OECD Development Pathways

Multi-dimensional Review of Panama

VOLUME 1. INITIAL ASSESSMENT

PANAMA

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CONSUMPTION POSSIBILITIES

EMPOWERMENT

WORK

SOCIAL CONNECTIONS

HOUSING

INFRASTRUCTURE

VULNERABILITY

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Multi-dimensional Review of Panama

VOLUME 1. INITIAL ASSESSMENT

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Foreword

*E*conomic growth matters, but it is just one facet of development. Policy makers should focus their attention on ensuring that their country's development path is sustainable and that the lives of their citizens improve. This requires reconciling economic, social and environmental objectives.

OECD Development Pathways is a series that looks at multiple development objectives beyond an exclusive focus on growth. It recognises well-being as part and parcel of development and helps governments identify the main constraints to more equitable and sustainable growth by undertaking a multi-dimensional country review (MDCR). Governments trying to achieve economic, social and environmental objectives need to understand the constraints they face and develop comprehensive and well sequenced strategies for reform that take into account the complementarities and trade-offs across policies. The MDCR methodology is based on quantitative economic analysis, as well as qualitative approaches including foresight and participatory workshops that involve actors from the private and public sectors, civil society, and academia.

The MDCRs are composed of three distinct phases: initial assessment, in-depth analysis and recommendations, and implementation of reforms in the identified key areas. This approach allows for a progressive learning process about the country's specific challenges and opportunities that culminates in a final synthesis report to inform reforms in the country.

The MDCR of Panama is the third review, following that of Peru and Uruguay, to be undertaken by the OECD in Latin America. The MDCR of Panama – Volume 1, Initial Assessment, identifies the main barriers to further inclusive development. It highlights that promoting equitable, inclusive and sustainable economic growth and improving the well-being of all citizens should be at the core of Panama's development strategies.

This MDCR is designed to help Panama formulate development strategies, and identify and support the policy reforms needed to achieve further sustainable and inclusive development. This first volume presents a diagnosis of some of the main impediments to development. Forthcoming volumes will present an in-depth analysis of the main constraints, accompanied by specific policy recommendations to carry out structural reforms and create the conditions for making reform happen. These analyses support Panama's own development agenda towards achieving a brighter future for its citizens.

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Acronyms and abbreviations

ACODECO	Autoridad de Protección al Consumidor y Defensa de la Competencia (Consumer and Competition Protection Authority)
ACP	Autoridad del Canal de Panamá (Panama Canal Authority)
AEOI	Automatic Exchange of Information
ALMP	Active Labour Market Policy
AMPYME	Autoridad de la Micro, Pequeña y Mediana Empresa (Micro, Small and Medium-sized Enterprise Authority)
ANTAI	Autoridad Nacional de Transparencia y Acceso a la Información (National Authority of Transparency and Access to Information)
BEPS	Base Erosion and Profit Shifting
BNA	Banco de la Nación Argentina (National Bank of Argentina)
BNP	Banco Nacional de Panamá (National Bank of Panama)
CACM	Central American Common Market
CAF	Development Bank of Latin America
CCND	Consejo de la Concertación Nacional para el Desarrollo (Council of the National Concertation for the Development)
CEDLAS	Center for Distributional, Labor and Social Studies of the University of La Plata
CEPII	Centre d'Études Prospectives et d'Informations Internationales (Center for Prospective Studies and International Information)
CEQ	Commitment to Equity
CFZ	Colón Free Trade Zone
CGRP	Contraloria General de la República de Panamá (Office of the Comptroller General of the Republic of Panama)
CIAT	Inter-American Center of Tax Administrations
CoG	Centre of Government
CONEAUPA	Council for University Evaluation and Accreditation
CPI	Corruption Perceptions Index
ECLAC	Economic Commission for Latin America and the Caribbean
ENA	Empresa Nacional de Autopistas S.A. (National Highway Company S.A.)
EOIR	Exchange of Information on Request
EPL	Employment Protection Legislation
EVA	Export of Value-Added

