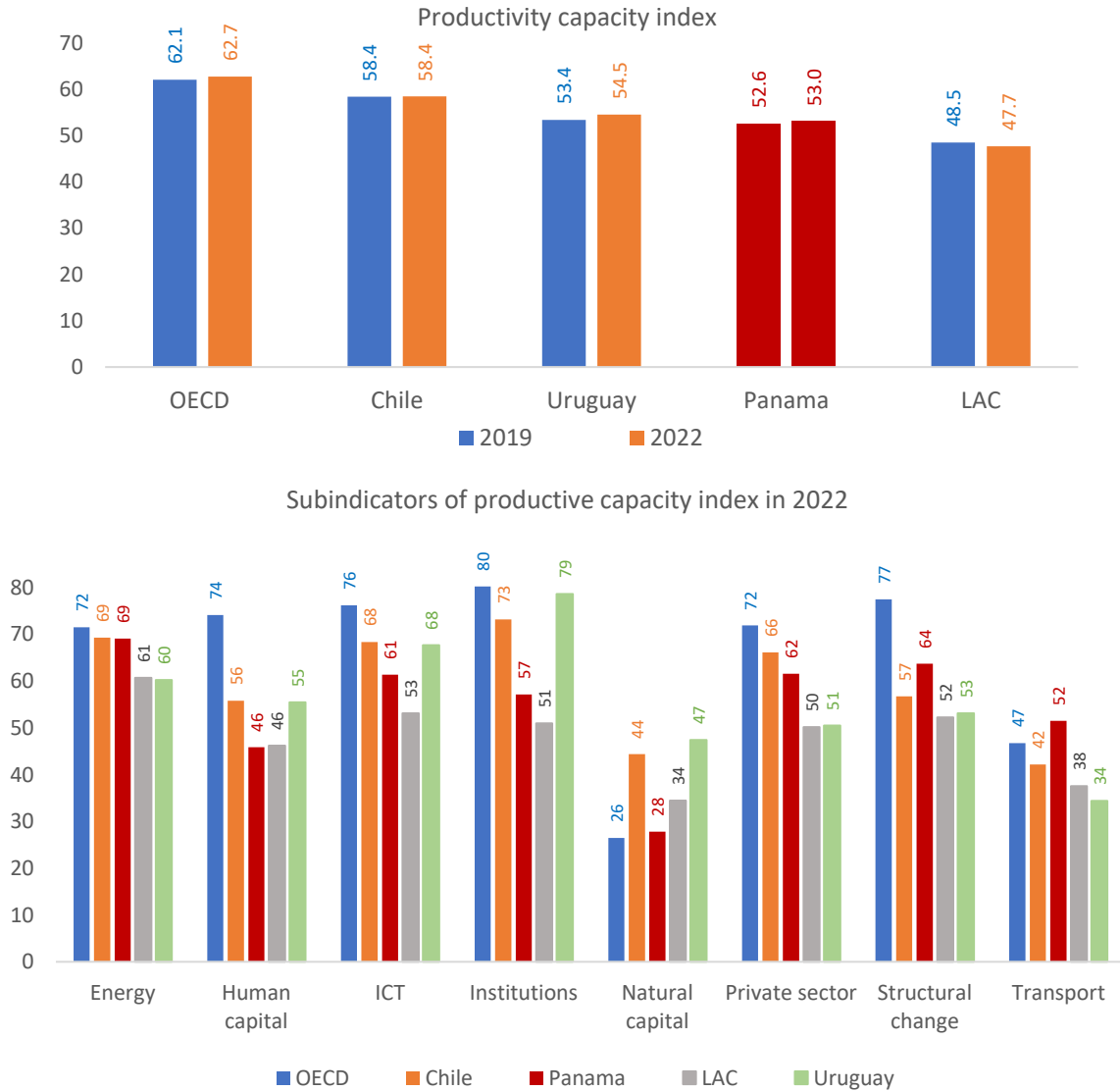
Source: World Development Indicators.

Figure A25a. Panama performs lower than Chile in all sub-indicators of Global Entrepreneurship Index in 2019.



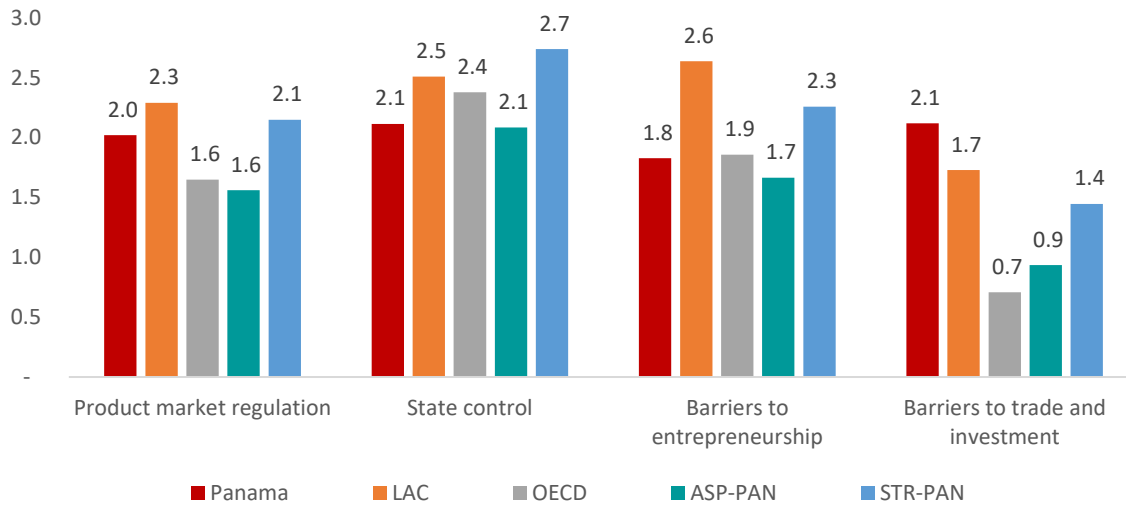
Source: The Global Entrepreneurship and Development Institute (2020): Global Entrepreneur Index 2019.

Figure 25b. Panama’s productive capacity is higher than LAC and has improved slightly from 2019 to 2022, however, it lags all of its other comparators. Among the sub indicators of productivity capacity index, Panama fares the worse in human capital, institutions, natural capital, and ICT, compared to many of its peers in the figure.



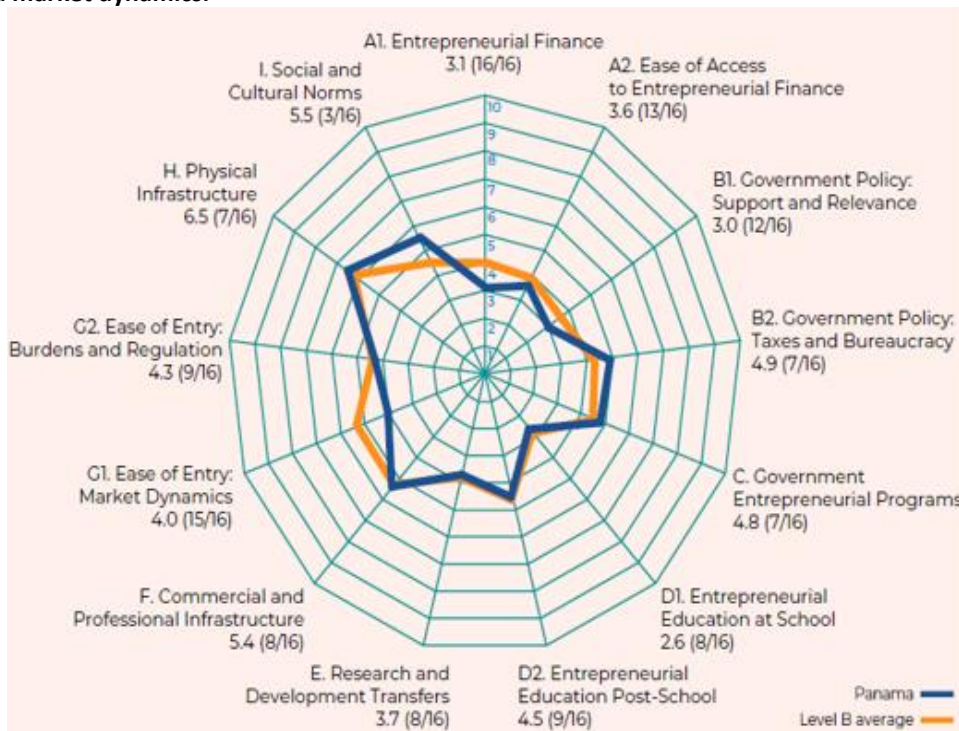
Source: UNCTAD, Productive Capacities Index.

Figure A25c. In 2016, overall competition in Panama’s production market was higher than LAC and its structural peers, but it lagged OECD and its aspirational peers, due to higher barriers to trade and investment. In 2016, Panama had lower state control and lower barriers to entrepreneurship compared to many of its peers.



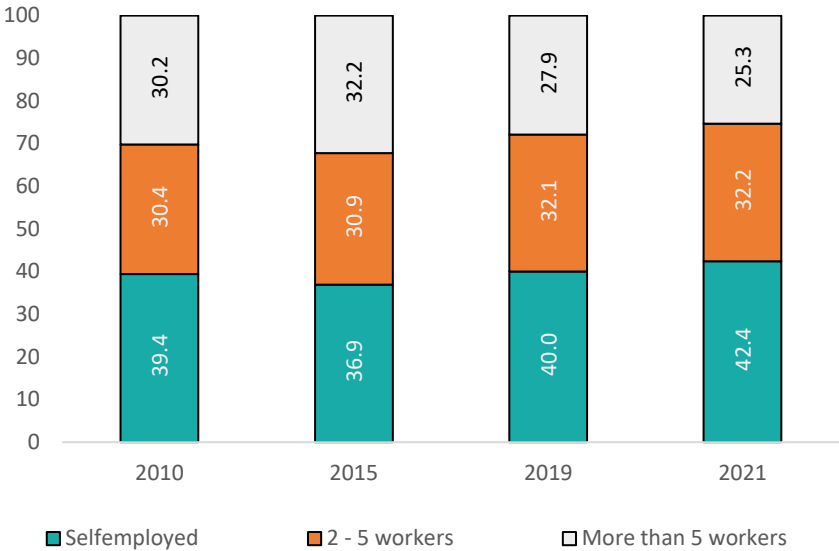
Source: OECD Product Market Regulation (PMR). Lower values indicate lower barriers. Latest PMR data for Panama was available in 2016.

Figure A26. Among the 13 sub-indicators of National Entrepreneurship Context Index (NECI) in 2022, Panama scores lower than the average of its income group in entrepreneurial education, government policy support, entrepreneurial finance, ease of access to entrepreneurial finance, and market dynamics.



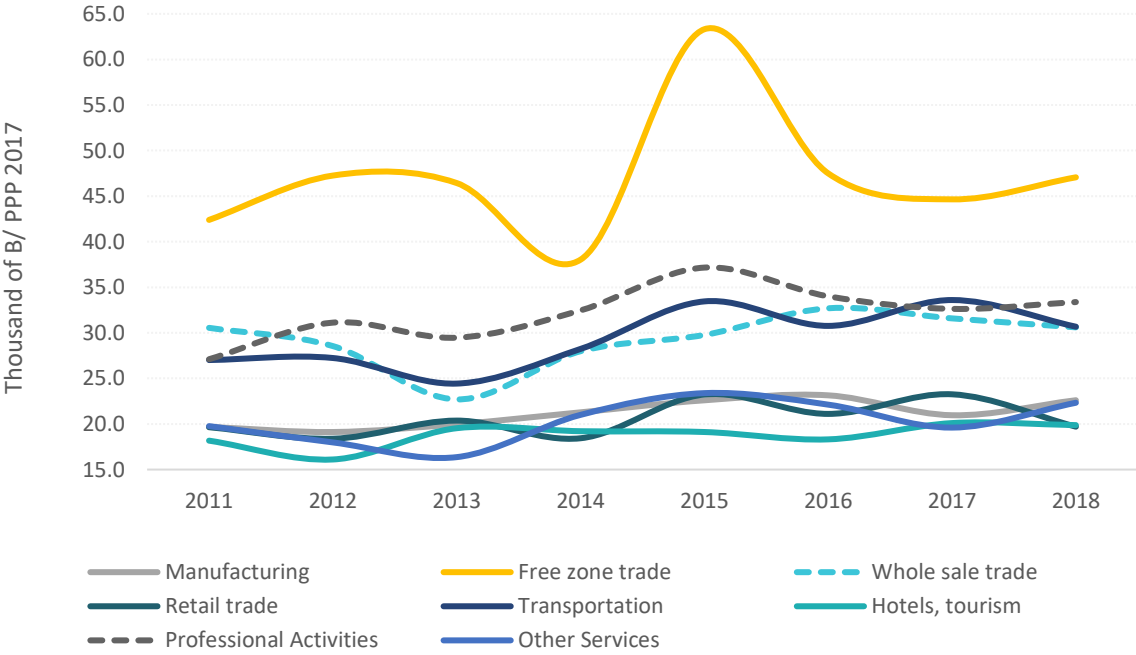
Source: Global Entrepreneurship Monitor (GEM) 2023. The label “Level B average” indicates the benchmark group for Panama consisting of 16 Economies with a GDP per capita of between \$20,000 and \$40,000.

Figure A27a. Most of the bottom 40 in Panama work in small and micro firms.



Source: SEDLAC

Figure A27b. With few exceptions, firms in most economic sectors have seen limited gains in labor productivity.



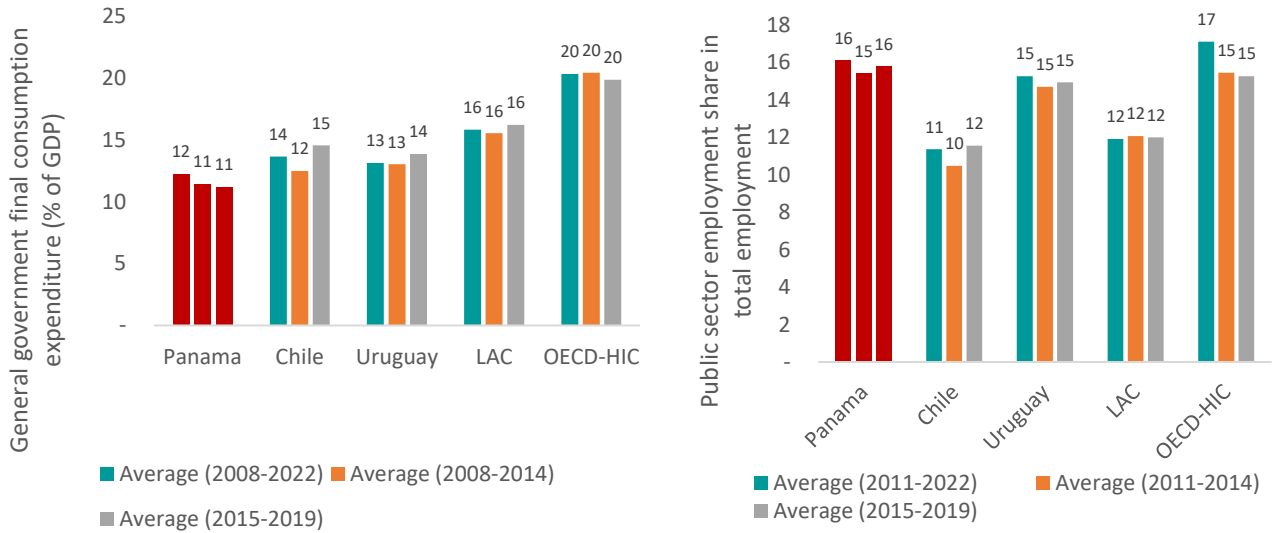
Source: Encuesta a Empresas no Financieras EENF – INEC.

Figure A28. In physical infrastructure, Panama lags its peers in rail and road quality.



Source: WEF.

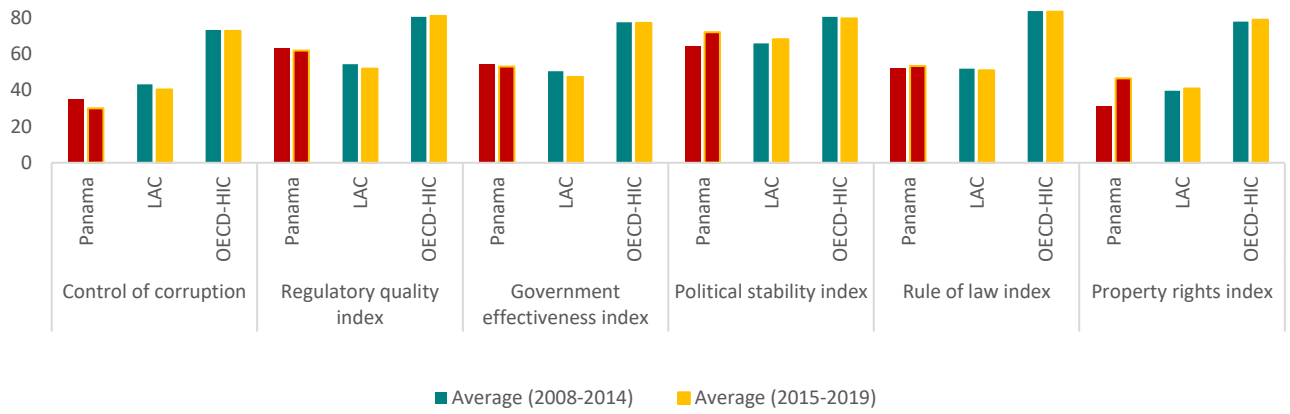
Figure A29a. Panama's public sector has lower share in GDP than its peers, but its share in employment is among the highest.



Source: World Bank.

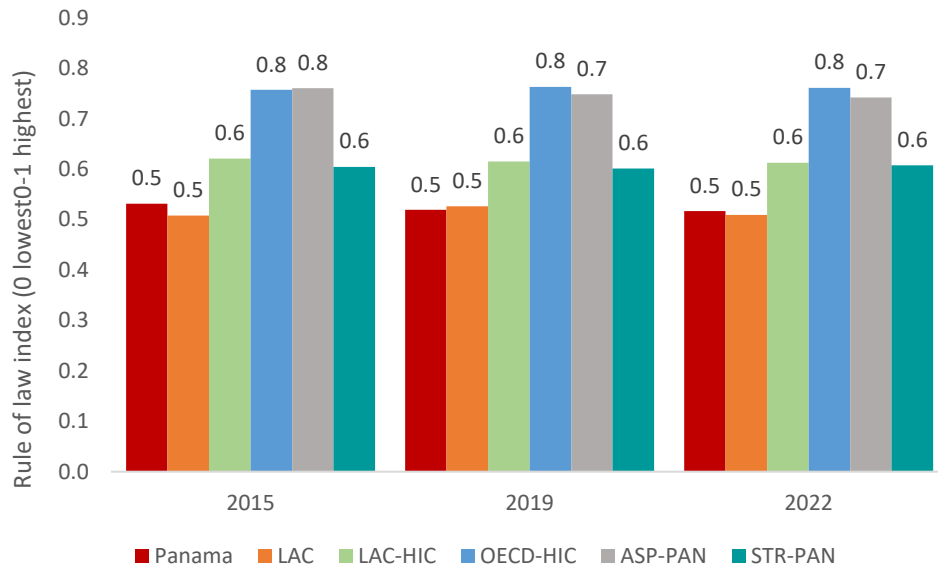
Source: ILO and OECD.

Figure A29b. Panama has lowest scores in corruption control, government effectiveness and property rights.



Source: World Bank, Worldwide Governance Indicators; Property Rights data is from the Heritage Foundation.

Figure A29c. Panama's score on rule of law is among the lowest.



Source: World Justice Project.

Figure A30a. Tax revenues of Panama is among the lowest globally.

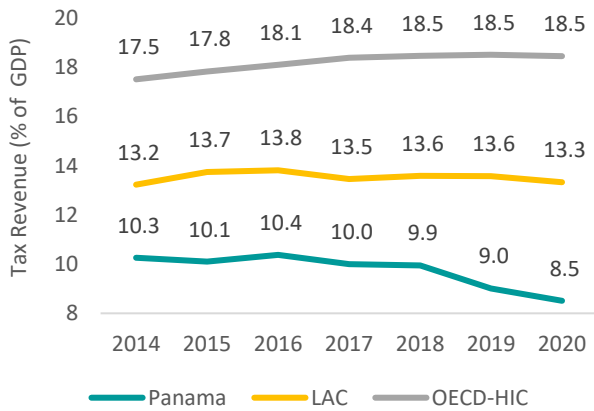
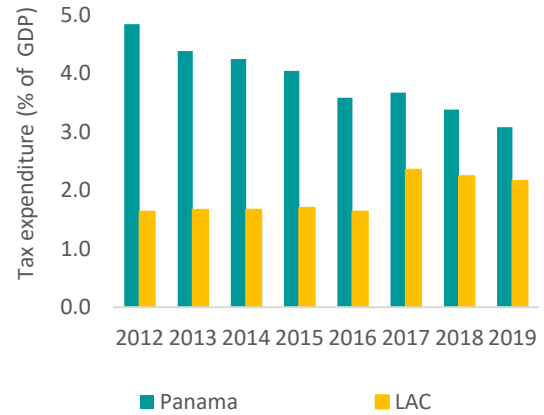
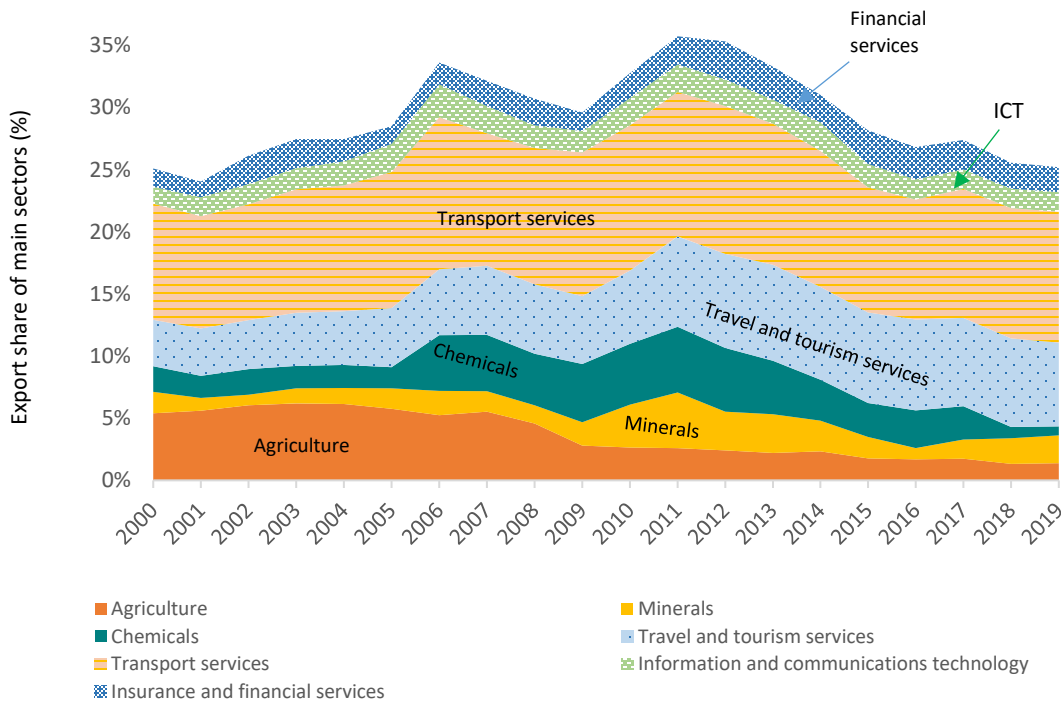


Figure A30b. Tax expenditure of Panama is among the highest.