FACE	Fondo de Compensación Energética (Electricity Compensation Fund)
FAO	Food and Agriculture Organization of the United Nations
FAP	Fondo de Ahorro de Panamá (Sovereign Wealth Fund)
FDI	Foreign Direct Investment
FET	Fondo de Estabilización Tarifaria (Tariff Stabilisation Fund)
FSI	Financial Soundness Indicators
FTO	Fondo Tarifario de Occidente (West Tariff Fund)
GDP	Gross Domestic Product
GNI	Gross National Income
GRP	Government of the Republic of Panama
ICT	Information and Communication Technology
IDB	Inter-American Development Bank
ILO	International Labour Organization
IMF	International Monetary Fund
INADEH	Instituto Nacional de Formación Profesional y Capacitación para el Desarrollo Humano (National Training Institute)
INEC	Instituto Nacional de Estadísticas y Censo (National Institute of Statistics and Census)
ITSE	Instituto Técnico Superior del Este (Higher Technical Institute of the East)
LAC	Latin America and the Caribbean
LCR	Liquidity Coverage Ratio
LNG	Liquefied Natural Gas
LOLR	Lender of Last Resort
LPI	Logistics Performance Index
MDCR	Multi-Dimensional Country Review
MEF	Ministerio de Economía y Finanzas (Ministry of Economy and Finance)
MIT	Middle Income Trap
NEET	Not in education, employment or training
ODA	Official development Assistance
OECD	Organisation for Economic Co-operation and Development
OPHI	Oxford Poverty and Human Development Initiative
PCT	Patent Co-operation Treaty
PCW	Panama Canal Watershed
PENCYT	National Strategic Plan for Science, Technology and Innovation
PISA	Programme for International Student Assessment
PIT	Personal Income Tax
PMR	Product Market Regulation
PPP	Purchasing Power Parity

RCA	Revealed Comparative Advantage
RICYT	Red de Indicadores de Ciencia y Tecnología (Network for Science and Technology Indicators)
SDG	Sustainable Development Goals
SEDLAC	Socio-Economic Database for Latin America and the Caribbean
SENACYT	National Secretariat Science, Technology and Innovation
SEZs	Special Economic Zones
SFRL	Social and Fiscal Responsibility Law
SIECA	Central American Economic Integration Secretariat
SME	Small and Medium-sized Enterprises
SOCX	OECD Social Expenditure Database
SSA	Social Security Agency
SSC	Social Security Contributions
TERCE	Third Regional Comparative and Explanatory Study
TFP	Total Factor Productivity
TVET	Technical and Vocational Education and Training
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
USD	United States Dollar
VAT	Value Added Tax
VRR	VAT Revenue Ratio
WHO	World Health Organization
WITS/UN	World Integrated Trade Solutions
WTO	World Trade Organization

Editorial

Panama has made significant strides in improving economic performance and social inclusion since the turn of the century. Economic growth started to accelerate after the social unrest of the late 1980s, which resulted in income per capita doubling since 2000. Today, Panama has consolidated an open economy with low unemployment, high investment rates and a stable macroeconomic framework. These achievements contributed to improving well-being and reducing poverty.

At current economic growth rates, Panama is set to become a high income country in 2021 but challenges remain to make it sustainable. After it took Panama 67 years to traverse the middle income bracket, making this achievement sustainable will require a more balanced development model. Economic growth has depended on few, highly productive sectors operating in Colón and Panama City. As this recent growth has been concentrated at the both regional and sectorial levels, its benefits have not been shared equally across the country. Such economic configuration not only increases social disparities, but also threatens to undermine the progresses achieved, as it leaves many in the vulnerable middle class.

Securing past advances and steering towards a new development model requires the implementation of a comprehensive policy agenda. First, it is necessary to equilibrate access to public services across all regions in Panama – particularly in education and skills, health, sanitation and transport infrastructure. Second, informality remains high at 40% of the workforce, affecting mainly low-skilled workers and the vulnerable population. In response, better skills and training policies, as well as suitable small- and medium-sized enterprises and labour market regulations, are needed. Finally, these reforms require corresponding mechanisms for financing development. Strengthening the efficiency and equity of taxation and crafting regulation for public-private partnerships is essential. At the international level, continuing the implementation of international transparency and exchange of information would instil greater confidence.