Source: WDI.

Figure A31. Transport and travel and tourism services have the highest share in exports, while the share of agriculture and chemicals have declined.



Source: ATLAS.

Figure A32a. As of 2019, social expenditure in Panama was at the level of the region...

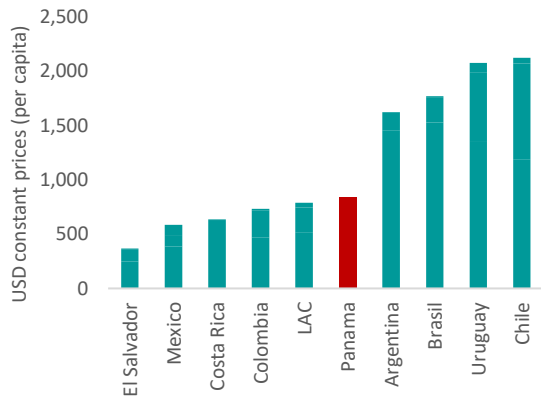
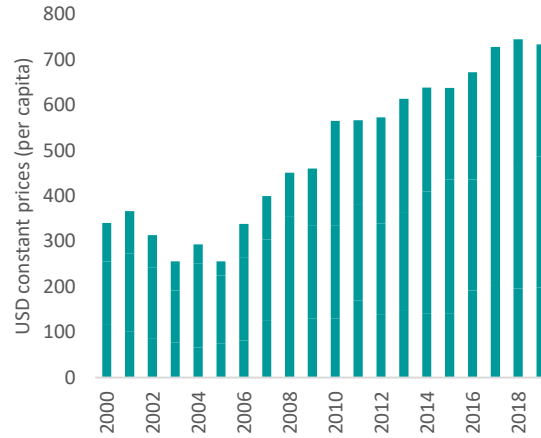
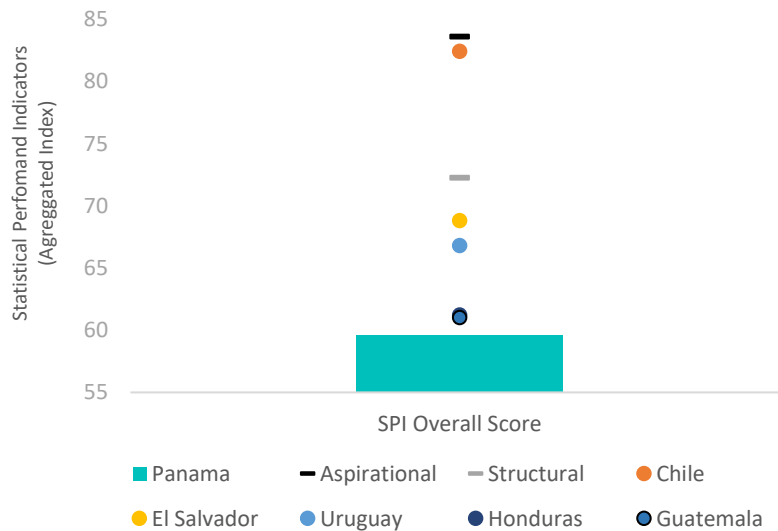


Figure A32b. ...despite having increased over the last decades



Source: CEPALSTAT, Statistics and Indicators, Per capita social public expenditure by sector, http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/Portada.

Figure A33. Panama’s national statistical system is weaker than that of comparator economies.



Source: <https://www.worldbank.org/en/programs/statistical-performance-indicators/Framework>

Figure A34a. Frequency of key natural hazard statistics for 1980-2020.

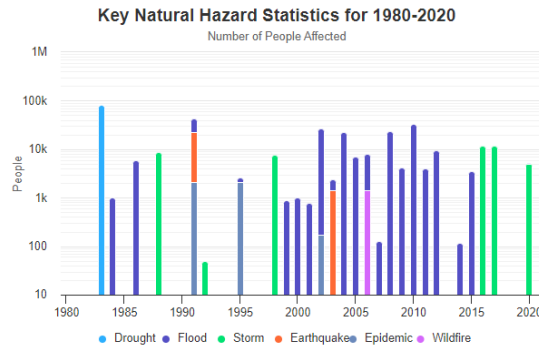
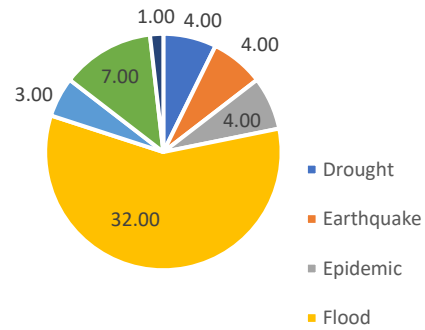


Figure 34b. Average annual natural hazard occurrence in Panama - 1980 – 2020 (distribution of 55 natural disasters).



Source: World Bank <https://climateknowledgeportal.worldbank.org/country/panama/vulnerability>

Figure A34c. Panama’s GHG emissions per 1000 people have been above LAC, OECD and Uruguay and has been increasing.

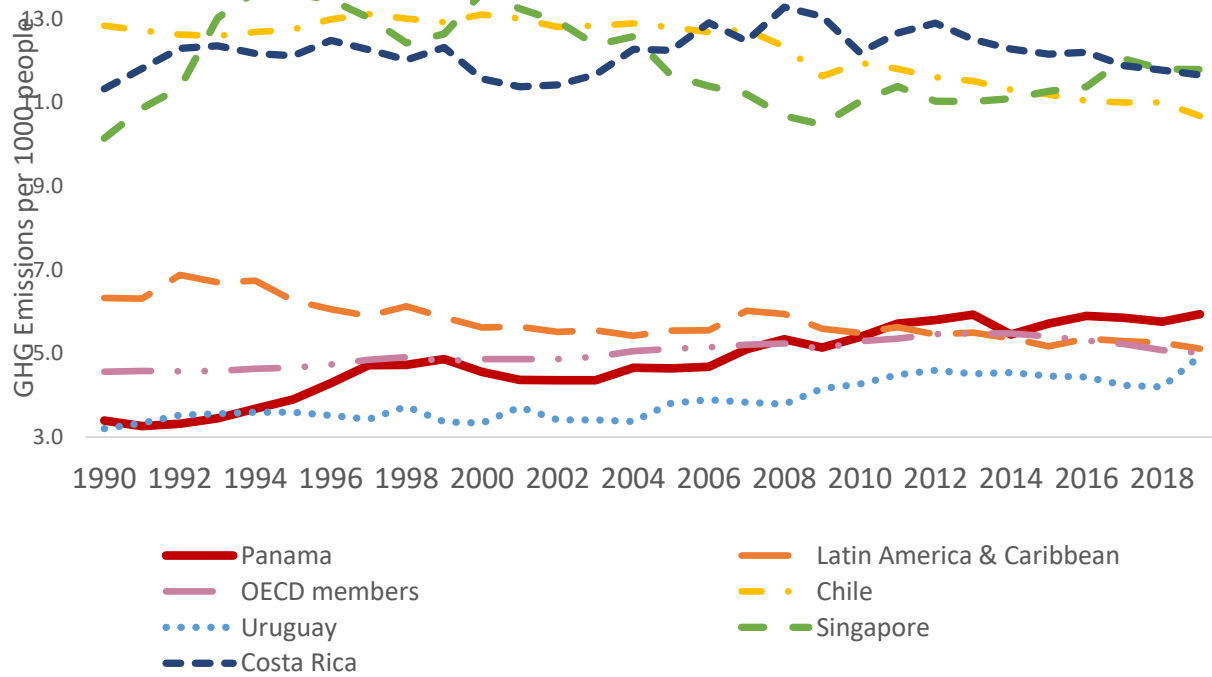
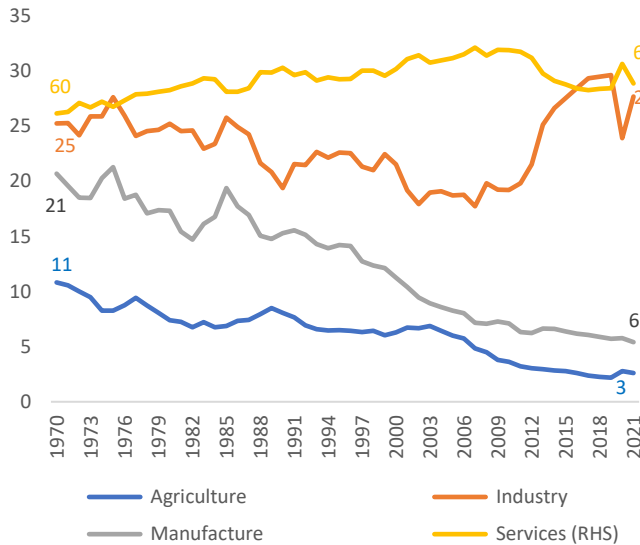


Figure A35. A characterization of the Poor and Vulnerable in Panama following the Asset-based Framework suggests that these groups face several deprivations relative to the middle class, 2019.



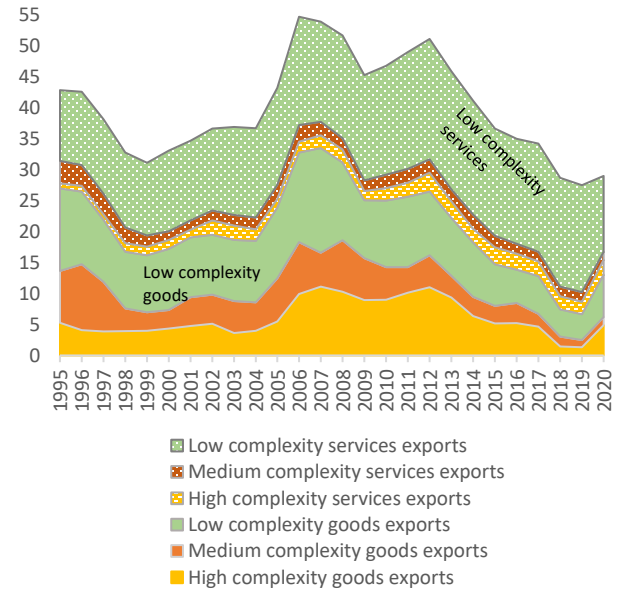
Source: Encuesta de Propósitos Múltiples and Encuesta de Mercado Laboral 2019

Figure A36. Services contribute the most to GDP, followed by industry.



Source: WDI. Note: Industry includes manufacturing, construction, utilities, and mining.

Figure A37. Low-complexity goods and services dominate the export mix.



Source: Atlas.

Table A1. Digital infrastructure and service indicators in Panama, 2020

Enhancing access to digital infrastructure	Panama		LAC		OECD	
	2008	2018	2008	2018	2008	2018
Fixed broadband subscriptions (per 100 inhabitants)	5.6	10.8	4.1	13.9	22.7	32.9
Active mobile-broadband subscriptions (per 100 inhab.)	2010	2018	2010	2018	2010	2018
	3.2	79.1	5.4	73.5	37.7	103.6
Proportion of population covered by at least 3G network	2015	2018	2015	2018	2015	2018
	79	95	86.1	94.6	98.2	98.8
Fixed broadband speed (in Mbit/s)	2008	2017	2008	2017	2008	2007
	0.26	4	0.58	5.1	2.2	27.7
Strengthening effective use of digital services	Panama		LAC		OECD	
	2008	2018	2008	2018	2008	2018
E-Government Development Index (EGDI)	0.47	0.61	0.52	0.65	0.72	0.82
Share of Internet users (% of population)	2008	2017	2008	2017	2008	2017
	33.8	57.9	25.3	62.9	65	83.4
UNCTAD B2C E-Commerce Index	2015	2019	2015	2019	2015	2019
	47.2	50.4	46.4	51.5	73.9	85

Source: OECD (2020): Latin American Economic Outlook 2020: Digital Transformation for Building Back Better.

Table A2a. Transport and energy industries contribute the most to Panama's greenhouse gas (GHG) emissions (kt CO₂ eq)

Sectors	1994	2000	2005	2010	2013	2016	2017
Energy	4,303	5,191	5,675	9,195	10,150	11,549	11,246
Transport	1,750	2,218	2,703	4,418	4,488	5,938	6,388
Energy industries	1,261	1,464	1,406	2,366	2,493	2,902	2,213
Manufacturing and construction	895	1,075	1,056	1,780	2,534	2,034	1,958
Other	398	434	509	631	635	675	688
Industrial processes and product use	175	313	220	606	936	1,157	1,257
Agriculture	3,288	3,066	3,512	3,677	3,853	3,513	3,463
Waste	716	1,011	1,233	1,498	1,681	1,876	1,905
Total GHG Emissions	8,482	9,580	10,639	14,976	16,620	18,095	17,871
LULUCF	-23,539	-23,234	-27,826	-28,191	-28,397	-27,821	-27,629
Balance	-15,057	-13,654	-17,187	-13,215	-11,777	-9,727	-9,758

Source: Prepared by the Mitigation Department of the Ministry of the Environment. See MiAmbiente (2020b).

Table A2b. Transport and energy industries have the highest share in Panama's GHG emissions

Sectors	1994	2000	2005	2010	2013	2016	2017
Energy	50.7	54.2	53.3	61.4	61.1	63.8	62.9
Transport	20.6	23.2	25.4	29.5	27.0	32.8	35.7
Energy industries	14.9	15.3	13.2	15.8	15.0	16.0	12.4
Manufacturing and construction	10.6	11.2	9.9	11.9	15.2	11.2	11.0
Other	4.7	4.5	4.8	4.2	3.8	3.7	3.8
Industrial processes and product use	2.1	3.3	2.1	4.0	5.6	6.4	7.0
Agriculture	38.8	32.0	33.0	24.6	23.2	19.4	19.4
Waste	8.4	10.6	11.6	10.0	10.1	10.4	10.7

Source: Prepared by the Mitigation Department of the Ministry of the Environment. See MiAmbiente (2020b).

Table A2c. Among transport and energy industries, land transport and production of electricity and heating contribute most to GHG emission of Panama (kt CO2 eq).

	1994	2000	2005	2010	2013	2016	2017
Transport	1750	2218	2703	4418	4488	5938	6388
Land transport	1,740	2,204	2,627	3,761	3,926	4,980	5,147
Maritime and river	NE	NE	NE	439	425	874	1,157
Civil aviation	9.1	13.6	76.2	218.4	137.6	84.1	83.5
Energy Industries	1,261	1,464	1,406	2,366	2,493	2,902	2,213
Production of electricity and heating	984	1335	1406	2366	2493	2902	2213
Oil refinery	277	129	0	0	0	0	0
Manufacturing solid fuels and others	0	0	0	0	0	0	0

Source: Prepared by the Mitigation Department of the Ministry of the Environment. Note: Table shows the decomposition of GHG emissions by activities in transport sector and energy industries, the two largest contributors to the GHG emissions of Panama.

Table A3a. Priority areas obtained through different methods

Consultations (2022)	Growth benchmarking (2015-2019) ²²⁷	Micro Data (1991-2021)
-Human capital -Physical infrastructure -Inclusion -Digital infrastructure -Lack of data and transparency -Innovation -Environmental sustainability and resilience to natural disasters	-Innovation -Access to finance -Education -Digital Infrastructure -Gender equality -Security -Governance	- IPs in comarcas and rural areas - IPs in urban areas - Rural dwellers - Women - Education - Territorial differences in health - Job quality
Source: See Table A3b below.		

Table A3b. Summary findings of the methods used to identify priorities and data sources

I. Consultations - (2022)

A. Consultations with the stakeholders in Panama

A mission from the World Bank conducted in-person and online consultations between October and November 2022 with representatives from: Authority of Transit and Land Transportation, Chamber of Commerce, Industries and Agriculture of Panama (CCIAP), Comptroller General, Directorate for International Financial and Fiscal Strategy (DEFFI), Interamerican Development Bank (IADB), MiBus, Mining Chamber of Panama (CAMPIA), Ministry of Agriculture and Rural Development (MIDA), Ministry of Education, Ministry of Environment, Ministry of Finance (MEF) (technical and high-level meetings), Ministry of Government, Ministry of Health, Ministry of Public Works (MOP), Ministry of Social Development, National Authority for Government Innovation (AIG), National Council of Private Enterprise (CONEP), National Directorate of Public Procurement (DGCP), National Disability Office (SENADIS), National Institute of Women (INAMU), National Secretary for Afro-Panamanian Development (SENADAP), National Secretary of Energy, National Statistics Office (INEC), National Water Council (CONAGUA), Panama Metro, Secretary for Public-Private Association (SNAPP), United Nations System in Panama, and The University of Panama

The objective of the consultations was: (i) to inquire stakeholders' views about the main challenges and opportunities to foster sustainable economic growth and reduce poverty and inequality in Panama; and (ii) to understand whether the priority areas of the 2015 SCD are still relevant, which include: energy supply, quality of education, transparency and effectiveness of public institutions, inclusion of Indigenous peoples, and access to and sustainability of clean water.

The main findings of the consultation process are summarized below:

- **Education.** Stakeholders consider that access to education, quality of education, and lack of professional and vocational programs are the main challenges for growth and development. Low education outcomes, high dropout rates in lower secondary education, and weak coordination between tertiary education and productive sectors pose challenges for the country's development. There have been delays in updating the K-12 curriculum, which is expected to be more flexible for students in lower secondary school and factor in the differences across five indigenous comarcas. There are still infrastructure challenges in rural areas, especially for the "rancho" schools with lower educational outcomes. The pandemic exacerbated educational drawbacks, as public schools were closed for two years leading to learning losses and increasing the food insecurity for children. Teachers' strikes and resistance to change are a concern. There are opportunities from innovative technologies and *Plan Colmena*, as new educational platforms can close the gap in information and geographical distance.
- **Access to health services in rural areas and comarcas.** Rural populations' access to health services is limited and has worsened since the pandemic. After the pandemic, mobile health services to rural areas decreased substantially, medicine shortages worsened, and maternal mortality rate increased, mainly due to lack of health personnel. Weak coordination between the Ministry of Health and Social Security during the pandemic exacerbated the existing challenges. The country has been investing in the centralization and digitalization of selected health care processes, which presents an opportunity to increase coordination and the efficiency of service delivery.

Table A3b. Summary findings of the methods used to identify priorities and data sources

- **Inclusion of indigenous and rural populations.** The poverty rate among indigenous and rural populations is high. Their limited access to basic infrastructure, health care, education and financial services and economic opportunities are the main structural barriers to inclusion and development in Panama. Although social programs have increased, they do not address these structural problems. Recently climate change has become a big challenge for these areas, given the high level of vulnerable populations to natural disasters. The Guna Yala population living on islands should be relocated. The rural population is underrepresented in the national statistics as the expenditure survey used to compute basic food basket is only urban. The Development Plan for the Indigenous communities is seen as an opportunity to improve school access, create higher education institutions, generate green job opportunities, foster tourism, and empower indigenous women. High rate of labor informality and deficit in Social Security pose challenges to the sustainability of social protection programs.
- **Gender equality.** Labor market conditions are highly unequal for women as they face higher rate of informal employment, underemployment, and lower labor market participation, although they have higher levels of education than men. The pandemic also uncovered many gender-related inequalities and risks, as gender violence and women unemployment increased during the pandemic. Climate change creates further difficulties in access to water in rural areas, which further increases the burden for women. Panama has made significant progress on the legislative framework toward gender equality and plans to create the Ministry of Women, which was created in 2023, after the consultation process.
- **Visibility of Afro-Panamanians.** There is a lack of inclusive public policies for Afro-Panamanians, starting with limited data and information about this group, creating a significant bottleneck. However, there are opportunities for Afro-Panamanians to benefit from the consolidation of the SENADAP collaboration with the INEC, the Ministry of Education, civil society, and the Ministry of Health to improve the identification across services. One of the objectives is to improve the collection of ethnic information in censuses, surveys, and administrative records.
- **Visibility of people with disabilities.** There has been substantial progress in the registration of people with disabilities in national registries, including the development of a digital voluntary certification process on an interoperable platform. Centers specialized in supporting people with disabilities have also seen improvements, along with the development of a plan for risk and disaster management. Additionally, there has been significant progress in the labor integration initiative. In this vein, *Plan Colmena* presents an opportunity to extend disability insertion programs to areas in need. However, limited data and information on the socio-economic characteristics of people with disabilities is also one of the first constraints faced by policy makers in their effort to reach these groups.
- **Public sector transparency, effectiveness, and access to data.** Lack of reliable data and low quality of administrative records are a big challenge, crossing across many sectors and areas including, health, education, infrastructure, water, transport, mining, labor market, Afro-Panamanian Populations, Indigenous Populations, and rural areas, among others. There is no culture of accountability nor evidence based or goal-oriented policy. Government's efforts should focus on improving the availability of and access to data and strengthening transparency, efficiency, and

Table A3b. Summary findings of the methods used to identify priorities and data sources

the justice system. Being on the grey list of Financial Action Task Force (FATF) is a significant bottleneck for the country's international trade and investment. The government has made substantial progress in complying with the FATF actions, but it still needs to improve the registry of beneficial ownership. Panama's public procurement framework has improved substantially since 2018. The Directorate has standardized regulations and documents to foster transparency and digitalization and in 2021 created the open-source platform for public procurement called *PanamaCompra*, which has significantly enhanced public budget management's transparency, efficiency, and accountability. However, long reviewing times in the Comptroller's office slow down the process and hinder the efficiency of the procurement system. Investments in technologies and public information ecosystems present a big opportunity to increase transparency and efficiency in public services, and the *Plan Colmena* is critical to improve public service delivery.