Reforms are needed to achieve a more inclusive and sustainable path, and the OECD, together with other regional organisations, can support Panama's efforts. This Multi-Dimensional Country Review helps meet these challenges. This first volume presents a diagnosis of some of the main impediments to development. Forthcoming volumes will present an in-depth analysis of the main constraints, accompanied by specific policy recommendations to carry out structural reforms and create the conditions for making reform happen. These analyses support Panama's own development agenda towards achieving a brighter future for its citizens.

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Facts and figures of Panama

(Numbers in parentheses refer to the OECD average)

The land, people and electoral cycle

Population (million)[c]	4 037 043	Official and national language	Spanish
Under 15 (%)[c]	1 064 657	Form of government	Presidential republic
Life expectancy (years)[b]	78	Land area (km^2)	74 177.30

The economy

GDP, current prices (billion USD)[b]	52.13	*In % of GDP*	
Latest 5-year average real GDP growth[c]	6.57 (1.8)	Exports of goods and services[a]	52.2 (27.7)
GDP per capita, PPP (thousand, current international USD)[b]	21.97 (40.9)	Imports of goods and services[a]	51.7 (27.4)
GDP per capita (thousand, current USD)[b]	13.1 (36.7)	*Exports composition (% of total exports)[c]*	
Inflation rate (%)[c]	0.7	Goods	4.9
General government revenue (% of GDP) [b]	20.4 (40.3)	Services	95.1
General government total expenditure (% of GDP)[b]	22.7 (42)	*GDP shares (%)[a]*	
General government gross debt (% of GDP)[b]	38.7 (71.3)	Agriculture	2.9 (1.6)
General government net borrowing (% of GDP)[b]	-2.3 (-1.7)	Industry	27.7 (24.0)
Current account balance (% of GDP) [b]	-7.28 (2.15)	Services	69.4 (74.3)

The labour market

Labour force participation (%)[c]	64.4 (71.3)	Unemployment rate (%)[a]	4.4 (7.0)
Employment rate (%)[c]	61.6 (67.0)	Youth unemployment rate (aged 15-24, %)[a]	9.5 (13.5)
Informal economy[c]	40.2		

The environment

CO_2 emissions (kg per 2005 PPP USD of GDP)[a]	0.14 (0.26)	Renewables (% of total primary electricity supply)[a]	19.1 (9.6)
Forest area (% of land area)[b(a)]	62 (31)		

Well-being

% Believe corruption is widespread throughout the government	83.9 (64.1)	% Satisfied with the educational system	69.4 (74.5)
% Have confidence in the honesty of elections	43.9 (59.4)	% Satisfied with their standard of living	76.6 (75.0)
% Not enough money for food	42.1 (13.1)	% Satisfied with water quality	74.5 (84.5)
% Not enough money for shelter	33.0 (11.3)	% Who feels safe walking alone at night	72.4 (50.8)
% Satisfaction with the roads	61.4 (66.2)	% With someone to count on to help	90.2 (88.3)
% Satisfied with affordable housing	50.8 (56.7)	Life satisfaction (Cantril ladder)	6.6 (6.5)
% Satisfied with air quality	74.6 (80.5)		

Notes: a) Data for 2014, b) data for 2015, c) data for 2016.

Sources: INEC (2017), Instituto Nacional de Estadística y Censo (National Institute of Statistics and Census) (*https://www.contraloria.gob.pa/inec/*); IMF (2015), *World Economic Outlook Database*, International Monetary Fund, April 2017 edition, Washington DC; OECD (2017), *June 2017 Economic Outlook database*; OECD.STAT (2017), *http://stats.oecd.org/*; OECD (2015), *Better life index 2015* (database), Paris; OECD (2016), *OECD Employment Outlook 2016*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/empl_outlook-2016-en*; OECD/ECLAC/CAF (2016), *Latin American Economic Outlook 2017: Youth, Skills and Entrepreneurship*, OECD Publishing, Paris; World Bank (2015), *World Development Indicators* (database), *http://data.worldbank.org/*, Washington DC.