- **Access to and sustainability of clean water.** Many rural areas have no access to clean water and sanitation, due to their remote location, and contaminated water with chemicals causes health problems and hampers agricultural sustainability. Operational mistakes and lack of coordination across institutions in the water sector led to inefficiencies. The sector needs more human capital, integrated information system, and better administrative records on water services to develop the sanitation strategy effectively. It also needs to develop a comprehensive plan for the management of hydraulic resources, including the Canal, and design novel financing schemes to address financing problems arising from low water tariffs and decreasing budget allocation for water. Given the negative effects of climate change on the sector, improving the management of water and soil is critical.
- **Energy transmission and prices.** The challenge in the energy sector is no longer the supply shortages but the transmission of energy and high prices. High cost of electricity is a big burden for vulnerable populations and small companies. There are more than \$90K rural households without electricity. The energy transition project will use on-the-grid and off-the-grid solutions to close this gap by 2030. However, financing the strategy is a significant challenge. Closing the gap requires \$80 million and currently only \$10 million are allocated. The government is aiming to stabilize the energy price through gas production by 2024. The sector sees opportunities in the ongoing transmission projects, including the fourth line project, which can triple the capacity of the North Caribbean and Central Pacific transmission. The PPP to build the transmission line Panama-Bocas del Toro by 2030 and the connection project with Colombia will strengthen the central América network. The energy transition strategy is seen as an opportunity, but it needs significant funding and coordination.
- **Quality of infrastructure.** Low-quality roads, weak connectivity in several vulnerable regions, lack of data on transport and infrastructure, climate change, and shrinking government budget are the main challenges with regards to infrastructure.
- **Climate change and vulnerability to natural disasters.** Panama has a high score on climate vulnerability, and increased frequency of extreme weather conditions poses additional risks for the Canal's operations, water supply, and agriculture. Low adaptation capacity of the country poses a high risk to vulnerable populations. Expected approval of climate change law and the legal framework developed to fight climate change and the creation of the Institute of Hydrology and Meteorology presents a substantial opportunity.

Table A3b. Summary findings of the methods used to identify priorities and data sources

- **Digitalization of public sector.** Digitalization of the public sector processes and services offers substantial gains in improving transparency, increasing access to information, and promoting the efficiency and effectiveness of public service delivery in a wide range of critical areas including education, health, transport, finance, social inclusion, and adaptation to climate change, among others. Government has made significant progress with the digitalization strategy led by AIG, but there is still a lot of room to expand digital infrastructure and public services.
- **Innovation.** There is no investment and incentives for private sector innovation. Government budget focuses on physical investment and operations and the investment in research and innovation is very low. Due to lack of funding and well-developed national program, universities do not conduct high quality research and some universities do not even have a lab.
- **Fiscal framework and social security.** Increase in fiscal deficit and unsustainability of Social Security is a big concern for fiscal stability. Government expenditure increased during the pandemic, especially for the delivery of key health and social protection services. At the same time, there is the need to increase quality spending in education, infrastructure, and other sectors. The sustainability of the pension system is under pressure, with an eroding contributory base and aging population. Limited government revenues question the fiscal sustainability of Panama's spending and investment needs.
- **Agricultural sector.** Tariffs on agricultural goods and sanitary requirements make exports of agricultural goods difficult and expensive. The industry has taken advantage of opportunities for digitalization and the creation of the legal framework for family agriculture. Other policies such as *Plan Colmena*, school feeding program SFP and *Agro Solidario* help to improve coordination between institutions.

B. Inputs of sector experts from the World Bank Group's Global Practices and the International Finance Corporation (IFC)

The following sector specific inputs were provided by: Cornelia Tesliuc (Social Protection and Jobs), David Olivier Treguer (Sector Leader, Sustainable Development), David Vilar (Program Leader, Infrastructure), Diego Arias Carballo (Practice Manager), Fabian Hinojosa (Senior Transport Specialist), Federica Secci (Senior Health Specialist), Felipe Montoya Pino (Urban Specialist), Julian Najles (Digital Development), Katharina Siegmann (Senior Environmental Specialist), Leah Arabella Germer (Agriculture Specialist), Maria Camila Padilla Gomez (Senior Procurement Specialist), Maria Elena Garcia Mora (Senior Social Development Specialist), Maria Jose Vidal Roman (Consultant, Digital Development), Marie Caroline Paviot (Senior Agriculture Economist), Mia Rodriguez (Country Officer, IFC), Patrick Wieland (Senior Environmental Specialist), Suhas D. Parandekar (Senior Economist, Human Development), Ursula Martínez (Social Protection Specialist), and Yara Esquivel (Senior Financial Sector Specialist).

- **Agriculture:** Relative to the returns in other sectors, there is probably underinvestment in agriculture. Widespread inefficiencies and unsustainable practices hinder productivity, hamper the environment, and leave small producers vulnerable to climatic and economic shocks while keeping them excluded from high-value markets and income-generation opportunities. High and rising

Table A3b. Summary findings of the methods used to identify priorities and data sources

food/fuel/fertilizer prices are exacerbated existing structural drivers of poverty, inequality, and food insecurity in Panama. The Ministry of Agriculture has adopted a Family Farming Law (with the support of the World Bank) to focus its support on family farmers who are amongst the poorest.

- **Anti-Money Laundering.** Panama has progressed in addressing money laundering issues, but significant challenges remain. Due to deficiencies in its anti-money laundering efforts, Panama has been placed on the Financial Action Task Force (FATF)'s list of jurisdictions with strategic deficiencies and the EU blacklist for non-cooperative tax jurisdictions. While Panama has implemented laws and regulations to improve transparency and has taken steps such as creating a registry of beneficial ownership, demonstrating effectiveness in preventing money laundering remains a challenge, particularly in verifying and updating information on beneficial owners of legal entities. The country has also identified risks from illicit financial flows from abroad and various offenses related to organized crime and international trade as major concerns in money laundering.
- **Climate Change.** Panama has made important progress in developing an institutional framework for climate change, including the creation of the Ministry of Environment (MiAmbiente) in 2015 and the submission of its first and updated Nationally Determined Contribution (NDC) in 2016 and 2020. While Panama is not a large emitter, decarbonization pathways are a crucial element of the country's sustainable growth trajectory. Panama's forests and natural resources are strategically important to both the mitigation and adaptation to climate change impacts. As a narrowly shaped country with two extensive coastlines, strengthening coastal management and integrating disaster risk reduction in their marine-coastal system management approaches is fundamental.
- **Digital Development.** With a persistent rural-urban divide, Panama faces challenges in achieving affordable and universal digital connectivity. Infrastructure limitations and the financial disincentive for operators to deploy digital infrastructure in remote areas contribute to limited access and unaffordability of broadband services in rural regions. The lack of high-speed internet, low mobile network coverage, and limited device ownership further contribute to the digital gap. While the government has utilized digital platforms during the COVID-19 pandemic, the overall connectivity quality is insufficient for resilience, and digital literacy is declining. Enhancing digital infrastructure, skills, and cybersecurity is crucial for Panama's digital economy and ensuring inclusive access to connectivity.
- **IFC.** As of August 31, 2022, the International Finance Corporation (IFC) has an investment portfolio of \$369 million in Panama, focusing on financial institutions, affordable housing, women-owned businesses, green banking, small and medium enterprises (SMEs), and support for the Panama Canal. The IFC is actively involved in providing advisory services for public-private partnership (PPP) projects in the areas of transmission lines and intercity roads. However, Panama still faces challenges related to compliance with international standards, particularly in areas such as beneficial ownership information and responding to requests for information, which could have negative consequences for the country's macro risk perception, cost of doing business, and relationships with correspondent banks if not addressed by October 2022.
- **Infrastructure.** Transportation has been a key sector in Panama's economic development, with significant investments in infrastructure, such as the expansion of the Panama Canal, Tocumen International Airport, and Panama City's metro lines. However, there is still room for improvement

Table A3b. Summary findings of the methods used to identify priorities and data sources

in the overall quality of transport infrastructure, particularly in terms of road connectivity and access to rural areas. In urban areas, mobility conditions and integration of the public transport system remain challenges. The government has approved a new PPP law to attract qualified investors and move towards long-term well-structured public-private partnerships. The World Bank is supporting the government in strengthening institutional capacity for PPP execution and addressing challenges in strategic planning, project prioritization, and technical expertise. The PPP agenda is seen as a vital tool for infrastructure development and economic recovery in the post-COVID context.

- **Procurement.** Panama has a well-established public procurement framework supported by laws, regulations, and an electronic procurement system called PanamaCompra. The system has undergone modernization efforts since 2006, with recent updates aimed to enhance transparency, efficiency, and professionalization. However, a new challenge has emerged, which is a systematic delay in implementing contracts due to the requirement of an "endorsement" by the *Contraloría General de la República* for all public procurement activities. Panama faces increasing risks from multi-hazard events, including climate-related hazards and natural disasters like earthquakes, floods, and hurricanes. These events have resulted in substantial economic losses and disproportionately affect vulnerable populations who lack the resources to cope. The rapid and poorly planned urbanization in Panama has exacerbated these risks, leading to social segregation, limited access to public services, and degradation of ecosystems. The government has recognized the importance of strengthening disaster risk management and climate adaptation measures to address these challenges. Efforts are underway to improve institutional frameworks, enhance coordination between government levels, and integrate risk considerations into territorial planning. Building the capacity of local institutions and fostering inter-municipal cooperation are crucial steps toward sustainable and climate-resilient urban development in Panama.
- **Health Nutrition and Population:** Sanitation works were halted due to corruption scandals between 2014-2019 but have been reactivated by the current government administration, which is also dealing with the COVID-19 pandemic. Progress has been made in the legal framework and the government action plan, but there needs to be more evidence of progress in implementing new health regulations. While the Indigenous Peoples Development Plan has made progress, there are still delays in health interventions for Indigenous communities. Panama faces new challenges, such as closing coverage gaps due to COVID-19, implementing electronic health records and telemedicine, improving access to quality medicines at a fair price, managing hazardous waste, and strengthening social participation in health operations.
- **Social Protection and Jobs.** Panama still faces the low coverage rates of the main CCT programs and targeting challenges. The importance of adaptive social protection systems was highlighted by the COVID-19 pandemic and the emergency subsidy program *Panama Solidario* that covered in 2020 around 80 percent of the population and partially mitigated poverty increase. However, the government has been unable to close the program due to a lack of other social assistance programs for the urban poor. In addition, the social protection system in Panama faces structural challenges, such as fragmentation, targeting errors, limited coverage, and a limited delivery system with a modest national social registry and payment system. Data gaps in the sector include an analysis of urban poverty and the potential expansion of the RdO program's coverage, as well as a cost-benefit

Table A3b. Summary findings of the methods used to identify priorities and data sources

analysis of the program's expansion to poverty and the distributional impact of food inflation on the poorest.

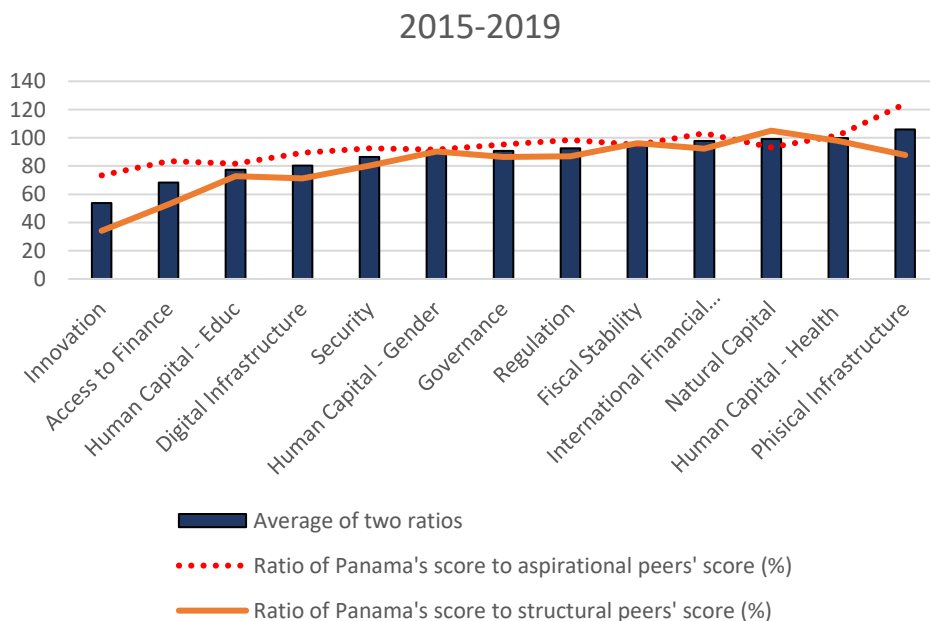
- Social Sustainability and Inclusion.** The government's response, during and post-COVID-19, was designed to serve primarily urban centers, failing to address the needs and risks of rural areas. The repercussions of the pandemic and Russia's invasion of Ukraine might delay Panama's full economic and social recovery. There was recent social unrest, and there continues to be significant discontent from the population with the measures taken by the government to address unemployment, the high cost of living, and other demands set forth by the different unions and groups. Moreover, the country's economic growth and geographic location have made it a point of high interest among the intraregional migratory flows. Conditions at this crossing point are extremely precarious and dangerous, and migrants that arrive to host communities lack access to basic services.

II. Growth Benchmarking

Growth diagnostics benchmarking was built such that each indicator is normalized to a scale of 0 to 100 using the following formula:

$$\text{Index of } xi = \frac{(\min(xi) - x(i))}{(\min(xi) - \max(xi))} * 100$$

In this formula, xi represents the specific indicator of interest, min refers to the minimum value of the indicator, and max represents the maximum value of the indicator. It's important to note that if an indicator's maximum or minimum values are extreme outliers, they are not considered in the calculation of the index. For indicators where higher values indicate worse outcomes (e.g., a Public Service index where 0 represents the best public service and 10 represents the worst), the index scores are adjusted by subtracting them from 100.



Aspirational peers of Panama: Estonia, Hong Kong SAR, China, South Korea, Lithuania, Singapore, Taiwan, China, and United Arab Emirates; Structural peers of Panama: Bulgaria, Costa Rica, Croatia, Dominican Republic, Uruguay.

Sources of the variables used in each index:

Table A3b. Summary findings of the methods used to identify priorities and data sources

Index	Sources
Innovation	The World Intellectual Property Organization, The United Nations, and Cornell University, INSEAD, and the WIPO
Access to Finance	WDI and IMF
Human Capital - Educ	UNESCO and World Bank Human Capital Index
Digital Infrastructure	The International Telecommunication Union and WDI
Security	United Nations, and Fund for Peace
Human Capital - Gender	WDI and UNESCO
Governance	WDI, The Freedom House, Fund for Peace, and The Heritage Foundation
Regulation	The Heritage Foundation
Fiscal Stability	IMF
International Financial Flows	WDI
Natural Capital	WDI and World Risk Index
Human Capital - Health	WDI and World Bank Human Capital Index
Physical Infrastructure	World Economic Forum, Fund for Peace, and WDI

III. Micro Data

The SCD Update conducted several pieces of analysis, including the study of the main barriers to inclusion, drivers of poverty and vulnerability, challenges to human capital accumulation, and factors affecting jobs and firm performance. Several microdata sources were consulted, including EML data for 1991-2021, EPM data for 2015-2019, and EENF data for 2011-2018.

The SCD Update follows an asset-based framework to characterize the poor and vulnerable groups and assess the drivers of poverty and vulnerability. According to this framework, there are four components of households' income:

1. Assets owned by households, which can be broken down into three subcomponents:
 - a. the stock of income-earning assets owned by each household member, which may include human capital, financial and physical assets, social capital, and natural capital.
 - b. the rate at which these assets are utilized by each household member to produce income.
 - c. the returns to assets
2. Prices (of the goods and services households consume and receive)
3. Transfers (monetary or in kind, both within and outside the country)
4. The potential realization of shocks (health, natural disasters, crime, loss of employment).

To benchmark different groups' income-generating capacity and markers of well-being, the SCD Updated conducted cross-country (regional, structural, and aspirational peers) and within-country comparisons (by gender, territory, and ethnicity).

The analysis and benchmarking of gender within Panama and between other countries follow a framework that categorizes indicators into the following dimensions: 1) human endowments, 2) economic opportunities, and 3) voice and agency.

Table A3b. Summary findings of the methods used to identify priorities and data sources

Labor Markets and private sector diagnostics were studied through the lens of job profiles and job needs of the country, particularly for the poor and bottom 40 percent, and by examining links between job outcomes, growth, and twin goals over the last three decades using harmonized labor market indicators. The diagnostic uses harmonized microdata from SEDLAC from 1991 to 2019. This effort was complemented by an analysis of firm productivity across sectors and firm sizes and the barriers faced by firms in Panama.

These exercises indicate that IPs, rural dwellers, and women face the most important disadvantages. In addition, progress towards the twin goals is limited by low-productivity MSMEs and low-quality jobs.

Finally, this analysis was complemented by a deeper look at Panama's Human Capital level. For this, the analysis used the 2018 and 2020 Human Capital Index-HCI calculated for 172 countries in the context of the Human Capital Project of the World Bank. Information of each component of the Index was analyzed and standardized to compare the main drivers of Panama's low HCI. The HCI components are Probability of Survival to Age 5; Survival Rate from Age 15 to 60; Expected Years of School; Harmonized Test Scores; Learning-Adjusted Years of School. Each of the indicators were obtain from WDI and standardized from 0-1 using the following formula:

$$\text{Index of } x_i = \frac{(\min(x_i) - x(i))}{(\min(x_i) - \max(x_i))}$$

Where x_i represents the specific indicator of interest, min refers to the minimum value of the indicator from the list of 172 countries, and max represents the maximum value of the indicator.

The analysis indicates that the main drivers of Panama's low HCI were education outcomes, especially those related with education quality (Harmonized Test Scores). Within- and cross-country benchmarking of health outcomes suggest that health is also limiting HC in poor territories in Panama.

Table A4. Detailed recommendations under each policy area and implementation timeframe

	Short term	Medium term	Long term
1. Increase the level of human capital			
1a. Increase access and quality of education	Update K12 curriculum to create a stronger and more inclusive education system.	Strengthen the system for monitoring and evaluating teacher and student outcomes.	Strengthen higher education and research institutes by increasing funding and creating new research positions.
	Enhance retention in secondary education by incorporating relevant content for vocational education in comarcas and <i>impoverished</i> areas.	Strengthen public and private technical education to better respond to labor-market demand.	Enhance education and complementary infrastructure in rural areas, including via PPPs.
	Improve digital connectivity to schools.		
	Increase the level and efficiency of education financing and ensure service quality and equity.		
	Strengthen social programs with the potential to increase human capital such as <i>Red de Oportunidades</i> and <i>PASE-U</i> .		
1b. Increase access and quality of health services	Improve healthcare regulation and coordination between different actors, such as the Ministry of Health and the CSS.	Improve health infrastructure, promote the development of traditional medicine, and improve water and sanitation systems in Indigenous territories.	
	Improve the efficiency of health-sector financing to ensure equitable, high-quality services, including through results-based funding mechanisms.		
	Continue enabling remote health services (telehealth).	Continue enabling telehealth, combined with access to electricity and internet in remote areas.	
	Include countrywide metrics and indicators to assess the health system's quality, including through the Electronic Health Information System (SEIS).		
	Improve access to quality medicine and reduce price-information asymmetry by reporting the activities of the High-Level Commission (<i>Mesas de Dialogo</i>) organized in 2022 and by digitizing the procedures of the National Directorate of Pharmacy and Drugs.		
2. Increase the innovation and entrepreneurial capacity of firms and improve the quality of jobs			
	Strengthen the regulatory framework to lower the cost of financing and transactions, reduce information asymmetry, and increase the range of	Expand the physical and digital infrastructure of the financial sector to extend its reach to rural and remote areas.	