Administrative regions of Panama
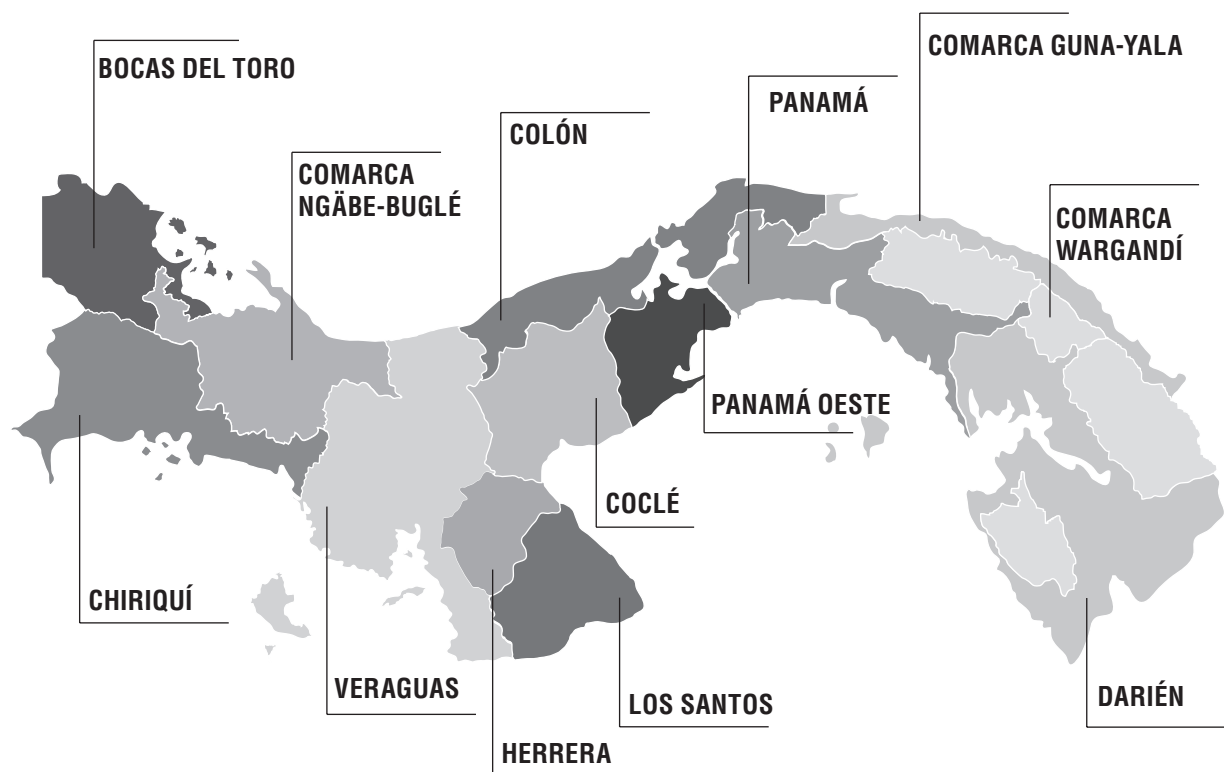
Source: Ministry of Economy and Finance of Panama.

Executive summary

Panama has experienced considerable socio-economic progress and improved well-being in the past decades. GDP per capita has grown considerably since 2006 at a 4.5% annual average, faster than the average of 2.8% in Latin America and Caribbean and narrowing the gap with developed countries in terms of GDP per capita. If Panama sustains this growth rate, it would become a high-income country by 2021. In addition, Panama cut its level of poverty, defined as the share of people living on less than USD 3.10 purchasing power parity (PPP) per day, in half to 8% between 2004 and 2014. Over the same decade, extreme poverty, or those living on less than USD 1.90 PPP per day, decreased by two-thirds, encompassing 3% of the population. Furthermore, Panama performs relatively well in most OECD well-being dimensions compared to countries at the same level of development.

Yet, these improvements have not benefited all groups in society equally. Significant discrepancies continue to exist between groups and regions. While economic growth has been able to lift the income of important shares of the population, Panama remains an unequal country, with income inequality levels, measured by the Gini coefficient at 0.48, significantly above the OECD average (0.32 for the Gini coefficient). Beyond incomes, access to housing, public infrastructure and services differ significantly between regions, contributing to discrepancies in the well-being of the population across the country.

A great divergence exists between urban and rural areas, and especially with *comarcas indígenas* or indigenous territories. People living in the *comarcas* are much more likely to live in poverty and to report lower levels of satisfaction about their living conditions. They are also at greater risk of having an informal job or not having access to drinkable water in their dwelling. The lowest level of electricity coverage in Panama is amongst the indigenous population. However, low outcomes regarding material and living conditions do not stop at the borders of the *comarcas*. *Bocas del Toro*, where 63% of the population is of indigenous origin according to the 2010 census, reports comparable outcomes, as does *Darién*, where indigenous people account for 30% of the population.

Panama needs to unlock new drivers for growth and overcome vulnerability to meet evolving demands from citizens. The country's drivers of growth, which rely strongly on Canal activity as well as the construction and financial sectors, seem insufficient to sustain further socio-economic progress and inclusion. In addition, many of those who escaped poverty in recent years remain vulnerable and could slip back into poverty with an economic slowdown. At the same time, the emerging middle class has new and evolving demands, regarding notably public services such as education, health, housing and transportation.

Informality continues to hold back job quality. Informality, at close to 40% of non-agricultural workers, is one of the highest among Latin American countries with similar levels of income per capita. Informality is associated to high socio-economic and territorial

inequalities. Young people with low education, especially those from the *comarcas*, are the worst affected, while higher education significantly reduces the likelihood of working informally. Poor controls and weak enforcement in the labour market coupled with deficiencies in education and active labour market policies are some of the factors behind these low outcomes.

Better jobs require further competitiveness and productivity gains across economic sectors. In the period 2004-14, labour productivity has been driven mainly by the accumulation of physical capital, while human capital and total factor productivity have contributed less than 15% of labour productivity growth. Furthermore, large productivity disparities exist between economic sectors. Low industrial and agriculture productivity growth translate into high inequalities at the regional level. Characterised as a conventional investment driven growth, Panama has the challenge to shift to a knowledge driven growth and a more diversified economic structure that expands the benefits of the Canal to other sectors and regions.

Innovation and infrastructure gaps, particularly at sub-national level, remain important. Low investment in research and development and the ineffective diffusion of knowledge affect innovation outcomes. Although Panama has made considerable progress in increasing infrastructure investment and implementing better soft solutions to improve international connectivity, more equal access to infrastructure is needed at the local level.

Panama has significant weaknesses in the area of education and skills that directly affect productivity and inclusiveness. As is the case in other countries in Latin America, the poor quality of education and high drop-out rates from secondary schools stand as key challenges since they thwart students' path towards higher education, exacerbate inequalities and narrow the skill base of the future labour force. Additionally, the pertinence of education is low. Almost half of Panamanian formal firms report difficulties finding workers with the skills they need, compared to close to 38% in OECD countries. This highlights the importance of focusing on a wider range of skills in the curriculum. It also means improving vocational education, training and mechanisms to better match the demand and supply of skills.

Further fiscal revenues should play a more significant role in shaping income distribution in Panama. In 2015, total tax revenue and social security contributions at 16.2% of GDP are low compared to both OECD (34.3%) and Latin American (22.8%) economies. Improvements in the effectiveness and efficiency of the tax-and-transfer system should promote income redistribution and further resources are needed to finance the investment in key social areas, including education and skills.