Table A4. Detailed recommendations under each policy area and implementation timeframe

	Short term	Medium term	Long term
2a. Increase access to better jobs and financing for MSMEs, self-employed workers, and vulnerable groups	assets and goods that can be used as collateral.		
	Strengthen the regulatory framework for digital financial services.	Increase financial and digital literacy.	
	Broaden the range of financing instruments available to MSMEs and entrepreneurs.	Provide training services to entrepreneurs and MSMEs to increase their entrepreneurial capacity.	
	Assess labor regulations.	Upskill the labor force based on private-sector demand for skilled labor.	
	Promote higher-productivity jobs in sustainable agriculture, ecotourism, and services with high levels of complexity or connectivity to external markets.		
2b. Increase technical and entrepreneurial skills	Incorporate technical training in the curricula of secondary school and higher education.		
	Promote vocational technical and entrepreneurial training through PPPs.		
2c. increase private sector funding for STI		Promote technology transfer through technology licensing, GVCs, trade, international collaboration.	
		Increase business sophistication.	
	Promote collaboration between the public sector, industry, and academia to increase innovation and entrepreneurship capacity of entrepreneurs and firms.		
2d. Strengthen government policies to support innovation	Develop a comprehensive innovation strategy and vision; consolidate existing strategies.		
	Strengthen the regulatory framework of science and technology institutions (SENACYT and CICYT) to clarify their responsibilities.	Increase coordination and data sharing between SENACYT, CICYT, and other public agencies.	Increase domestic demand and/or market access for innovative products.
	Strengthen intellectual property protections to incentivize innovation and attract investment.		
2e. Strengthen government policies to support entrepreneurial activities	Simplify and streamline business regulatory procedures and rules for opening a new business.	Promote advisory and educational activities for aspiring entrepreneurs .	
3. Ensure the inclusion of Indigenous communities, rural populations, and women			

Table A4. Detailed recommendations under each policy area and implementation timeframe

	Short term	Medium term	Long term
3a. Increase the productive assets of Indigenous people and rural communities	Improve the quality and cultural relevance of education services and expand the intercultural bilingual education curriculum.	Expand the provision of educational and health services in <i>comarcas</i> and rural areas by constructing, rehabilitating, and expanding schools and health centers.	
	Enhance the quality and cultural relevance of health services by implementing intercultural health protocols and building the capacity of healthcare providers.	Improve water, sanitation, and road infrastructure in remote rural areas, potentially through PPPs.	
3b. Boost economic opportunities among Indigenous people, rural communities, and the urban poor	Create institutional arrangements and sectoral instruments to link agriculture, tourism, and green initiatives.	Explore the possibility of using payment for environmental services (PSE) programs to support sustainable agriculture among smallholder farmers.	
	Promote sectors that can connect to export markets and/or deliver complex services to generate high-quality jobs.		
	Boost financial inclusion among smallholder farmers and improve the targeting of public programs providing access to technical assistance through digitalization under the Family Farming Law.		
3c Increase the coverage of social assistance programs in Indigenous territories	Expand the coverage of the RdO program to poor households and broaden its presence in Indigenous territories.	Strengthen the Social Registry to improve targeting and better mitigate the impact of shocks.	
3.d Strengthen governmental capacity to implement policies in Indigenous territories	Build the capacity of the Indigenous Authorities to enhance governance within their territories.		
	Enhance the ability of the Vice Ministry of Indigenous Affairs (VMAI) to effectively plan and coordinate public policies, investments, and dialogue with Indigenous people.		
3e Improve economic opportunities for women	Increase access to healthcare, including skilled birth attendants, in underserved rural and Indigenous areas.	Implement programs focusing on vocational skills and soft skills to improve women's employment prospects.	
	Incorporate a gender lens into the planning and delivery of services and the implementation of the Indigenous Plan.	Strengthen the voice and participation of Indigenous women in the decision-making	Implement social outreach efforts to address gender stereotypes.

Table A4. Detailed recommendations under each policy area and implementation timeframe

	Short term	Medium term	Long term	
		processes of Indigenous Authorities.		
4. Promote environmental sustainability and strengthen resilience to natural disasters				
4a. Promote water sustainability	Clarify the responsibilities of different institutions in charge of water system and promote practices and technologies that improve water management.			
	Ensure timely, reliable, and standardized information and data sharing in the water sector and improve real-time coordination among them.			
	Improve the institutional, administrative, and technical capacity of the agencies involved in water management.			
	Reduce gaps in water access and quality.			
	Invest in upgrading, renewing, and maintaining old water and wastewater infrastructure to improve the storage, delivery, and resilience of the water system.			
		Seek innovative solutions to increase the efficiency of water use, including investing in smart irrigation.		
	Strengthen regulations to reduce the impact of economic activities on forests.			
4b. Decrease deforestation and increase forestation	Raise public awareness of the importance of forests and of the damage caused by illegal logging.			
	Encourage sustainable forestry practices and promote reforestation and restoration efforts through targeted education and training.	Promote capacity building and training among Indigenous people to improve forest management and ensure sustainability.		
	Improve monitoring and surveillance tools to identify areas of deforestation and illegal logging.			
	Upgrade the technical and institutional framework for multi-hazard monitoring networks and early warning systems.			
	Update the existing institutional arrangements to effectively address observed and projected climate trends,			

Table A4. Detailed recommendations under each policy area and implementation timeframe

	Short term	Medium term	Long term
4c. Increase resilience to natural disasters	along with changes in the natural, agricultural, and built environments.		
	Create a sovereign insurance strategy for natural disasters.		
	Reduce contingent liabilities resulting from natural disasters and public health crises by improving the country's capabilities for natural hazard risk identification and assessment.		
4d. Promote green economy	Develop and enforce a comprehensive regulatory framework to promote sustainability in the mining, transportation, energy, and manufacturing sectors.		
	Promote PPPs in the energy sector to further increase renewable energy production.		
	Mobilize green financing.	Strengthening regional cooperation and integration in the renewable energy sector.	
	Promote technical and vocational training programs in renewable energy.	Promote private investment in R&D and innovation to support renewable energy technologies.	
5. Cross-Cutting: Strengthen public sector institutions			
5a. Promote accountability and transparency	Review and streamline processes in the Comptroller's office to increase efficiency in the procurement system.	Strengthen planning, monitoring, and evaluation functions within the Ministry of Economy and Finance and approve pending anti-corruption legislation.	
	Modernize the regulatory framework for accountability.	Strengthen legal protections, increase transparency in the appointment and removal of judges, and ensure that judges have adequate resources and training.	
	Enhance the registry of beneficial ownership to comply with FATF actions and get off the grey list.	Improve the quality and accessibility of budget information and strengthen oversight mechanisms to combat	Invest in technology and public information systems to increase the transparency and

Table A4. Detailed recommendations under each policy area and implementation timeframe

	Short term	Medium term	Long term
		corruption and improve transparency.	efficiency of public services.
	Improve the processes and resources available for the titling of land and the recognition and protection of rights of possession.	Increase efforts to combat fraud and the misappropriation of property, including through enhanced enforcement and stronger penalties.	Strengthen the legal framework for property registration to ensure that all land is titled, particularly outside of Panama City.
	Develop a comprehensive regulatory framework for aviation and increase technical and human resources to ensure safe and effective operations.	Put in place insurance mechanisms to ensure the stability of its financial system.	
5b. Promote evidence driven policy	Increase resources allocated to data collection and enhance statistical capacity, particularly in areas with identified gaps such as infrastructure, workforce skills, and financial resources.	Increase the depth and breadth of available data by prioritizing the collection of high-quality data in key areas.	Implement a data-driven culture in the public sector, emphasizing the importance of data interoperability and ICT in modernizing the state and monitoring and evaluating public services.
	Improve data openness by enhancing the transparency and accessibility of data to a wider audience, including civil society and academia.	Encourage the adoption of best practices in government statistics, including the use of new technologies and the development of partnerships with academia and the private sector to enhance the country's statistical capacity.	Promote evidence-based policymaking across all sectors, including through the development of monitoring and evaluation frameworks to assess the impact of policies and programs.
5c. Increase the effectiveness of public service delivery	Develop targeted interventions to improve access to basic public services, especially in regions with low access rates.	Experiment with ICT in service delivery, such as telemedicine and digital vouchers for social protection programs.	Increase investment in infrastructure to support the delivery of basic public services such as electricity and sanitation. Diversify the energy matrix to reduce dependence on hydropower and prevent energy shortages in the dry season.

Table A4. Detailed recommendations under each policy area and implementation timeframe

	Short term	Medium term	Long term
	Improve the social protection system by enhancing targeting, coverage, adequacy, and delivery methods, and incorporating the lessons of the ongoing assessments of social programs.		
	Finalize the creation of a single universal registry for beneficiaries of social protection.		
	Develop and adaptive social protection system.		
5d. Promote revenue mobilization	Review value-added tax exemptions, personal income tax exemptions and deductions, and corporate tax exemptions and incentives.	Focus on improving tax and customs collection efficiency and broadening the tax base by reducing exemptions, deductions, and tax expenditures that mainly benefit higher-income households. Apply value-added tax to the digital economy.	

Table A5. Progress made in 2015 SCD priority areas		
<i>2015 SCD Main Findings</i>	<i>Evolution since 2015</i>	<i>Recommendations of SCD 2023</i>
Education		
<p>The country needs to strengthen targeted public and private technical education to better respond to labor market demands: introduction of vocational training and bilingual education; revision of high school certificates.</p>	<p>The country still exhibits high levels of skill-labor mismatch. The government established in 2017 the Specialized Higher Technical Institute (ITSE) to meet the needs of the country's strategic sectors and generate attractive opportunities for secondary education graduates. However, vocational education enrollment is still low, secondary school drop-outs are still high, and the National Skills Standardization and Certification System is still incipient.</p>	<p>Reducing skill mismatches entails policy action on the supply side and on the demand side. On the demand side, effective and well-informed career guidance at the end of lower secondary education plays an important role in achieving a good match between students' preferences and labor market needs. On the supply side, it is crucial to strengthen the operation and management of higher education and vocational institutes through enhanced coordination, common standards, and curriculum updates to align with changing sector needs and emerging technologies. Better funding, public-private coordination, and K-12 and higher education curriculum updates are necessary.</p>
<p>Panama needs to regularly monitor and evaluate education outcomes with goal of improving quality.</p>	<p>Panama increased the monitoring of education quality which was last internationally measured in PISA 2009. The country participated in the CRECER assessments 2016-2018, PISA 2018, the off-school PISA-D program, ERCE 2019 and PISA 2022. However, education quality and secondary completion levels are still low.</p>	<p>The country would benefit from updating the k12 curriculum, and the establishment and application of monitoring and evaluation framework to design and implement data-driven policies to enhance education quality and school competition.</p> <p>Utilizing the results from CRECER can allow for customized school improvement plans, improved teacher training, and targeted interventions for schools facing learning challenges. Sustained commitment, stable funding, and local technical capacity are</p>

Table A5. Progress made in 2015 SCD priority areas		
2015 SCD Main Findings	Evolution since 2015	Recommendations of SCD 2023
		essential for continuing these national assessments.
Increasing payments of the CCT program <i>Beca Universal</i> differentiated by student grade level (three cycles) to address high dropout rates in secondary education.	In 2020 the <i>Programa de Asistencia Social Educativa Universal PASE-U</i> replaced the Beca Universal Program. The latter differentiate the benefits by education level the student is attending.	The results of the new PASE-U program should be rigorously evaluated.
Inclusion		
IPs. The concentration of poverty in indigenous areas suggests that special attention is needed for these areas and this population group.	<ul style="list-style-type: none"> The formation of the National Indigenous Peoples Council established a permanent platform for dialogue and institutionalized coordination between indigenous peoples and the Government. Congress approved the Law No. 301 which includes the adoption of the National Indigenous Peoples Development Plan (PDIPIP), endorsed by IP authorities, and consulted with communities. Government recognized the creation of the <i>Comarca Naso Tjer Di</i> in 2020. 	<ul style="list-style-type: none"> Increase the coverage of social assistance in the Indigenous Territories Strengthen institutional capacity and build capacity among IP authorities to effectively plan and coordinate public policies and investments of the PDIPIP.
Comarcas. <i>Comarcas</i> require attention to issues of culturally appropriate economic opportunity, social assistance, infrastructure provision and the enforcement of legal rights.	<ul style="list-style-type: none"> Since 2016, the regulations of Law 37 require Free, Prior, Informed Consent of Indigenous Peoples. Progress on the regulation of Law 88 on Languages and Alphabets of Indigenous Peoples, and the design of the National Plan of Intercultural Bilingual Education. 	<ul style="list-style-type: none"> Land tenure policies that protect IPs rights and forests. Improve water, sanitation, and road infrastructure in remote rural areas with potential participation of the private sector through the PPP law.

Table A5. Progress made in 2015 SCD priority areas		
<i>2015 SCD Main Findings</i>	<i>Evolution since 2015</i>	<i>Recommendations of SCD 2023</i>
	<ul style="list-style-type: none"> Advances in the strengthening of a model that recognizes traditional medicine, including through the dissemination of Law 17 Traditional Indigenous Medicine and its regulation and the registry of health agents in traditional medicine. 	
<p>Women. Women have benefited from the growing job market.</p>	<ul style="list-style-type: none"> The COVID-19 pandemic hindered progress on the participation of women in labor markets as sector where women predominantly work were among the most affected. Many women who lost their pre-pandemic jobs left the labor force altogether. IP women face significant deprivations (lowest levels of educations and earnings). 	<ul style="list-style-type: none"> Increase access to effective healthcare in underserved rural and indigenous areas. Implementation of programs (soft-skills and vocational) to raise aspirations of young women. Strengthen the voice and participation of Indigenous women in the decision-making processes of Indigenous Authorities. Incorporate gender lens in the planning and delivery of services, particularly for the implementation of Indigenous Plan.
Energy		

Table A5. Progress made in 2015 SCD priority areas		
<i>2015 SCD Main Findings</i>	<i>Evolution since 2015</i>	<i>Recommendations of SCD 2023</i>
<p>Energy shortage</p> <p>Opportunities: Manage the national energy demand effectively; modernize the institutional framework of the sector, including improving the coordination among institutions that are key players in the sector; Add renewable energy or natural gas power generation, Panama may mitigate the risks of power shortages.</p>	<p>Energy supply has increased since 2015 and meets the demand.</p> <p>Renewable energy production has also increased.</p>	<p>Expand renewable energy production.</p> <p>Decrease transmission cost.</p>
Water		
<p>Adequate water resources management is the key priority area under sustainability.</p> <p>Unclear roles of the different agencies hamper effective regulation, and having multiple implementing agencies for infrastructure provision impedes coordination.</p> <p>Sector policy setting remains disjointed.</p> <p>The regulatory function of the sector is lacking, compared to other sectors in Panama, such as electricity and telecommunications.</p>	<ul style="list-style-type: none"> • In 2015, Ministry of Environment (MiAmbiente) was created to raise environmental protection to ministerial level. • In 2015, the High-Level Committee on Water Security was created to prepare the “National Water Security Plan 2015-2050. • In 2016, National Water Council (CONAGUA) is created with the responsibility for coordinating and guaranteeing the development and implementation of the National Water Security Plan. • The ACP has implemented programs providing incentives for environmental protection in the Canal’s watershed. • The ACP has implemented programs providing incentives for environmental protection in the Canal’s watershed, including freshwater fee and 	<ul style="list-style-type: none"> • Improve the Institutional, administrative, and technical capacity of the agencies involved in the management of water • Improve water management by clarifying responsibilities of institutions and strengthening coordination among them • Reduce gaps in access to and quality of water • Invest in upgrading, renewing, and maintaining old water and wastewater infrastructure • Ensure timely, reliable, and standardized information and data sharing on water • Improve real time coordination among water institutions to prevent inefficiencies in operations

Table A5. Progress made in 2015 SCD priority areas		
<i>2015 SCD Main Findings</i>	<i>Evolution since 2015</i>	<i>Recommendations of SCD 2023</i>
	<p>promotion of green technology.</p> <ul style="list-style-type: none"> • IDAAN has been implementing many initiatives to increase the awareness of public on water use, reducing non-revenue water through enforcement and decreasing water contamination. 	
Public sector efficiency		
<p>Transparency, regulatory framework, and efficiency of public sector management are the main challenges Panama faces.</p> <p>Opportunities at that time included: Meeting Global Forum standards on tax/ financial information sharing (OECD grey list); Introducing performance informed budgeting (PIB) along with better coordination; Improving fiscal management, modernizing financial planning, debt management, and fiscal risk from disasters.</p>	<p>The government has established the Anti-Corruption Prosecutor's Office and a new Judicial Council to address corruption issues but improving the quality and accessibility of budget information and strengthening oversight mechanisms are also necessary to combat corruption and improve transparency.</p> <p>Panama has been on the FATF grey list since 2019 due to the high risk of money laundering and terrorism financing. In June 2023, FATF recognized Panama's progress on all 15 areas of its Action Plan and agreed to an on-site visit to verify this progress.</p> <p>In February 2023, the European Union decided to keep Panama on its list of jurisdictions that do not cooperate in tax matters because the country has not complied with the international criteria on transparency and exchange of tax information, and for having a foreign source income exemption regime considered harmful. The government has committed to complying with OECD recommendations on domestic</p>	<p>Enhance the registry of beneficial ownership to comply with FATF actions and get off the grey list.</p> <p>Improve the quality and accessibility of budget information and strengthen oversight mechanisms to combat corruption and improve transparency.</p> <p>Invest in technology and public information ecosystems to increase transparency and efficiency in public services.</p> <p>Increase the efficiency of tax administration and mobilize tax revenue.</p>

Table A5. Progress made in 2015 SCD priority areas		
<i>2015 SCD Main Findings</i>	<i>Evolution since 2015</i>	<i>Recommendations of SCD 2023</i>
	<p>tax-base erosion and profit shifting in time for the Fall 2023 review.</p> <p>Government has undertaken the following reforms to modernize the tax system:</p> <ul style="list-style-type: none"> -Program of Support for the Digital Transformation of the Tax Administration in Panama (PATDAT), financed through a loan from the Inter-American Development Bank (IDB) in the amount of B/.40.0 million to be executed over 5 years. The program aims to achieve the following objectives: improving governance and human resource management, strengthening tax control and compliance facilitation, and enhancing technological management. -The online tax system, known as e-Tax 2.0, had 60 online procedures by the beginning of 2020, and currently, there are 160 active procedures, according to the Director of the Tax Administration (DGI). -Progress was made in electronic invoicing through voluntary mass adoption in the year 2021, with two modalities known as the free invoicer and the certified authorized provider (PAC). The adoption of electronic invoicing in Panama has accelerated in the last two years, increasing from 537 users in 2021 who were already issuing their operation receipts in this system to 38,656 users as of May 18, 2023. 	

Table A5. Progress made in 2015 SCD priority areas		
<i>2015 SCD Main Findings</i>	<i>Evolution since 2015</i>	<i>Recommendations of SCD 2023</i>
Improve public procurement practices.	The country has made progress in improving its public procurement framework since 2018, including the creation of the mandatory open-source platform PanamaCompra, which has enhanced public budget management's transparency, efficiency, and accountability.	Review and streamline the process in the Comptroller's office to increase efficiency in the procurement system.

Table A6. Knowledge gaps		
Knowledge gaps identified in the 2015 SCD	New knowledge since the 2015 SCD	New knowledge gaps
Human Capital		
Education		
Causes of dropout rates in Panama.	Student learning assessments: PISA 2018, ERCE 2019, Prueba CRECER since 2016.	<p>Evaluation of PASE-U program on secondary education dropouts.</p> <p>Evaluation of the creation of ITSE on technical education and skills mismatch.</p> <p>Evaluation of Plan Colmena on education and health outcomes.</p> <p>Assessment of the emerging lessons from student learning assessments (PISA, ERCE, CRECER).</p>
Health		
<i>Not identified as a priority in the 2015 SCD.</i>		<p>Demographic and health surveys.</p> <p>Survey data on women's health, gender norms, agency and empowerment, and violence against women.</p> <p>Administrative records on health markers and inputs with ample geographic coverage.</p>
Innovation, entrepreneurial capacity, and job quality		
<i>Not identified as a priority in the 2015 SCD.</i>		<p>Limited coverage and availability of firm data, especially micro firms and informal firms.</p> <p>Assessment of the drivers of informality and labor productivity.</p> <p>Assessment of labor regulations as sources of labor market frictions.</p> <p>Lack of data and analytical work on competition.</p>

Table A6. Knowledge gaps		
Knowledge gaps identified in the 2015 SCD	New knowledge since the 2015 SCD	New knowledge gaps
Inclusion		
Poverty by all ethnic and other vulnerable groups.	In 2017, the multidimensional poverty was measured for the first time. In 2020, the MPI was measured by district and township (corregimiento) using 2010 census data.	<p>General lack of granular social data. Basic food basket information for rural areas, especially IPs.</p> <p>Lack of reliable data on disability (following the Washington Group Short Set on Functioning) and migrants. Invisibility of gender and sexual minorities on census and survey data.</p> <p>Lack of basic farm-level survey data (economic and biophysical) to enable updated assessments of the main opportunities for improving productivity and competitiveness.</p> <p>Analysis of urban and rural poverty at granular levels (poverty mapping).</p> <p>Analysis on improvements needed for traditional and adaptive social assistance programs.</p> <p>Recent assessment of the redistributive ability of the fiscal system.</p> <p>Assessment of impacts of climate change and natural hazards on the poor and vulnerable.</p> <p>Assessment of recent increase in migration flows.</p>
Reliable data of Afro-descendants' conditions.	In 2016 the National Secretary for the Afro-Panamanians development – (SENADAP) was created. Since 2018 improvements have been made in the questionnaires of household survey to self-identify Afro-Descendants and an	Assessment of potential reporting biases in household surveys.

Table A6. Knowledge gaps		
Knowledge gaps identified in the 2015 SCD	New knowledge since the 2015 SCD	New knowledge gaps
	experimental census was implemented on 2021.	
Coverage and quality of public service delivery across the country (local governments).		
Tools such as general equilibrium model that can inform how different scenarios of sectorial growth would affect poverty reduction and shared prosperity.		
Energy		
Creation of simulation tools on growth or climate. Limited knowledge on underground water.	Climate change scenarios have been created by the Ministry of Environment In 2021, the Hydrology and Meteorology Institute was created to inform on weather conditions, climate change and risk mitigation, and produce information on water.	Analysis of urban poverty and the potential to increase social assistance programs in urban areas. Disaggregated data on forestry products extraction, processing, and commercialization is necessary to better define the economic importance of the sector.
Water		
Hydrological situation of the country is not well known. It comprises: Limited knowledge on underground water. Unreliable information on water uses.	In 2015 the Ministry of Environment was created In 2021, the Hydrology and Meteorology Institute was created to inform on weather conditions, climate change and risk mitigation, and produce information on water.	Knowledge on underground water remains limited. Limited information on water uses and tariffs.
Comprehensive understanding of the current water demand. Lack of a functioning information system to connect the knowledge of the various institutions involved in water resource management.		Lack of knowledge regarding the nutrition security status of different demographics in Panama (e.g., urban/rural, Indigenous comarcas).
Lack of up-to-date knowledge on water-stressed areas. Unknown ecological cost of water.		Role and contribution of secondary cities in addressing key development challenges.
Unreliable information on water uses.		
Lack of a functioning information system to connect the knowledge of the various institutions involved in water resource management.		
Unknown ecological cost of water.		
Environmental sustainability and resilience to natural disasters		
<i>Not identified as a priority in the 2015 SCD.</i>		Detailed data and analyses on the impact of climate change and natural disasters on economic sectors and population.

Table A6. Knowledge gaps		
Knowledge gaps identified in the 2015 SCD	New knowledge since the 2015 SCD	New knowledge gaps
		Study on water-land model that demonstrates how water scarcity and soil erosion in the upper watershed could impact the Canal's efficiency.
Public sector institutions		
Coverage and quality of public service delivery across the country (local governments).		Lack of reliable data and disaggregated statistical data of vulnerable groups challenges their inclusion in national policies, programs and projects. Data and markers of the health system's quality. Causes of dropout rates in Panama.
Lack of data on public service coverage and quality in Panama's municipalities hinders efforts to understand the correlation between weak local governance and access to services, highlighting the need for better spatial data analysis. Compiling detailed information (databases) on the quality and resources of regions, municipalities, and metropolitan areas in Panama could help fill this knowledge gap.		Data on public service coverage and quality in Panama's municipalities are still limited. Assessment of the data infrastructure (e.g., cloud, data center and data sharing mechanisms).
A computable general equilibrium (CGE) model could provide insights into the trade-offs of investing in different public services, and how different scenarios affect growth, employment, poverty reduction, and shared prosperity.		Still there is no CGE model to assess the tradeoffs of investing in different sectors.
		Road sector assessment, including accessibility and vulnerability to disaster analysis. Road safety assessment. Urban mobility assessment in secondary cities.
		Analysis of the tax system and tax expenditure.

Box 1. The Covid-19 pandemic exposed Panama's development challenges

The COVID-19 pandemic had a profound impact on Panama's economy and exposed its structural inequalities. GDP contracted by 17.7 percent in 2020, marking the largest drop in recent history. Although the economy rebounded with a growth rate of 15.8 percent in 2021, the COVID-19 crisis had a dramatic impact on the labor market. At the onset of the pandemic in 2020, the unemployment rate reached the historic level of 18.5 percent. Women accounted for more than 64 percent of the job losses in 2020. Although unemployment rates started to recover by 2021, women's participation in the labor market was still down by 14.6 percent (8.1 percentage points). The pandemic also uncovered many gender-related inequalities in household chores and child rearing. Labor losses were also larger among low-skilled workers. In fact, workers with primary education or less accounted for 81 percent of the labor losses between 2019 and 2021. As a result, poverty and inequality increased in Panama.

To mitigate the impacts of the crisis, the government created *Panama Solidario (PS)*. The program's monthly transfers and comprehensive coverage helped to contain the impacts on poverty and inequality. Between 2019 and 2021, poverty increased from 12.1 to 12.9 percent, but the increase would have been 4 percentage points higher without PS. In addition, the Gini coefficient also increased from 0.498 to 0.509 over the same period, with a mitigation of 0.016 Gini points. Moreover, the middle class would have shrunk by seven percentage points between 2019 and 2021, but PS buffered about two-thirds of this reduction. A new version of PS (*Nuevo Panama Solidario*) continues to support households at risk as labor market conditions have not fully recovered. However, clear targeting criteria will be necessary for the new program to be successful.

Furthermore, the pandemic had negative impacts on an already weak human capital. Public schools were closed for two years, leading to learning losses. Panama's losses in Learning-Adjusted Years of Schooling (LAYS) due to the pandemic are estimated at 1.7 years. These learning losses could translate into a significant decrease in earnings and productivity. Moreover, school closures also impacted the food security of households, as a limited number of schools continued receiving the benefits of the School Feeding Program (SFP). Compounded with income losses, the share of households reporting food insecurity increased from 11.9 percent before the pandemic to 24.7 percent in 2021. The pandemic also increased health-coverage gaps in remote areas and put the health system under huge pressure.

At the same time, the pandemic became an opportunity to sharpen public service delivery. The crisis exposed the lack of efficient delivery of basic public services and their uneven coverage. However, it also allowed the health, education, and social protection sectors to experiment with new service models. For example, a telemedicine program provided remote health services to patients with chronic conditions and positive COVID-19 cases; the implementation of the National Pharmaceutical Law²²⁸ ensured increased access to cheaper generic medicines; *Panama Solidario* was delivered through digital means to populations in urban areas (*Vale Digital*) and prompted the expansion of a National Registry.

But global effects of Russia's invasion of Ukraine further affected the well-being of households. Although inflation remained relatively moderate at 5.2 percent year-on-year in June 2022, transport inflation increased to 20.4 percent over the same period, driven by a surge in gasoline prices. While Panama's inflation was lower than that of its regional peers, price increases threaten vulnerable groups and the middle class. Food prices affect lower-income households the most, representing more than

22 percent of their expenditures. Meanwhile, transportation and food costs also represent a significant share of expenditures for middle-income households, around 20 percent. Given the widespread impacts across the income distribution, the price increases of mid-2022 resulted in the largest social unrest in decades. In response, the government deployed subsidies and tax cuts for fuel and food, costing about US\$300 million.

Figure 1. The Pandemic reverted over a decade of progress in women’s labor force participation.

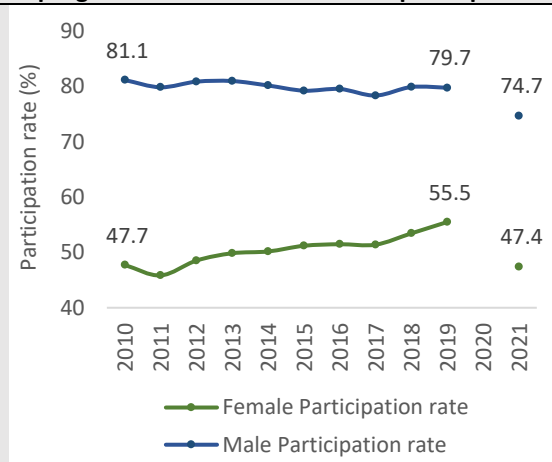


Figure 2. Resulted in increases in poverty rates despite strong social protection programs.

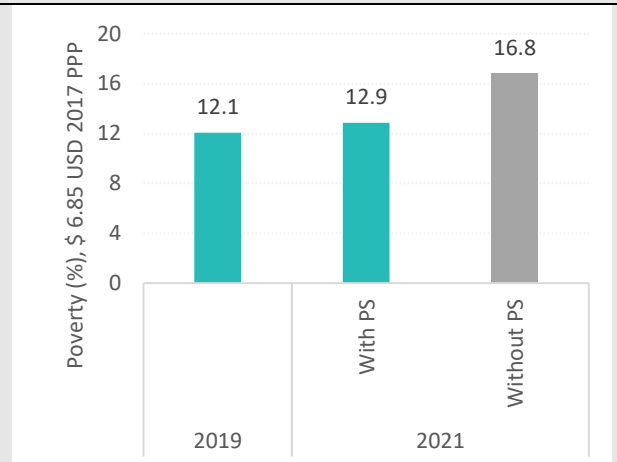


Figure 3. Resulted in increases in inequality.

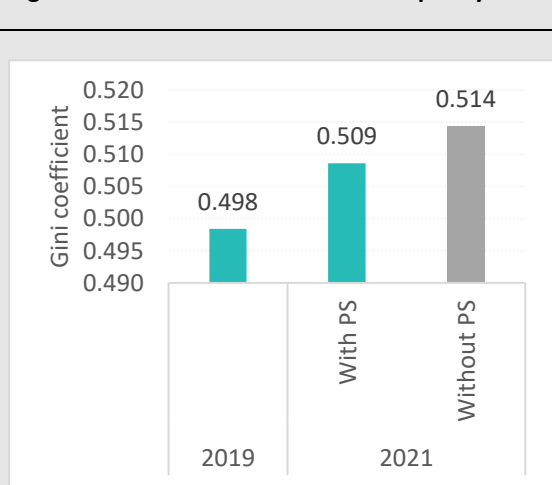
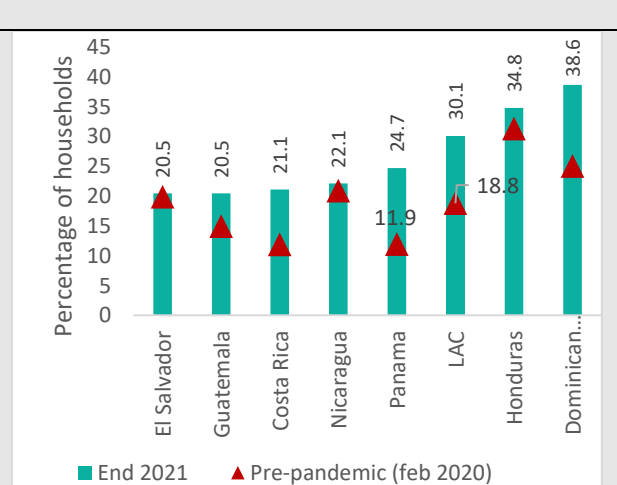


Figure 4. Labor and income losses resulted in food insecurity.



Source: (1) - (4): Socio-Economic Database for Latin America and the Caribbean (SEDLAC) (CEDLAS and the World Bank). Note: The phone-EMLT2020 is not included as it is not strictly comparable with previous years of the EML. (5) World Bank and UNDP (2021) High-Frequency Phone Survey, Wave 2.

Box 2. Knowledge and data gaps of key vulnerable groups

Migrants.²³⁰ Panama is facing an unprecedented crisis of mixed migration flows. In the last two years, the number of migrants and refugees traveling on foot through the Darien region²³¹ was around three times the number registered in the 10-year period between 2010 and 2020. In 2022, 248,284 people arrived in Panama transiting through this dangerous route, the highest annual figure on record. This represented an 86 percent increase in people entering Panama irregularly over the previous year (133,726). Most migrants, asylum seekers, and refugees are from Venezuela (61%), followed by Ecuador (12%), Haiti (9%), Cuba (2%), and India (1%). Notably, the number of children and adolescents in transit has been on the rise as well; in 2022, 40,438 minors crossed into Panama, the highest number recorded in history. Transit and irregular migration through this region have intensified in 2023, with 87,390 people making this trek between January and March, a 16-fold increase compared to the same three months from the previous year. According to UNHCR surveys, most migrants and refugees are in transit to the U.S. as their destination.

Conditions at this crossing point are extremely precarious and dangerous, and migrants that arrive to host communities lack access to shelter, information, food, healthcare, water, and other basic services, and in many cases are subject to physical and sexual violence. Effective October 12, 2022, the US announced that Venezuelans who seek to enter the US illegally will be returned to Mexico. Procedures to access the refuge and asylum system remain unclear. In the short term, the policy increased pressures in transit countries like Panama, which experienced an immediate increase of migrants and refugees stranded in transit and in very vulnerable conditions. In addition, the end of Title 42 on May 11, 2023, is expected to accelerate migration flows to the U.S., though the medium and long-term impacts of this decision on Panama and other transit countries are still being assessed, including potential risks such as straining natural resources in the Darien, invasion of IP lands, and increased social unrest.

In a joint statement on April 11, 2023, the U.S., Panama, and Colombia agreed to launch a sixty-day campaign to halt irregular migration through the Darien Gap and provide new pathways for legal migration and launch a plan to develop border communities in northern Colombia and southern Panama. The impact of these measures is yet to be assessed.

People with Disabilities. Panama's 2018 household survey shows a higher incidence of poverty in households without persons with disabilities compared to household with, which is not consistent with what it is observed in the region²³². Data limitations, such as stigma in reporting or measurement errors, should be taking into account and further studied. Moreover, Panama is one of the few countries in LAC that has not incorporated the Washington Group Short Set on Functioning (WG-SS) in their census and surveys. The WF-SS is a set of international criteria for collecting high-quality comparable data on disability²³³.

Afro-descendants (ADs). Based on household data, ADs appear not to be worse off than the rest of the population on several markers of wellbeing. Access to services of ADs is high compared to the Indigenous populations, reflecting in part that many live in the urban areas (81 percent). However, recent studies show that ADs -particularly women²³⁴²³⁵- have been excluded from the country's economic growth and face exclusion in labor markets, access to health and political participation. A better measurement of these group in household surveys is needed for a deep analysis of their vulnerabilities. Since 2018, some improvements have been made in the questionnaire of household

survey to self-identify ADs. As a result, the population identified as AD has increased from 9.2 percent in 2010 (Census) to 28.6 percent in 2021 (EML).

Sexual and gender minorities. Despite some advances in the past decades, lesbian, gay, bisexual and transgender (LGBT) people continue to face discrimination in Panama. It is difficult to tackle the exclusion of LGBT people because of the entrenched stigma and the lack of an enabling legal framework. For example, there are no legal provisions explicitly protecting LGBT people. In Panama, this topic remains invisible as no census or survey collects information on gender identification and sexual orientation, making it difficult to carefully assess exclusion among this segment of the population.

Box 3. Indigenous territories and the *comarcas*

Panama is home to seven Indigenous ethnic groups, namely the Ngäbe or Ngöbe, Kuna or Guna, Emberá, Buglé, Wounaan, Teribe/Naso, Bokota and Bribri. Based on the 2019 household survey, about 42 percent of IPs live in *comarcas*, while the rest live in other areas.

The ancestral lands and indigenous territories in Panama have different levels of recognition and autonomy, ranging from collectively owned communities to formal *comarcas* (including the recent creation of the Comarca Naso Tjër Di in 2020), where the government has recognized significant levels of autonomy in traditional forms of government, land, and natural resource rights and ways of living. The *comarcas* and other Indigenous territories are self-government through ten Congresses and two Councils.

Four reinforcing factors underpin the inequalities between Panama's Indigenous Territories and the rest of the country: (i) the remote and dispersed nature of Indigenous communities; (ii) the lack of public servants to provide quality and culturally pertinent services; (iii) low levels of public investment; and (iv) limited capacity for planning and coordination across sectors and with IP authorities. Difficult access leads to higher costs for building and maintaining infrastructure and presents a specific challenge to attract qualified personnel for service delivery. For example, the *comarca* Ngöbe Buglé has 2.2 health workers per 10,000 inhabitants compared to the national average of 29.5 per 10,000 inhabitants²³⁶. Additionally, difficult access is exacerbated by low levels of public investment in Indigenous Territories and limited capacity among government agencies to plan and coordinate public investments across sectors and with Indigenous Authorities. Between 2014 and 2015, only 2.3 percent of total central government investment spending went to the *comarcas*, even though they are home to the majority of the poor. At the same time, coordination has been hindered due to the lack of structured platforms for upstream consultation with Indigenous Authorities and among government agencies. As a result, investment in Indigenous Territories has been affected by lack of coordination and limited information about local contexts and priorities.²³⁷

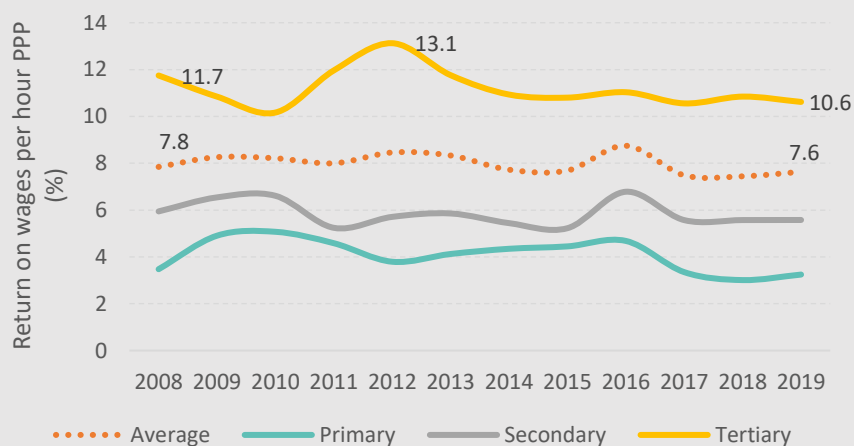
Progress has been made during the past decades through the recognition of Indigenous Peoples' cultural rights and collective land tenure security, the formulation of the National Indigenous Peoples Development Plan (PDIPI), and the establishment of the National Council for the Integral Development of Indigenous Peoples (CONDIPI).

The National Indigenous Peoples Development Plan represents, for the first time, a national consensus among the 12 Indigenous Congresses and Councils on a common vision for their development. Its driving principles are: (a) Indigenous Authorities play a leading role as partners in defining and implementing development investments in their Territories; (b) development programs should address the multi-dimensional aspects of poverty and well-being, based on Indigenous cultural norms and values; and (c) development investments should benefit all 12 Indigenous Territories. The 15-year Plan outlines objectives, actions, and indicators around three Pillars: (a) political and legal (governance and land rights); (b) economic (productive activities and food security); and (c) social (access to basic infrastructure and services).

The Panamanian government has demonstrated strong commitment to work with the IP Roundtable and implement the Plan. What was historically the Directorate of Indigenous Affairs has been upgraded to the Vice Ministry of Indigenous Affairs (VMAI). MINGOB has been invited to participate within the government’s Social Cabinet to improve the alignment of social policies and public investments with the Plan. A significant increase of investments has been made to a few of the *comarcas* and in January 2017 a Presidential Decree transferred to MINGOB the resources and mandate to institutionalize the IP Roundtable.

Box 4. Estimating education return differentials by education level ²³⁸

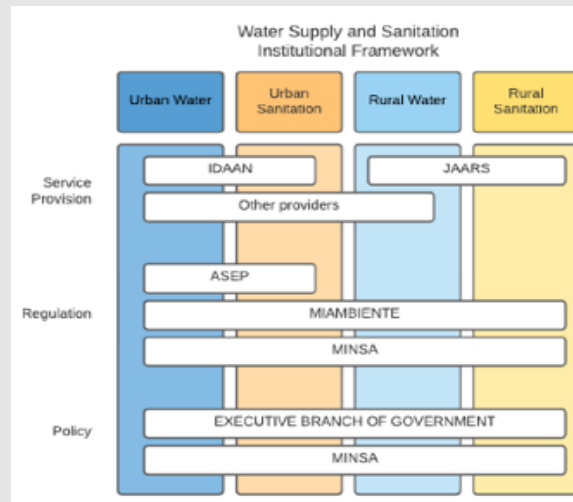
Overall, the average returns to education in the last decades have remained constant in Panama. Yet, the difference in the returns of completing primary and secondary education is small and decreased between 2010 – 2015 and have increased in the last years. Returns to tertiary education are relatively high and peaked in 2012 remaining relatively stable afterwards. According to Hausmann, Espinoza and Santos (2016) the returns of secondary education in Panama have been affected by the boom of construction jobs that paid high salaries to low-skilled workers.



Box 5. Water Management System of Panama

The National Aqueducts and Sewerage Institute (IDAAN) is the main water provider in charge of supplying drinking water and wastewater management in urban areas and rural communities with over 1,500 inhabitants, serving about 68 percent of Panama’s population.²³⁹ The remaining rural areas where most indigenous populations reside have access to water and sanitation only through locally organized water committees named Rural Aqueduct Administrative Boards (JAAR), whose organizational strength varies, leading to concerns about the supply and quality of water.²⁴⁰ The National Authority for Public Services (ASEP) supervises and regulates the provision of water and sanitation services; MiAmbiente regulates and monitors the compliance with laws and regulations on the country’s natural resources including water; while the Ministry of Health (MINSa), through its Directorate of Drinking Water and Sanitation (DISAPAS), formulates, coordinates, and implements the policies and strategies of the drinking water and sanitation services sector.²⁴¹ ACP is responsible for the administration, maintenance, use, and conservation of the Canal’s water resources.

Figure 9: Institutional Framework Water and Sanitation Sector



Source: Netherlands Water Partnership (2022): Panama Water Sector Study.

Note: The figure updates the information provided in Panama SCD 2015 based on information in 2018.

Box 6. Initiatives of the Panamanian Government since 2015 to Promote Environmental Sustainability and Resilience

Since 2015 Panama has undertaken important steps to strengthen the country’s environmental governance and its climate legal and institutional framework

- **A major landmark in the national environmental and climate change policy was the approval of the General Law of Environment (Law of March 8, 2015),** which creates the Ministry of Environment MiAMBIENTE. Elevating environmental protection to a ministerial level resulted in budgetary provisions that reduced some previous human and financial resource challenges that impeded in the past full application and enforcement of national environment regulation.

Many of MiAmbiente's regulatory and enforcement powers emanate from this Law, which still serves as an overall framework for regulating and managing environmental issues. The institutional reform and budgetary improvement have been supported by a framework of policies including: the Biodiversity Strategy and Action Plan (NBSAP) 2018-2050, the National Environmental Strategy (2021-2050), the National Forest Strategy 2050, the Regulation of the mitigation chapter of the GLE through Executive Decree No. 100 of October 2020, the Regulation of the adaptation chapter of the GLE through Executive Decree No. 135 of April 2021, the National Strategy for Climate Change 2050, Panama's 2021 Climate Vulnerability Index vulnerability, the 2022 National Climate Action Plan, and the National Gender and Climate Change Plan.

- **In 2015, the High-Level Committee on Water Security was created to prepare the “National Water Security Plan 2015-2050: Water for All” plan to safeguard the integrity of Panama’s water resources,** improve access to water and provide a diagnosis of Panama’s challenges related to water. The plan identifies five national goals: Universal access to high quality water and basic sanitation services; water for inclusive socio-economic growth; preventative management of water-related risks; healthy river basins and ecosystems and water sustainability and prevention of water-related conflicts. The plan also created in 2016 a National Water Council (CONAGUA), following the state of emergency due to the impact of El Nino, which is responsible for coordinating and guaranteeing the development and implementation of the National Water Security Plan. To reduce contamination and restore watersheds, Panamanian government plans to integrate watershed management, by improving the management of sustainable use of land and strengthen the monitoring of water. The first action includes management plans for the sustainable use of land, like sustainable farms.²⁴²
- **The ACP has implemented programs providing incentives for environmental protection in the Canal's watershed.** Together with the support of the government and private institutions, these programs have made progress in recovering forest cover, which directly affects the conservation of the basin that supplies drinking water to 50% of the country's population. The ACP has also implemented incentives for the use of green technology.
- **IDAAN has been implementing many initiatives to increase the awareness of public on water use, reducing non-revenue water through enforcement and decreasing water contamination.** In 2021, with a new director, IDAAN is focused on digitalization and technology-driven innovation.²⁴³ The IDAAN also aims to address Panama’s water-related problems, explicitly promoting awareness in the Panamanian population regarding rational water use through environmental education campaigns,⁵ reducing non-revenue water through enforcement and replacement of infrastructure, increasing drinking water and sanitation coverage, and optimizing water purification and wastewater treatment plants (WWTP) (IDAAN, 2019). In 2021, IDAAN has focused on digitalization, and technology-driven innovation.
- **Panama has developed various policies and institutional arrangements to support the country’s strategy to address climate change,²⁴⁴ including a Strategic Plan (PEG) 2019-2024²⁴⁵ to strengthen the** institutional framework for managing disaster risk, as well as adequate financial and training support to SINAPROC (National Civil Protection System) and first responders. While the PEG emphasizes the need to manage and reduce climate and disaster risk factors,

including at subnational levels, it also emphasizes that—even with the Association of Municipalities of Panama (AMUPA) as a strategic partner—there is not sufficient local technical capacity to allow SINAPROC to effectively decentralize its DRM responsibilities. To further integrate DRM into public policy, the Strategic Plan called for the development of a more comprehensive institutional framework to address the risk factors for climate and other disasters, and to update the National DRM Policy in accordance with international policies and the national context.²⁴⁶ Following the hurricanes Eta and Iota at the end of 2020, in 2021, the government approved the creation of the Institute of Meteorology and Hydrology of Panama (IMHPA)²⁴⁷ to act as the official meteorological and hydrological authority at the national level and to manage early warning systems (SAT) in the national territory, filling a legal gap in this matter, on which there were no clear institutional guidelines.

Panama has also taken steps to untap the potential of renewable energies and promote green transition:

- **In March 2016 the National Energy Plan 2015-2050 (PEN 2015-2050) was approved**, which serves as a long-term roadmap for diversifying the energy sector and advancing energy access, energy efficiency, energy security and the overall decarbonization of the energy system. Under the ambitious scenario of the plan, renewable energy could reach 70% of the power supply by 2050, while at the same time meeting growth in demand. Moreover, the Government of Panama has made important progress in developing an institutional framework for climate change, including through the submission of its updated Nationally Determined Contribution (NDC)²⁴⁸ in 2020. Panama's updated NDC is structured around actions in ten sectors²⁴⁹ focusing its mitigation commitments on the sectors with the greatest impact on the national emissions trends, namely: Energy and Forests.
- **Panama is part of "Renewables in Latin America and the Caribbean" (RELAC) initiative** along with 14 other countries. This initiative is implementing various measures to mitigate the impact of climate change.
- **Panama launched the project "Aligning Financial Flows of the Financial Sector in Panama with the Climate Change Objectives of the Paris Agreement,"** funded by the Green Climate Fund and the European Union through the EUROCLIMA program. Over the past two years, the Ministry of Economy and Finance has made significant progress in building technical capacities in the public sector, mainly related to mainstreaming climate change in budget, investment, and public debt management processes.
- **The Superintendence of Banks of Panama (SBP) joined the green taxonomy project for Central America.** It will receive support from the International Finance Corporation (IFC) to develop a sustainable finance guide, including definitions of economic activities and assets that can be considered green in accordance with international standards. National Energy Secretariat highlights a planned investment of over B/. 4 billion dollars in energy transition initiatives by 2024, linked to solar rooftops for state buildings, electric mobility, energy efficiency, solar heaters, smart grids, the Hydrogen Hub, and the fourth transmission line, among others.

- **Energy transition project towards using green hydrogen is in the second phase of the roadmap**, aiming to create laws, fiscal and non-fiscal incentives to attract private investments towards free zones for the production, distribution, and commercialization of this alternative fuel. (vii) Over the past two years, the Ministry of Economy and Finance (MEF) and the Ministry of Environment (MiAmbiente) have formed a strategic alliance to mainstream the climate change variable in policy instruments management (investment, public debt, and budget) through actions aimed at strengthening national capacities in these areas.
- **Green bonds development:** The first Green Bond in the Panamanian market was issued by the Inter-American Corporation for Infrastructure Financing (CIFI), amounting to US\$200 million for investment in waste management facilities, wastewater treatment, effluents, recycling, and other environmental risk mitigation projects. In 2021, the Panama Canal Authority (ACP) issued its first green bond, raising 2 billion dollars to finance sustainable environmental projects. The bond issuance generated significant interest, demonstrating support for ecological initiatives.
- **Creation of green investment funds:** The Water, Protected Areas, and Wildlife Trust was created to be a permanent source of financing and support for environmental initiatives.
- **In 2023, PROPANAMA organized the first sustainable investment forum** to promote, alongside the private sector, the attraction of sustainable high-impact Foreign Direct Investment.
- **The Development Bank of Latin America (CAF) approved allocating US\$122 million from the Green Climate Fund (GCF) to support electric mobility in Panama, Paraguay, and Uruguay.** The IDB also offered non-reimbursable financing for environmental projects (green hydrogen). (v) BAC Panama will use US\$135 million to drive social and environmental projects through financial solutions focused on promoting clean energy use and sustainable mobility in Panama and Central America.

Box 7: The Role of Agriculture in the Policy Priorities and High-Level Objectives

Inclusion of IPs, rural populations, and women: Reducing the inequalities faced by small farmers and IPs engaged in agriculture will be a critical element of the inclusion agenda. To this end, the Ministry of Agriculture (MIDA) has adopted a Family Farming Law (with the support of the DPL P174107) to focus its support to family farmers with high levels of poverty. MIDA has identified several priorities for its future investments to improve the productivity, income, access to services (e.g., through digitalization) and access to finance of small farmers and IPs engaged in agriculture.

Level and quality of human capital: Supporting small farmers and IPs engaged in agriculture to transition from low- to high-value-added activities is an important opportunity for generating higher quality jobs in rural areas. Agro-industrial companies in Panama are important players with great potential to revitalize the rural economy. Agro-industry is comprised of more than 340 companies, representing one-third of all industrial companies in Panama, and these generate approximately 32,000 full-time jobs, equivalent to 8.5 percent of the country's total employment.²⁵⁰

Promote the sustainability of water and forests and resilience to natural disasters: supporting sustainable agriculture livelihoods in Panama's poorer rural areas will be critical to eliminating deforestation. A high proportion of forest lost occurring in Panama over 2012-2019 coincides with the country's poorest and more agriculturally active areas. For example, 48,758 ha of forest were lost over this period in Panama's southern Central Region; this area is also characterized by 60 – 90 percent employment in agriculture and by poverty rates above 40 percent - including for some above 80 percent. Notably, several of Panama's remaining areas of denser forest cover still overlap with areas of 60 – 90 percent employment in agriculture as well as poverty rates of 40 – 100 percent.

¹ Growth figures are from PWT. See Figures A1a, A1b and A2 in the appendix for comparative growth figures of Panama.

² Unless otherwise noted, this document uses the SEDLAC methodology to construct household income aggregates (https://www.cedlas.econo.unlp.edu.ar/wp/wp-content/uploads/Methodological_Guide_v201404.pdf) and defines monetary poverty and extreme poverty as the headcount of people living under \$6.85 a day (2017 PPP) and \$3.65 a day (2017 PPP), respectively. As of 2019, the percentage of the population living in poverty was 12.1, while the percentage living in extreme poverty was 3.7 percent. In general, the SCD update focuses on monetary poverty. In 2019, the official poverty rate was 21.5 percent, while the official extreme poverty rate was 10.0 percent.

³ Data is obtained from <https://www.csis.org/analysis/key-decision-point-coming-panama-canal>.

⁴ See Figures A3 through A5 in the appendix on GDP share of trade, Colon FTZ, and the Canal.

⁵ See Figures A6a and A6b for private and public sector investment shares in GDP.

⁶ See Figures A7a and A7b for FDI share of GDP and its sectoral distribution.

⁷ See Figures A8a and A8b in the appendix for GDP share of key sectors and the contribution of these sectors to the value-added growth.

⁸ See Figures A9 and A10 for the key events in Panama's economic history and the evolution of GDP and construction sector.

⁹ Although the pandemic and Russia's invasion of Ukraine led to increase in inflation, public debt, current account deficit and fiscal deficit, they have been declining and are expected to stabilize in the medium term. Inflation is expected to increase temporarily to 3.3 percent in 2023 before converging to 2 percent by 2025. The current account deficit is forecasted to widen to 3.5 percent of GDP in 2023, driven by higher import prices, but is expected to stabilize at 3.2 percent in the medium term, supported by decreasing food and oil prices. Anchored in the Fiscal and Social Responsibility Law, fiscal deficit is expected to decline through tax administration reforms, higher canal revenues, and controlled public spending. Panama's debt-to-GDP ratio is estimated to have peaked in 2022 and is expected to gradually decline.

¹⁰ See Figures A11 through A13 in the appendix for macro and investment climate indicators of Panama.

¹¹ WDI. See also <https://tradingeconomics.com/country-list/rating> for the list of all countries with investment grade.

¹² See Figures A14a through A14d in the appendix on labor market indicators of Panama.

¹³ Hausmann, Obach and Santos (2016).

¹⁴ The SCD update defines labor informality using a legalistic approach. A worker is defined as informal if she does not contribute to the pension system. The main results of the report are robust to alternative definitions.

¹⁵ OECD (2017) suggests that high informality rates are the result of inflexible regulations for hiring of temporary workers. Also, see sub section 3.2.1 for a discussion on vertical and horizontal inequalities.

¹⁶ In 2019, only 44 percent of Panama's rural population had access to paved roads.

¹⁷ Unpaid workers are those that work at least an hour a week to generate some form of income but do not receive a direct form of payment for their labor, neither in kind nor monetary. For example, a family member working in a family farm or family business.

¹⁸ Overall employment increased by 14 ppt between 1991 and 2019 (from 48.1 to 62.8 percent). The increase was larger in rural areas, from 49.7 percent in 1991 to 68.5 percent in 2019 (18.8 percentage points), compared to urban areas (from 46.8 percent in 1991 to 60.6 percent in 2019, or 13.7 percentage points). Data for the *comarcas* starts in 2001: the employment rate increased in the *comarcas* from 63.2 percent in 2001 to 89.4 percent in 2019. However, the percentage of people that were employed but unpaid in the *comarcas* increased from 29.7 percent to 43.8 percent over the same period.

¹⁹ See Figures A1b, A3, A4, A5a, A5b and A7a in the appendix.

²⁰ See Figure A7b for decomposition of FDI inflows by sector. According to IMF (2020), since January 2014, the number of banks in Panama declined from 91 to 79. The onshore system lost four banks, two of which were foreign banks and offshore banks declined by eight. IMF (2020) projects that this trend may continue, as smaller banks with lower profits and higher NPLs, may not afford increasing operational costs (due to more stringent AML/CFT regulations and implementation of Basel III standards), and may be acquired by larger banks or exit.

²¹ See Figure A5a in the appendix.

²² See Figures A15 through A19 in the appendix.

²³ Labor market indicators presented in the SCD Update have been constructed using the harmonized definition from the Socio-Economic Database for Latin America and the Caribbean (SEDLAC). Therefore, numbers presented here might differ slightly from the official figures produced by the INEC. In 2019, the official unemployment and informality rates reached 5.8 and 44.9 percent, respectively, based on the EML.

²⁴ See Figure A20 in the appendix.

²⁵ Secondary enrollment rates (63.8 percent in 2019) have not improved over the past decades and remain below the regional average (77.5 percent). In addition, according to the Regional Comparative and Explanatory Study (*Estudio Regional Comparativo*

y *Explicativo*, ERCE), 83 and 97 percent of sixth-grade students do not achieve the minimum learning outcomes in reading and math, respectively.

²⁶ In 2021, Panama's growth bounced back to 15.3 percent and continued to grow at 10.5 percent in 2022. It is expected to decrease to 5.7 percent in 2023, primarily due to the global economic slowdown and the US monetary policy tightening.

²⁷ Since the pandemic, the National Authority for Government Innovation (AIG) has been implementing various measures to improve the connectivity of the population. In 2020, the Digital Coverage project provided mobile connectivity to remote communities in the Darién region and the Ngäbe-Buglé and Guna Yala comarcas benefiting 71,818 people. Moreover, the "Solidarity Educational Plan" allowed free access to the Internet for student in public schools.

²⁸ See Box 1 in the appendix for a summary on how COVID-19 exacerbated Panama's challenges.

²⁹ For example, the Biodiversity Strategy and Action Plan 2018-2050, the National Environmental Strategy 2021-2050, and the National Forest Strategy 2050. See Box 6 for more details on government's actions to promote environmental sustainability and resilience to disasters.

³⁰ According to MEF, in 2021, Panama Canal Authority (ACP) signed an agreement with the United States Army Corps of Engineers to analyze the water projects program to find an optimization system in water management, both for ship transit through the Panama Canal and for human consumption. The administrator of the Panama Canal, Ricaurte Vásquez, announced in January 2023 that the ACP has received the draft of the potential solutions package for the new water management system, which will ensure water resources for the consumption of Panamanians and canal operations in the coming years. The implementation of the new water management system will require an investment of over 2 billion dollars, and work is underway to execute it.

³¹ See Tables A3a and A3b in the appendix for different methods used to benchmark policy priorities, their findings, and data sources.

³² See Appendix Table A3b for details.

³³ See Figure A19 in the Appendix.

³⁴ In addition, access to banking is constrained by burdensome paperwork, financial requirements, and an over-centralized location (Figure A21 in the appendix). Panama's financial inclusion index in 2017 was lower than high-income and upper middle-income countries, as well as the regional average. National statistics show that only 14 percent of all bank accounts belong to the persons in the two poorest income quintiles (World Bank 2021). Even though in almost all countries female, poor, and rural population had a lower access to finance, this was worse in Panama than in high-income and middle-income countries (Garcimartín et al. 2022).

³⁵ See Human Capital Index (HCI) 2020 of the World Bank.

³⁶ Growth became even more pro-poor during the slowdown period - between 2017 and 2019 - due to the large labor income growth of the bottom 40 in rural areas of 21.3 percent (compared to 6.2 percent of the total rural population). In fact, labor earnings accounted for 34 percent of poverty reduction in rural areas compared to 15.6 percent in urban areas between 2013 and 2019.

³⁷ Reducing poverty becomes more difficult as poverty levels are lower. An alternative explanation for the poverty level in urban areas to remain stagnant is that the economic slowdown affected the ability of the labor market to keep lifting people out of poverty. Although potentially true, the share of people living in vulnerability to poverty in urban areas continued to decrease, while the middle-class continued to expand. However, labor market conditions started to weaken at the time of the macroeconomic slowdown. See figures A15 to A20 in the Appendix.

³⁸ The participation rate in rural areas steadily increased by 4.7 percentage points from 2015 to 2019, with a minor increase in the unemployment rate of 0.8 percentage points. Agricultural and primary activities, a comparatively low-pay sector, presented one of the highest annual income growth rates at 4.4 percent in the period.

³⁹ Lavado and Yamada (2022).

⁴⁰ See Figure A22 in the appendix.

⁴¹ This section follows and an asset-based framework, which provides evidence on the different elements that promote (or deter) households' income generating capacity, and ultimately their economic development. See: López-Calva and Rodríguez-Castelan (2016); Bussolo and López-Calva (2014); and Attanasio and Székely (1999).

⁴² Either due to pending titling or lack of enforcement mechanisms in the case of invasion of *colonos*. Panama's legal framework for protecting the land rights of IPs is one of the most progressive. Despite this, IP *comarcas* and territories have not yet managed to successfully complete the process for securing collective title to their lands. Threats to the land rights of IPs come from increasing competition for access to lands that are claimed by IP but are not yet titled.

⁴³ Garcimartín et al. (2022).

⁴⁴ Panama's Rural Access Index, which includes primary, secondary, and tertiary road networks, is 58.4 percent, the lowest in Central America (Mikou et al., 2019).

⁴⁵ Between 2013 and 2019, public transfers accounted for 10 percent of the observed poverty reduction over the period. In the years preceding the 2015 SCD, public transfers played a more important role explaining over a quarter of the poverty reduction

observed between 2008 and 2013. In part this might be driven by a reduction in coverage of the main cash transfer programs. For example, RdO reached around 35 percent of the population in the poorest quintile in 2013 but only 20 percent in 2019.

⁴⁶ Other social programs have much higher adequacy. For instance, *120 a los 65* represents 33 percent of the income of the poorest quintile, and *Angel Guardian* and *Beca Universal* represent 14 percent each.

⁴⁷ INEC (2019) Encuesta de Propósitos Múltiples. Based on the question: “In the last 12 months, have your, your household, or your assets been affected by natural hazards?”

⁴⁸ Climate-induced flooding can increase water-borne and vector-borne illnesses. Bouley et al. (2018).

⁴⁹ Widespread inefficiencies and unsustainable practices at the post-harvest, storage, processing, transport, and distribution stages stifle productivity, hamper the environment, and leave small producers vulnerable to climatic and economic shocks, while keeping them excluded from high-value markets and income generation opportunities.

⁵⁰ Catastrophic events have a disproportionate impact on the poor and vulnerable. Climate-related threats undermine the sustainability of agri-food systems, and the ability of rural families to secure food and nutrition and generate income. In particular, the livelihoods of the rural poor depend on water availability and subsistence farmers have far fewer coping mechanisms in the face of extreme weather events. Changing climatic conditions and physical damage from floods and hurricanes threaten the ability of rural poor to generate income, improve their food security, and accumulate human capital.

⁵¹ MiAmbiente (2020a).

⁵² World Bank (2018).

⁵³ According to World Bank simulations in an intermediate scenario (World Bank, 2022). See Figure A23 in the appendix.

⁵⁴ INEC. (2021). Encuesta de Mercado Laboral [National Labor Market Survey]. Panama: INEC; and OECD. (2018).

⁵⁵ Figure A24 in the appendix.

⁵⁶ UNESCO (2020).

⁵⁷ PISA refers to the OECD’s Programme for International Student Assessment. ERCE is the UNESCO’s Comparative and Explanatory Study for Latin America.

⁵⁸ Meduca (2021).

⁵⁹ Aleph (2019).

⁶⁰ OECD (2020a).

⁶¹ UNESCO (2022).

⁶² Meduca (2010).

⁶³ Jin et al. (2019).

⁶⁴ UNESCO. (2021).

⁶⁵ Loizillon, A. (2020); UNESCO (2021).

⁶⁶ OECD (2019a).

⁶⁷ World Bank (2021b).

⁶⁸ Panama’s Electronic Health Information System (SEIS) is based on the electronic medical record of the patient and utilizes standardized codes for diagnosis and services rendered.

⁶⁹ Gutierrez et al (2023).

⁷⁰ World Bank (2021b).

⁷¹ World Bank (2023).

⁷² See Figure A25a in the appendix for the sub indicators of Global Entrepreneurship Index (GEI) in 2019, which is the latest available data on GEI.

⁷³ See UNCTAD (2019), IMF (2023a and 2023b), Aliperti et al. (2021), World Bank (2021d).

⁷⁴ See Figure A25b in the appendix for the indicators on the productive capacities of Panama.

⁷⁵ See Figure A25c in the appendix for the product market regulations.

⁷⁶ Global Entrepreneurship Monitor (2023). Established business ownership rate increased from 4.7 percent in 2019 to 5.8 percent in 2022, while the percentage of adults running a new business increased from 23 percent in 2019 to 28 percent in 2022 (which were at 33 percent in 2020 and 22 percent in 2021). Out of 49 countries participating in GEM, the proportion of adults starting or running a new business is highest in five Latin America and Caribbean countries from middle-income (Level B) and low-income (Level C) economies, in the same order, Guatemala, Colombia, Panama, Chile, and Uruguay, followed by high-income (Level A) United Arab Emirates and low-income Togo. All these countries have around one in four adults or more starting or running a new business. Panama surpassed 46 economies, including all 21 high income economies (Level A) in the study, covering among others United States, Canada, United Kingdom, Japan, Germany, Sweden, and Norway.

⁷⁷ World Bank (2013).

⁷⁸ Schwab, (2019).

⁷⁹ World Bank (2018). Household survey data from 2019 indicate that the returns to tertiary education in Panama are 11 percent higher than the returns to secondary education. See Box 4 in the appendix.

⁸⁰ Labor market indicators presented in the SCD Update have been constructed using the harmonized definition from SEDLAC. Therefore, numbers presented here might differ from the official figures produced by the INEC. In 2012, the official informality rate was 37.3 percent based on the EML.

⁸¹ OECD (2017).

⁸² OECD (2017).

⁸³ Cunningham (2007) and OECD (2018).

⁸⁴ ILO (2019).

⁸⁵ See Figure A25a in the appendix for Global Entrepreneurship Indicators (GEI) of Panama in 2019.

⁸⁶ See Figure A25a in the appendix for details on each indicator of GEI.

⁸⁷ GEM (2023). NECI index summarizes the average state of 13 national Entrepreneurial Framework Conditions selected by GEM researchers as the most reliable determinants of a favorable environment for entrepreneurship, which include. The GEM Global Report is based on hard data collected from at least 2000 entrepreneurs and national experts in a country.

⁸⁸ See Figure A26 in the appendix for details on NECI's sub-indicators. Panama's score in the remaining indicators of NECI in 2022 are as follows. Government Policy: Taxes and Bureaucracy (4.9 out of 10), Government Entrepreneurial Programs (4.8), Entrepreneurial Education Post-School (4.5), Each of Entry: Market Dynamics (4.0), Ease of Entry: Burdens and Regulation (4.3). The score ranges from 0: very inadequate/insufficient status to 10: very adequate/sufficient status.

⁸⁹ See Figure A27a in the appendix.

⁹⁰ AMPYME (2021).

⁹¹ Moreover, from 2000 to 2018, on average, only 9 percent of adults had a credit card, and just 23 percent had a debit card. By contrast, these figures were 22 percent and 48 percent, respectively, among structural peers and 71 percent and 14 percent among aspirational peers (Demirgüç-Kunt et al. 2021).

⁹² ILO (2019).

⁹³ Source: EML2015-2029.

⁹⁴ World Bank (2021c).

⁹⁵ See Figure A27b in the appendix.

⁹⁶ OECD (2018).

⁹⁷ UNCTAD (2019).

⁹⁸ See Figure A28 in the appendix.

⁹⁹ A considerable percentage of IPs reside on islands, particularly in the Guna Yala region, and, thus, 35.2 percent of the IPs depend on sea and rivers as the main source of transportation instead of roads. (Source: EML 2019).

¹⁰⁰ COPA Airlines is a well-running airline, owing to its very high standards of safety and security, despite the inadequate regulatory framework of Panama.

¹⁰¹ See Table A1 in the appendix. Positive linkages between the adoption of digital technologies and productivity have been well established in the literature. According to OECD estimates, in the EU a 10 percentage-point increase in the share of firms using high-speed broadband internet and cloud computing leads to a 1.4 percent and 0.9 percent increase in multi-factor productivity after one year, respectively. After three years, these figures rise to 3.9 percent and 2.3 percent, respectively. For policies promoting connectivity to be effective, however, they must be accompanied by the efficient reallocation of resources, which includes mitigating the costs of the digital transition for displaced workers and maximizing their reemployment potential (Sorbe et al. 2019; Gal et al. 2019; Draca et al. 2009 and Syverson 2011).

¹⁰² As part of the National Digital Agenda, AIG has the objective to connect remote rural areas through fiber optic, improving the connectivity of 60,000 citizens, and reaching 151 school. In addition, AIG is developing Educational Wifi project through VSAT.

¹⁰³ UNIECF (2021). There is also a big gap between private and public schools' access to digital services: in 2017, 61 percent of students in public schools had Internet access at home, compared with 92 per cent of private school students, which in Ngöbe-Buglé and Kuna Yala regions, drops to 6 percent and 10 percent, respectively.

¹⁰⁴ Cybercrime costs the world economy nearly \$600 billion in 2018, equivalent to 0.8 percent of global GDP, according to a report by the World Economic Forum. Cybercrime in Latin America and the Caribbean costs about \$90 billion a year, with the number of cyber incidents and cybercrimes increasing exponentially (World Bank, 2021).

¹⁰⁵ See Figure 29a in the Appendix for the share of public sector in GDP and employment in Panama.

¹⁰⁶ See Figure A29b for the governance indicators. On Corruption Perception Index of Transparency International, Panama scored 36 out of 100 in 2022, substantially lower than other high-income countries in LAC, such as Uruguay (74), Chile (67), and lower than LAC's average (38.8).

¹⁰⁷ See Figure A29c for the rule of law index of Panama. It should be noted that Worldwide Governance Indicators are a research dataset summarizing the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries, which are gathered from a number of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms, and do not reflect the official views of the World Bank, its Executive Directors, or the countries they represent, and are not used by the World Bank to allocate resources.

¹⁰⁸ US State of Department (2022).

¹⁰⁹ IMF and WDI. Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue.

¹¹⁰ See Figure A30a in the appendix on tax revenues as share of GDP. According to IMF (2023b), Panama's VAT revenue is only 2.5 percent of GDP, while the LAC average for 2014-2018 is 6.1 percent. Panama's general VAT tax rate is 7 percent (compared to LAC average of 15 percent), with some products subject to higher rates (10 percent for alcoholic beverages and hospitality, and 15 percent for tobacco-derived products) and many others are exempt from the VAT. Panama's VAT C-efficiency, defined as revenue divided by the product of the tax rate and consumption performance, was only 0.49 in 2019, though it was on par with comparator economies, and VAT revenues were among the lowest stemming from high number of exemptions, tax evasion, and low rates. Its CIT C-efficiency lagged comparator economies and LAC's average. Also, there are no legal provisions to curtail tax expenditure, the Tax Authority (Directorate-General of Revenue, DGI) and Customs Administration are undertaking significant modernization reforms. The low tax revenue of Panama is partly compensated by the revenues from the Canal, which in 2022 reached 3.6 percent of GDP, up from an average of 2.7 percent between 2008 and 2015.

¹¹¹ Directorate-General of Revenue (2019). According to Cardoza (2017), in 2017, 40 percent of VAT tax in Panama was evaded.

¹¹² See Figure A30b in the appendix for tax expenditure.

¹¹³ IMF (2020).

¹¹⁴ For the purpose of this report, and following data availability in Panama's household surveys, we use the term *comarcas* to refer to the province-level territories of Emberá-Wounaan, Guna Yala, and Ngöbe-Buglé. See Box 3 in the appendix for a description of the *comarcas* and their relationship with the central government.

¹¹⁵ The *comarcas* concentrate more than one third of all poor in Panama in 2019.

¹¹⁶ Despite the recent progress in the reduction poverty and inequality -mostly in rural areas- vertical and horizontal inequalities persist. Contrary to the period leading to the 2015 SCD, when poverty in the *comarcas* had a meager decrease from 86.8 percent in 2008 to 85.25 percent in 2012, the reduction of poverty between 2013 and 2019 was mostly driven by the reduction in rural areas and *comarcas*. Poverty in the *comarcas* and rural areas fell by 18 and 12 percentage points, respectively, over the period. But because of the low basis from which they started, *comarcas* and rural areas still lag far behind. And notwithstanding the progress of IPs in rural areas, IPs living in urban areas are worse off in 2019 compared to 2015, as the poverty rate increased 0.7 percentage points.

¹¹⁷ Climate change and weather shocks are also expected to contribute to gender disparities. Persistent gender gaps exacerbate women's exposure to shocks and limit their ability to adapt. For example, the lower labor force participation of women, their concentration in the informal sector, restricted access to credit, the higher burden of care responsibilities on them, and restrictive social norms could increase their exposure and vulnerability, while reducing their ability to mitigate the negative impacts of climate change. Evidence has shown that women are particularly vulnerable to the social responses triggered by weather shocks in places where they face restrictive gender norms. For instance, in areas with a strong preference towards boys, weather shocks have been associated with higher mortality rates among girls (Chatterjee and Merfeld, 2021; Haile et al., 2019), poorer health outcomes for girls (Rocha and Soares, 2015), and increased school dropouts as they assume household chores or enter early marriages (Bau et al., 2022; Dasgupta and Karandikar, 2021; Sylvain et al. 2021). Moreover, weather-related economic shocks tend to have a disproportionately negative impact on women's agency due to various factors, including their lower decision-making power in households and higher exposure to gender-based violence. For example, in Peru, the prevalence of physical intimate partner violence increases by 65 percent after the occurrence of droughts during cropping seasons, resulting in increased poverty-related stress and reduced female empowerment (Diaz and Saldarriaga, 2023).

¹¹⁸ World Bank (2015).

¹¹⁹ Ostry et al. (2018).

¹²⁰ In addition, women in Panama tend to bear the burden of domestic and care work and have a higher overall workload than men. Women spend more time doing household chores than men, such as cleaning, cooking, and caring for children and older adults. Estimates indicate that women in urban Panama allocate 2.4 times the hours men put into these tasks, and when paid and unpaid labor are considered, women work more hours a week than men (Charmes, 2019).

¹²¹ Source: WDI.

¹²² Azevedo et al. (2012).

¹²³ According to WDI, access to electricity in Panama is 96.7 percent in 2020 vs 98.5 percent in LAC. Whereas access to basic sanitation was 84.6 in Panama vs 88.5 percent in LAC in the same year.

¹²⁴ Institutional inefficiencies and lack of coordination deters the even provision of basic services (World Bank, 2020).

¹²⁵ World Bank (2020).

¹²⁶ See figure A32a-b in the appendix.

¹²⁷ Astudillo et al (2019).

¹²⁸ OECD (2018).

¹²⁹ About 60 percent of the reduction is attributed to direct transfers.

¹³⁰ Even when compared to lower income countries such as El Salvador, Honduras, and Guatemala. See Figure A33 in the Appendix. The Statistical Performance Indicators (SPI) is a framework of 5 pillars to assess the maturity of national statistical systems (World Bank, 2021). Data Use: produces data that are used widely and frequently. Data Services: connects data users to producers. Data Products: Statistical products and their accuracy, timeliness, frequency, comparability, and levels of disaggregation. Data Sources: Data collection, administrative and geospatial data, data generated by private firms and citizens. Data Infrastructure: hard infrastructure (legislation, governance, standards) and soft infrastructure (skills, partnerships) as well as the financial resources to deliver useful—and widely used—data products and services.

¹³¹Such as infrastructure, personnel skills, and financial resource.

¹³² World Bank. (2021).

¹³³ OECD (2019).

¹³⁴ World Bank (2021a).

¹³⁵ IPCC (2021).

¹³⁶ World bank (2021a).

¹³⁷ World Bank (2011).

¹³⁸ MiAmbiente Plan Nacional de Acción Climática 2022: <https://transparencia-climatica.miambiente.gob.pa/wp-content/uploads/2022/02/Plan-Nacional-de-Accion-Climatica.pdf>

¹³⁹ See Figure A34c in the appendix for the evolution of GHG emissions.

¹⁴⁰ National Secretariat of Energy (SNE, 2022): <https://www.energiaestrategica.com/flexibilidad-y-almacenamiento-nuevo-eje-del-gobierno-para-potenciar-renovables-en-panama/>

¹⁴¹ See Tables A2a through A2c in the appendix for Panama's total GHG emissions and their sectoral decompositions.

¹⁴² Garcimartin et al. (2020): Garcimartin et al. (2020).

¹⁴³ The country's freshwater resources were estimated at 119.5 billion square meters in 2016, of which about 25.8 percent is being utilized. The greatest demand for fresh water is along the Pacific slope, where 83 percent of the population lives and where more than 70 percent of the country's economic activities take place.

¹⁴⁴ Cronk and Bartram (2018).

¹⁴⁵ The 2015 SCD highlighted how improper management contributes to the inefficient use of water resources. Panama's water-management system is complex and involves various government agencies, institutions, and other stakeholders. Inadequate information sharing and coordination among sectoral actors, coupled with the absence of a coherent tariff policy, leads to inefficiencies in water use and in the maintenance of water infrastructure. By improving Panama's water systems, the share of the population with 24-hour service could increase from 55 percent to as much as 64 percent, Cronk and Bartram (2018). Water systems in Panama provided 18 hours of service per day and continuity varied by region: Colon region had the highest.

¹⁴⁶ See Box 5 in the appendix on the water management system of Panama.

¹⁴⁷ World Bank, DISAPAS, WSP, FOCARD-APS. (2016).

¹⁴⁸ Garcimartin et al. (2020).

¹⁴⁹ It was launched by the national sustainable development council (CONEDAS), the Ministry of Health (MINSAs), the institute of aqueducts and sewage systems (IDAAN) and the ministry of housing and land management (MIVIOT),

¹⁵⁰ From the consultation meeting of the World Bank staff with CONAGUA in October 2022.

¹⁵¹ According to Statista, in 2020, it consumed about 114.4 billion gallons of water compared to 90.2 billion gallons in 2011 while it produced about 139 billion gallons of water in 2020, an increase of three percent from the previous year, but lower than its level in 2017. Accessed at <https://www.statista.com/statistics/720954/water-production-panama/>. Panama has very high levels of water consumption per capita (507 liters per person per day), more than 2.5 times the global average (189 liters) and the highest in Latin America and based on its per capita income, urbanization rate, and local water prices, Panama's water consumption should be about half its current level (Garcimartin et al. 2020).

¹⁵² Each time a ship transits the Canal, about 50 million gallons of fresh water are lost through the locks to the oceans. The Canal's basin is also a key source of drinking water for 55 percent of the country's population and produces 1.9 percent of its electricity. In 2007, 58 percent of the water in the Canal's basin was used for navigation, 7 percent for drinking water, and 2.6 percent for electricity generation. By 2017, these shares had increased to 71, 14, and 6 percent, respectively. During 2010-2017, 57 percent of total electricity was produced as hydroelectric energy from 45 plants, only two of these are based in canal, Gatun and Madden lakes, compared to world average of 37 percent, which is 29th highest in the world. Despite the fact that energy production occupies 89.6 percent of the consumption of fresh water available of the country, does not directly compete with human use or with the operation of the Panama Canal (Garcimartin et al. 2020). In addition, water and land in the basin are used for agriculture, forestry, industrial production, fishing, recreation, and scientific research (Garcimartin et al. 2020; ACP 2019).

¹⁵³ IPCC (2021). In 2019, the Canal's water levels decreased due to an intense drought that lasted about six months, resulting in the maximum allowable ship draft being cut from 50 feet to 43 feet. This restricted larger ships from using the Canal's newest locks, which typically handle around seven ships per day. Since cargo load is a key determinant of Canal tariffs, these limitations

have cost the Panama Canal Authority approximately US\$15 million per year, or about 0.8 percent of the Canal's revenue, New York Times, May 17, 2019: <https://www.nytimes.com/2019/05/17/climate/drought-water-shortage-panama-canal.html>. Given that the Canal facilitates around 5 percent of the world's maritime trade, any interruptions in its operations directly impact the global economy. According to the World Trade Organization, the Panama Canal accounts for approximately 2.3 percent of global trade.

¹⁵⁴<https://www.worldbank.org/en/results/2020/10/16/harnessing-biodiversity-for-sustainable-rural-livelihoods-in-panama>.

According to the report of the Ministry of Environment in 2020, the Panama Canal basin, key to the economy of the country, has registered an increase in the temperature of 0.5 percent, with a reduction of up to 20 percent of the flows of the Chagres River that provides water for the waterway locks and for the consumption of almost two million people in Panama, Colon and Panama West. Climate change could also adversely affect major water-dependent economic activities, including Canal navigation, hydroelectricity production, agriculture, and tourism.

¹⁵⁵ <https://worldpopulationreview.com/country-rankings/water-quality-by-country>. Only following countries in LAC have a lower score than Panama on water quality: Peru, Nicaragua, Belize, El Salvador, Bolivia, Dominican Republic, Guyana, Honduras, Guatemala, and Haiti.

¹⁵⁶ Cronck and Bartram (2018). Rural agriculture generates 55.2 percent of organic water pollutants, while inadequate sanitation and waste-management infrastructure prevents communities from reliably accessing clean water (<https://www.coha.org/water-quality-is-impaired-by-agricultural-runoff-in-panama-and-the-united-states/>). In addition, 63 landfill sites affect waterways, mangroves, and coastal areas (Netherlands Water Partnership 2022) and heavy rains are likely to drive sedimentation in the Canal basin.

¹⁵⁷ Voluntary National Review (2020). These disparities worsen quality of life among the poor, imposing a high cost on Panama's economy and undermining inclusive development. A 2022 study of the LAC region found that an annual investment of 1.3 percent of regional GDP until 2030 could enable universal access to safely managed drinking water and sanitation while generating up to 3.4 million green jobs per year (ECLAC 2022).

¹⁵⁸ See Figures A34a and A34b in the appendix.

¹⁵⁹ World Bank accessed at <https://climateknowledgeportal.worldbank.org/country/panama/vulnerability>

¹⁶⁰ New York Times, May 17, 2019: <https://www.nytimes.com/2019/05/17/climate/drought-water-shortage-panama-canal.html>

¹⁶¹ The Ministry of Environment (MiAMBIENTE) (2021). Panama's contribution to global GHG is relatively small, with a total share of 0.05 percent, however, GHG emissions in per capita terms remain relatively high.

¹⁶² Panama's Second Biennial Update Report (2021).

¹⁶³ MiAMBIENTE (2021). The conservation and sustainable management of natural capital, especially forests, will be crucial to maintain the country's carbon-negative status. In addition, forests provide local income opportunities through ecotourism and sustainable forestry, while also enhancing resilience to climate change.

¹⁶⁴ MiAMBIENTE (2021).

¹⁶⁵ MiAMBIENTE (2022).

¹⁶⁶ Ministry of Environment (2019).

¹⁶⁷ ARIFA (2023). Enacted by Law No 8 of 2015.

¹⁶⁸ Pareja et al. (2019). In 2023, under the new contract with Cobre Panama, 11 environmental benefits were added. The company has 33 environmental management instruments, including Environmental Impact Studies, management plans, environmental audits, water concessions, and all have strict compliance requirements. The new contract commits Minera Panama to implement a reforestation program at their cost, including restoration within the project's footprint and reforestation for ecological compensation outside the project. The contract also includes a written commitment from Minera Panama to begin transitioning their coal power plant to greater use of renewable energy sources. Cobre Panama's environmental policy includes applying "to the extent reasonable, management practices under the Principles of Ecuador and the IFC / World Bank Standards to promote environmental protection and manage risks and impacts.

¹⁶⁹ IRENA (2018), *Renewables Readiness Assessment: Panama*, International Renewable Energy Agency, Abu Dhabi

¹⁷⁰ Panama's Second Biennial Update Report (2021). See also Tables A2a through A2c in the appendix.

¹⁷¹ WDI. Figures are based on the renewable energy consumption (% of total final energy consumption) series from 2015.

¹⁷² IRENA (2020).

¹⁷³ Many of MiAmbiente's regulatory and enforcement powers are based on the General Law of Environment (GLE), which serves as an overall framework for regulating and managing environmental issues, including those related to pollution control and conservation.

¹⁷⁴ This Executive Decree No. 135 of April 30, 2021, of the Ministry of Environment, published on May 13 in the Official Gazette Digital 29284-A aims to create the National System of Climate Change Adaptation Data as a platform for managing, evaluating, and monitoring climate risk and vulnerability to climate change in the Republic of Panama and seeks to establish the National Monitoring, Evaluation, and Reporting System for Adaptation; activate the Climate Change Adaptation Fund; and create the National Program "Build Your Resilience." These measures will be implemented throughout the national territory. The regulation

also stipulates that the Climate Change Directorate of the Ministry of Environment will lead the preparation of the national strategy for climate change adaptation with temporal horizons up to 2030 and 2050. It further mandates that the strategy must be updated and reviewed every five years in accordance with the procedures and guidelines established in this regulation.

¹⁷⁵ World Bank Global Facility for Disaster Reduction and Recovery (GFDRR) (2023): Enhancing institutional capacities for a more comprehensive and inclusive DRM in Panama. Available at <https://www.gfdr.org/en/feature-story/enhancing-institutional-capacities-more-comprehensive-and-inclusive-drm-panama>.

¹⁷⁶ Beca Universal was a conditional cash transfer program that provided cash transfers to families to encourage school attendance. The program first focused on lower secondary school retention and was then expanded to primary school. The government reformulated and replaced Beca Universal with Programa de Asistencia Social Educativa Universal (PASE-U) in 2020.

¹⁷⁷ ITSE started operation in 2019 with 150 students and, by the second quarter of 2023, two thousand students were enrolled pursuing degree programs in the Schools of Business, Hospitality and Tourism, Industrial Technology, and Digital Innovation <https://www.itse.ac.pa/Inicia-segundo-cuatrimestre-de-2023-en-el-ITSE-con-record-de-mas-de-2-mil-estudiantes>.

¹⁷⁸ Prueba CRECER evaluates students' competencies in 3rd and 6th grades in reading, math, and science. It is a standardized, census-based student learning assessment. Panama implemented CRECER assessments over the period 2016-2018.

¹⁷⁹ A current effort by MEDUCA includes the update of curriculums integrating STEAM methodology: <https://guias.meduca.gob.pa/pagina/portal-de-guias-2023>

¹⁸⁰ There are already guidelines in place for the transformation, improvement and well-being of the educators.

¹⁸¹ On April 6, 2022, Panama passed the Digital Equity Law (Ley No. 20294 Ley de Equidad Digital), which establishes the general guidelines for the formulation, development, and implementation of education public policies aimed at increasing equity in the education system. The law proposes the implementation of pertinent teaching-learning models, including the delivery of flexible modalities for the education services, facilitated by the technological transformation, which guarantee the delivery of creative and innovative education services for students to acquire the digital competencies and skills throughout their educational trajectories.

¹⁸² Important efforts are already taking place such as the creation of the National Institute of Vocational Training and Training for Human Development (INADEH).

¹⁸³ MEF, with the support of the United Nations Development Program (UNDP), is in the process of implementing a results-based budget.

¹⁸⁴ Law No.17 of June 27 2016, establishes the protection of the knowledge of indigenous traditional medicine.

¹⁸⁵ Following the episodes of social unrest, the National Authority for Government Innovation (AIG) and the Consumer Protection Agency (ACODECO) collaborated with the National Directorate of Pharmacy and Drugs of the Ministry of Health (MINSa) to develop the MedicApp application in September 2022. This user-friendly application enables individuals to access information about the price, availability, and proximity of medications. Its purpose is to empower consumers by reducing information asymmetry and facilitating price comparisons, including generic options. Furthermore, the Social Security Fund (CSS) has introduced the pilot program "MedicSol." This program allows insured individuals to utilize electronic prescriptions linked to their identification card at privately affiliated pharmacies covered by the program. The costs of these prescriptions are covered by the CSS. To further address the issue, in 2023, the government has taken additional steps. They have established an observatory of medicines, providing information on medicine availability and setting reference prices. Additionally, the government has enacted the executive decree 4, which aims to develop a National Plan for Guaranteeing the Supply of Medicines. This decree also establishes the National Center for Medicine Negotiation, which seeks to negotiate better prices for MINSa, Patronatos, the Social Security Fund (CSS), and Solidarity Pharmacies by leveraging economies of scale. In 2020, a unified-purchase strategy for medicines and supplies was established between the CSS and MINSa and, in 2022, an executive decree established the regulations for joint or unilateral purchases of medicines between the two entities when critical shortages of drugs and medicines are declared.

¹⁸⁶ In 2021, the government enacted the Law 186 in 2021 to promote entrepreneurship, by simplifying the complex legal procedures to open a business, decreasing excessive regulatory costs and increasing tax benefits.¹⁸⁶ To boost the productivity of MSMEs and entrepreneurship, in 2017, it launched the *Panama Emprende y Crece 2017-2022* and the *Política Nacional de Fomento de la Micro, Pequeña y Mediana Empresa 2017-2022*. Through PENCYT, SENACYT conducted targeted research programs in strategic areas, including water, energy, and health as well as increasing human capital. However, due to weakening of CICYT as the coordinating body implementation was not effective.

¹⁸⁷ Both initiatives aim to strengthen the capacity of firms, enhance the environment for small firms, foster entrepreneurship, extend financial services, and simplify bureaucracy.

¹⁸⁸ UNCTAD (2019).

¹⁸⁹ Article 16 of Law 34 from 2008 establishes that within the first six months after taking office each new administration must prepare and approve a new Strategic Government Plan (PEG). In December 2019 the new PEG for the period 2019-2024 was approved. The plan comprises an economic and social strategy integrated by five strategic pillars: i) Good Governance, ii) Rule of

Law, iii) Competitive Economy, iv) Poverty and Inequality reduction, and v) Education, Science, Technology and Culture. Each strategic pillar has a series of specific goals and tasks.

¹⁹⁰ The National Digital Agenda guides the National Authority for Innovation Government to achieve the digital transformation of the Panamanian State, for improving the quality of life of citizens, reduce the inequality gap and increase the competitiveness of the country. The National Digital Agendas are revised annually.

¹⁹¹ OECD (2020).

¹⁹² Panama aims to promote digital transformation through different initiatives, including two comprehensive strategic plans: Strategic Plan of the Government 2019-2024 and Digital Agenda 2020: The Journey toward a Digital Citizen. Both strategic plans highlight the importance of transitioning from e-government to fully digital government. Digital policies focus on establishing online processes for government entities and promoting e-signature and data protection.¹⁵

¹⁹³ Many of these recommendations are being implemented through various programs such as: *Aprender Haciendo, Proyecto de Orientación Vocacional para el Empleo, Empleo Solidario de Incentivo para la Contratación Laboral, Programa de Apoyo a la Inserción Laboral, Mejoramiento de la Empleabilidad de las Personas con Discapacidad, Yo Sí Cumplo, Bolsa de Empleo; and Ventanilla Única de Oportunidades.*

¹⁹⁴ Government's Strategic Plan 2019-2024.

¹⁹⁵ World Bank (2021c).

¹⁹⁶ In 2023, Panama launched the first State Agri-Food Policy Law (*Política Agroalimentaria de Estado*), establishing the legal bases for the transformation and sustainability of the agricultural sector and improving the social conditions in rural communities.

¹⁹⁷ Gaurav (2021) and OECD (2018).

¹⁹⁸ See Figure A36 for the evolution of the sectoral value-added shares in GDP. Share of services value added increased from 60 percent in 1970 to 66 percent in 2019, reaching an all-time peak of 73 percent in 2007. Share of manufacturing sector has decreased steadily from 21 percent in 1970 to 6 percent in 2021. Industry had a share of about 25 percent of GDP in the 1970s, which saw a steady decline until it reached 19 percent in the 2000s, before taking a steep upward turn in 2009 and reaching 29.5 percent by 2019. Agriculture also decreased gradually from 8.5 percent in 1970 to 6 percent by 1999 and had a steady sharp decrease from 6.3 percent in 2003 to 2.2 percent in 2019.

¹⁹⁹ Hausmann et al. (2017). See Figure A31 in the appendix for the share of key sectors in exports and Figure A37 in the appendix for the share of low, medium, and high value-added products and services in exports.

²⁰⁰ Approved by Executive Decree No. 203 of 2018.

²⁰¹ Important improvements have been made already through the implementation and institutionalization of Bilingual Intercultural Education-EIB, the introduction of the ARI TAEN JADENKÄ Program (mathematics for initial education among the Ngäbe population) and an Intercultural Bilingual Mathematics Curriculum by interactive radio.

²⁰² See Box 6 for the role of agriculture across policy priorities.

²⁰³ The *Plan Estratégico del Gobierno 2019-2024* (PEG) highlights the different faces of Panama: (i) modern; (ii) middle-class; (iii) suburban; (iv) rural and agricultural; and (v) Indigenous (*comarcas*). Other vulnerable groups such as people with disability and Afro-descendants are part of the PEG 2019-2024, but data current data gaps hinder a deeper analysis.

²⁰⁴ In 2022, the National Council for the Integral Development of Indigenous Peoples and the Advisory Committee of Indigenous Women (CAMIP), together with several public and private institutions, launched the Plan for the Economic Empowerment of Indigenous Women (PEMIP 2025). The objective of the PEMIP is the social inclusion of indigenous women in Panama and the effective exercise of their socioeconomic rights, by empowering them and generating opportunities. Moreover, the resolution for the Public Policy for Employability and Labor Insertion of Young People and Women in Conditions of Socioeconomic Vulnerability in Panama (PEIM) was recently passed.

²⁰⁵ See Box 6 for more details on government's actions to promote environmental sustainability and resilience to disasters. Since 2015, MiAmbiente has taken a wide range of initiatives to raise awareness on climate change, to increase knowledge base and to develop strategies to address issues related to climate change and environmental sustainability, including: *Comunicación Nacional sobre Cambio Climático: Primera* (2011), *Según* (2011), *Tercer y Cuarta* (2022); *Actualización de la Primera Contribución Determinada a Nivel Nacional (CDN1) – (2020)* (el original fue publicado en 2016); *Primer Informe Bienal de Actualización* (2017); *Niveles de Referencia de Emisiones Forestales de Panamá* (2018); *Estrategia Nacional de Cambio Climático 2050* (2019); *Contribución Determinada a Nivel Nacional* (2020); *Índice de Vulnerabilidad al Cambio Climático de la República de Panamá* (2021); *Guía Técnica Comunitaria, Herramienta para la Recopilación de Información y Evaluación de Vulnerabilidad, Riesgo Climático y Resiliencia* (2021); *Segundo Informe Bienal de Actualización; Segundo Informe Bienal* (2022); *Primer Informe Bienal de Transparencia Climática* (2022); In collaboration with the World Bank: *Partnership for Market Readiness (PMR)* and *Partnership for Market Implementation (PMI)*. Projects on adaptation include: *National Adaptation Plan (NAP)*; *Municipal Water Footprint Reduction Project*; *National Registry of Adaptation and Resilience Initiatives*; *Monitoring, Evaluation (M&E) of Adaptation*; *Community Adaptation Guidelines*; *Technical Guide on Climate Risk for Public Investment Infrastructure Projects*; *Climate Change Adaptation Data System*; on mitigation: *National Program Reduce Your Footprint (Programa Nacional Reduce Tu Huella)*.

²⁰⁶ Panama has implemented various strategic plans and programs to ensure water resource sustainability. Notable among these are the National Water Security Plan 2015-2050, Basic Health Plan 100/0, National Energy Plan, Alliance for One Million Hectares, Panama Sanitation Project, and many other initiatives aimed at ensuring access to potable water and sanitation, protecting the environment, improving social welfare, economic development, and the quality of life for the population. In addition, the Panama Canal Authority (ACP) is developing plans to guarantee water supply to the Panama Canal and the general population.

²⁰⁷ See Collado et al. (2018) for the details of the analysis on sustainable agriculture and smart irrigation systems in Panama.

²⁰⁸ Panama is part of UN-REDD (Reducing Emissions from Deforestation and Forest Degradation) Program, which was launched in 2008 to support nationally led REDD+ processes to promote informed and meaningful involvement of all stakeholders, including indigenous peoples and other forest-dependent communities, in national and international REDD+ implementation. Panamanian government is committed to the implementation of REDD+ progressively at the national level. In addition, for the fourth consecutive year, the Ministry of Environment extended the resolution that temporarily suspends the issuance of special permits for subsistence-based forest use and its modalities, as well as community permits and concessions in tropical forests, for a term of no more than a year. According to the "Diagnosis on Forest and Other Woody Land Cover in Panama" document published by the Ministry of Environment, the Panamanian government has established 27 protected areas in the national territory, contributing to the reduction of forest cover loss throughout the country. As a result, according to Ministry of Environment, Panama has restored 187,657.08 hectares, a significant achievement to drive an economic development strategy and work towards Panama's long-term goal of carbon neutrality by 2050. This program aimed to increase forest coverage by restoring 51,000 hectares between 2021 and 2025, as established in Executive Decree No. 137 dated May 21, 2021. Furthermore, the Land Use, Land Use Change, and Forestry (UTCUTS) sector has continued to implement and update initiatives aimed at conserving and recovering forest lands, including programs for conserving and restoring the forest heritage and creating forest cover maps to guide decision-makers.

²⁰⁹ Its commitments integrate both adaptation and mitigation dimensions of climate change, focusing its mitigation commitments on the sectors with the largest mitigation potential: Energy and land use, land-use change, and forestry (LULUCF).

²¹⁰ Government created the Disaster Risk Financing Strategy (DRFS) and Operational Plan in 2014 to improve its multi-hazard early warning capabilities and strengthen its financial resilience to natural hazard shocks. However, technical evaluations Carried out as part of the Index of Governance and Public Policy in Disaster Risk Management (*Índice de Gobernabilidad y Políticas Públicas en Gestión del Riesgo de Desastres*, iGOPP) show that Panama is still falling behind most Latin American peers Mexico, Costa Rica, Colombia, Peru, Argentina, Dominican Republic, Chile and Guatemala, as per IDB's iGOPP, 2025. <https://riskmonitor.iadb.org/en>

²¹¹ Panama has a catastrophe insurance policy with the Caribbean Catastrophe Risk Insurance Facility (CCRIF SPC). Since 2018, Panama acquired an excess rainfall parametric insurance policy, with annual renewals, under Cabinet Resolution No. 40 of June 26, 2018.

²¹² Strategies and programs of the government to promote electric vehicles include: (i) Law No. 295 of April 25, 2022, incentivizes electric mobility in land transport. This law was regulated by Executive Decree No. 51 of February 15, 2023, with the aim of achieving greenhouse gas emissions reduction, promoting and growing electric mobility, and the use of renewable energies as tools for energy transition in land transport. (ii) The National Electric Mobility Strategy aims to enhance and unify programs developed by the Government and the private sector to address mobility and quality of life challenges in the country's cities through electric mobility. (iii) The Energy Secretariat launched a tool to facilitate the transition of vehicles to electric models, based on an Excel file with macros and specifications of electric car models available in the country. It was developed with the support of the Inter-American Development Bank (IDB) and the consultancy firm Hincio, with input and information collected through the Energy Managers Program. (iv) The Ministry of Environment awarded the project "Comprehensive Strategic Plan for the Technical and Economic Support for the Transformation of MiAMBIENTE's Current Fleet to 100% Electric Vehicles - Phase I" to the Consortium for Sustainable Mobility Solutions and Energy Efficiency of Panama.

²¹³ See Box 7 for government programs and initiatives on environmental sustainability, renewable energy and green economy. Panama has implemented numerous policies and programs to promote environmental sustainability, primarily through the Ministry of Environment, including the following programs and strategies: National Climate Change Strategy 2050, the National Forest Strategy 2050, the Plan for the Integrated Management of Water Resources in Panama (2022-2026), the National Drought Plan, the National Climate Action Plan, the National Gender and Climate Change Plan of Panama, the National Water Security Plan 2058-2050: Water for All, the National Climate Change Policy, the National Wetlands Policy, the National Oceans Policy, the National Climate Change Strategy 2050, and the National Forest Restoration Program, with an emphasis on water-producing watersheds/2021-2025.

²¹⁴ Contraloría General (2023).

²¹⁵ World Bank (2020).

²¹⁶ These include: (1) To ensure transparency, the Online Quotation platform is being implemented for the first time, a 100% online system for public purchases and contracts that is transparent and accessible for scrutiny and analysis by the public. Until May 2023, 246,216 online quotations were conducted, amounting to a value of 892 million balboas. (2) According to the 2023

Report from the Council of the Americas on the Corruption Capacity Index, Panama achieved the greatest advancement in the region's overall score in 2023, with a substantial 9 percent improvement compared to 2022. (3) Executive Decree No. 6 of January 14, 2022 establishes the Institute of Development Planning, under the Ministry of Economy and Finance (MEF), which aims to strengthen the government's planning function and the long-term development vision that ensures the transformations required for inclusive and sustainable development. (4) Regarding the beneficiary registry, Law 129 of March 17, 2020, created the Private and Unique Registry System of Final Beneficiaries of Legal Entities, aiming to facilitate access to final beneficiaries of legal entities collected by attorneys or law firms providing services, modified by Executive Decree No. 13 of March 25, 2022.

²¹⁷ The Panamanian financial system is well developed and robust. According to the Superintendency of Banks, Panamanian Banking System showed strength, resilience, and adaptability during the Covid-19 crisis. In the latest report in March 2023, the liquidity of the Banking System reached 56.7%, and the average Liquidity Coverage Ratio (LCR) of supervised entities exceeded 100%, well above regulatory minimums in this regard. The Republic of Panama has developed a nearly exclusive monetary and banking system internationally, which uses the US dollar as legal tender and refrains from using monetary policy. The absence of a central bank has not prevented the Panamanian economy from having abundant bank credit at internationally compatible interest rates, allowing successful financial integration with the world. A notable advantage of this monetary system is that the demand for credit determines the amount of money circulating in the Panamanian economy, aligning with the level of GDP at any given time.

²¹⁸ Panama's Monetary and Banking System is built on the following pillars: absence of deposit insurance, absence of a lender of last resort, free capital mobility, and freedom to set interest rates for each of the country's banks. The rationale behind this design is to create a balance in the risk that depositors and banks undertake in the process of providing credit, whether inside or outside Panama. This compels both depositors and credit providers to behave most efficiently when identifying risks, thus avoiding extreme behaviors between the involved parties.

²¹⁹ IMF (2021).

²²⁰ IMF (2021).

²²¹ Resolution No. 205-2021-INEC and Decreto Ejecutivo No 177, 2022.

²²² World Bank. (Forthcoming). The report proposed activities to strengthen the institution in various areas, including financial, organizational, managerial, and statistical operations.

²²³ IMF (2023b).

²²⁴ IDB (2021). The government of the Republic of Panama, in collaboration with the Inter-American Development Bank (IDB), initiated a digital transformation process with the goal of enhancing the state's capacity by increasing tax collection. The program encompasses three key components as guiding principles for action and implementation of pilot plans: (i) Enhanced governance and human talent management, which aims to strengthen strategic management, update human resources management procedure and internal control and transparency management procedures and instruments; (ii) Strengthened tax control and compliance facilitation, which encompasses the review and optimization of operational processes; comprehensive tax risk management model; implementation of a taxpayer assistance center; modernization of the digital tax management system, and expansion of electronic invoicing usage; (iii) Enhanced technological management, which includes strengthening strategic planning and Information Technology (IT) management; updating IT infrastructure, and information security model. The tax administration faces significant challenges, but advancements in modernization efforts have been achieved both externally and within the institution, as stated by the Director General of Incomes (DGI), Publio de Gracia Tejada, at the "Challenges of Taxation in Panama" forum. As a result of the implemented measures by the Directorate General of Incomes (DGI), tax revenue collection in the fiscal year 2022 surpassed the 2019 collection levels by 6.0%.

²²⁵ <https://www.mef.gob.pa/2023/08/dgi-regulara-las-plataformas-digitales-para-que-paguen-tributos-al-estado/>

²²⁶ Panama's law on intellectual property rights was the first in the world to specifically include intellectual property rights for Indigenous people, showcasing the country's efforts to protect a wider range of stakeholders.

²²⁸ Law 97 of October 4th 2019. Retrieved from: https://www.gacetaoficial.gob.pa/pdfTemp/28875_A/75178.pdf

²²⁹ World Bank (2021). Panama Pandemic Response and Growth Recovery Development Policy Loan (P174107). retrieved from: <https://documents1.worldbank.org/curated/en/899581607742064952/pdf/Panama-Pandemic-Response-and-Growth-Recovery-Development-Policy-Loan.pdf>

²³⁰ Plewa (2021) "Migration Trends through Panama's Darien Gap and What They Mean for Regional Cooperation". Retrieved from: <https://igs.duke.edu/news/migration-trends-through-panamas-darien-gap-and-what-they-mean-regional-cooperation>

²³¹ The Darién Gap is a geographic region consisting of a large watershed, forest, and mountains covering Panama's Darién Province and the northern portion of Colombia's Chocó Department.

²³² Garcia Mora, M. E., Schwartz Orellana, S., & Freire, G. (2021). *Disability inclusion in Latin America and the Caribbean: A path to sustainable development*. World Bank.

²³³ <https://www.washingtongroup-disability.com/question-sets/>

²³⁴ UNDP and INAMU (2020). Situación de las Mujeres Afropanameñas

²³⁵ INAMU “Situación de la mujer en Panama 2014-2016”

²³⁶ Anuario Estadístico, Ministerio de Salud, <https://www.minsa.gob.pa/contenido/anuario-estadistico-del-2019>

²³⁷ World Bank (2018). *Panama - Support for the National Indigenous Peoples Development Plan Project (English)*. World Bank

²³⁸ We ran the regression: $\ln(w_i) = \beta_0 + \beta_p D_p + \beta_s D_s + \beta_t D_t + \beta_2 \text{exp}i + \beta_3 \text{exp}i^2 + \beta_j I_j + \beta_j P_j + \mu_i$, where D is a dummy if the person finished a given education level (p = primary, s = secondary, t = tertiary) exp is the age of the individual. Fixed effects by industry and province were included. The return of schooling per level of education is calculated relative to the immediate inferior level. For instance, the rate of return for primary education compares the gain of those with complete primary schooling to those with none, taking into account the foregone earning while studying ($r_p = \beta_p/6$), the rate of return for secondary education does the same, but against those with primary ($r_s = (\beta_s - \beta_p)/6$), and so forth. See: Montenegro, C. and H.A. Patrinos (2014).

²³⁹ Netherlands Water Partnership (2022): Water Sector Study Panama, Netherlands. Castillero (2019): Castillero, G. C. (2019). El agua del otro Panamá. *La Prensa*. https://www.prensa.com/opinion/agua-Panama_0_5389711027.html

²⁴⁰ Netherlands Water Partnership (2022): Water Sector Study Panama, Netherlands. Castillero (2019): Castillero, G. C. (2019). El agua del otro Panamá. *La Prensa*. https://www.prensa.com/opinion/agua-Panama_0_5389711027.html

²⁴¹ Netherlands Water Partnership (2022).

²⁴² Netherlands Water Partnership (2022); Gobierno Panama (2016): Plan Nacional de Seguridad Hídrica.

²⁴³ IDAAN (2019). Políticas Institucionales 2019. IDAAN https://www.idaan.gob.pa/wp-content/uploads/2020/01/politicas_institucionales_del_idaan_2019.pdf

²⁴⁴ These include: i) the National Committee for Climate Change of Panama (CONACCP), the inclusion of the Climate Change Chapters in the General Law on the Environment, the Regulation of the mitigation chapter of the GLE through Executive Decree No. 100 of October 2020²⁴⁴, the Regulation of the adaptation chapter of the GLE through Executive Decree No. 135 of April 2021²⁴⁴, the National Strategy for Climate Change 2050²⁴⁴, Panama’s 2021 Climate Vulnerability Index²⁴⁴, the 2022 National Climate Action Plan as a strategic framework that promotes the country’s long-term national and sectoral climate change implementation, and National Gender and Climate Change Plan. Panama has drafted a Law on Climate Change that is expected to be discussed during 2023.

²⁴⁵ The government’s Strategic Plan (PEG) was adopted through Executive Cabinet Resolution No. 149 of December 30, 2019 and approved the government’s Strategic Plan for the next five years. The Cabinet Resolution was published in the Government of Panama’s Official Gazette (*Gaceta Oficial Digital*) No. 28931-A, on December 30, 2019.

²⁴⁶ In line with the PEG, in 2021 the government approved Executive Decree No. 251,²⁴⁶ which created the Cabinet for Comprehensive Disaster Risk Management (*Gabinete de Gestión Integral de Riesgos a Desastres*), a high-level coordination entity under the Presidency tasked with ensuring implementation of the DRM agenda. This Cabinet complements the coordination responsibilities of SINAPROC by focusing on disaster preparedness and response in multiple sectors and integrating risk management into sectoral planning. Under the DRM Cabinet, the sector ministries are responsible for establishing strategic plans for the operational continuity in their sectors in the event of disaster. In addition, keeping with its mandate, the DRM Cabinet has recently approved the update of the National Policy for Comprehensive Disaster Risk Management 2022-2030, (PNGIRD) as well as the National Strategic DRM Plan (PENGIRD) 2022-2030, in coordination with the Ministry of Government (MINGOB) and the National Civil Protection System (SINAPROC).

²⁴⁷ Law No. 209 of 2021. https://www.gacetaoficial.gob.pa/pdfTemp/29269_A/GacetaNo_29269a_20210422.pdf

²⁴⁸ <https://unfccc.int/documents/499571>

²⁴⁹ Energy, Forestry, Integrated Watershed Management, Marine-Coastal System, Biodiversity, Sustainable Agriculture, Livestock and Aquaculture, Resilient Human Settlements, Public Health, Sustainable Infrastructure and Circular Economy.

²⁵⁰ From 2021 ASA “Exploring the Development Potential of Panama’s Rural Economy” (P172460).