Finally, Panama needs to strengthen its institutional capacity to adopt and implement its challenging development agenda. Confidence in institutions remains low and greater transparency is needed to build public trust in government. Panama needs to strengthen institutions' capacity to improve evidence-based decision making and increase its capacity for long-term strategic foresight to move forward on these reforms. Although the country has a comprehensive National Development Plan (*Plan Estratégico de Gobierno*, 2015-19) and is currently working on a strategic plan with a 2030 horizon, planning and evaluation processes should be improved by strengthening technical capabilities within most ministries. In that context, an improvement in the institutional framework to promote green growth is fundamental. At the global level, Panama should continue implementing international standards recently approved to increase transparency and improve the exchange of tax information with other countries.

This first volume of the *Multi-Dimensional Country Review of Panama* identifies the main constraints for inclusive and sustainable development and the second volume of this Review will go into more details about the policy recommendations to achieve it. In particular, first, it will analyse the policies to promote social inclusiveness at the provincial level; second, it will focus on policies to boosting formal jobs, and finally, it will provide recommendations to better public and private financing policies for development. The subsequent, third volume, will focus on how to move from analysis to action, concentrating on implementation and making reform happen.

Chapter 1

Overview: Towards further sustainable development and inclusiveness in Panama

Since the beginning of the 21ˢᵗ century, Panama has exhibited remarkable economic growth and has reduced the gap in terms of income per capita with high income countries. While this growth has enabled poverty reduction and advances in some well-being dimensions, prosperity has not always translated into social benefits for the whole population. Today Panama faces the challenges of adopting a new development model to overcome the middle income trap, and ensure prosperity is to the benefit of all. This overview chapter highlights the main assessments of this Multi-dimensional Country Review to promote further inclusive development through improvements in productivity, social cohesion, resource mobilisation and governance. The chapter presents a brief historical overview of Panama's development. The chapter then describes the methodology employed in this review, and summarises the main results of the OECD well-being analysis, which presents a comprehensive picture of people's material living conditions and quality of life. This chapter concludes with a summary of the main bottlenecks to inclusive development, and describes how these were selected for further analysis in the following chapters.

Panama's recent economic development has been impressive, although some challenges remain to overcome the so-called middle-income trap and guarantee well-being to all citizens. Boosting productivity and increasing value-added are fundamental to consolidate sustainable economic growth. Panama's economic growth in the past decade has contributed to reduce the gap in terms of GDP per capita with developed countries. Most of the economic performance was related to construction, real estate and commerce (wholesale and retail). Challenges remain to sustain this economic performance. Panama needs to boost labour productivity across sectors and regions, support improvements in living conditions, and reduce income inequalities.

This first volume of the OECD Multi-dimensional Country Review (MDCR) provides an initial assessment of the economy, identifies binding constraints to sustainable and inclusive development, and proposes topics for further analysis in phase II of the MDCR (Box 1.1). The entire process of the OECD MDCR aims to support governments with formulating national development strategies that take into account the multiplicity of development objectives and the means available for implementing public policy to promote equitable, inclusive, and sustainable economic growth that advances national aspirations and improves the well-being of all citizens.

Box 1.1. **The three phases of the Multi-dimensional Country Review of Panama**

This OECD Multi-dimensional Country Review (MDCR) is designed to help Panama formulate development strategies and identify and support the policy reforms needed to achieve further sustainable and inclusive development. This review is composed of three distinct phases:

- This first phase aims to identify the main constraints on achieving sustainable and equitable improvements in well-being and economic growth. This report, titled "Initial Assessment", is the first volume.

- The second phase will further analyse the key constraints identified in this report in order to formulate policy recommendations that can be integrated into the development strategy of Panama. The second volume produced is entitled "In-depth Analysis and Recommendations".

- The final phase of the MDCR will provide support to the implementation of these recommendations. As for other Latin American economies, this final phase is particularly relevant in Panama given the complexity of both the political economy and the policy-making process to make reform happen (Dayton-Johnson, Londoño and Nieto-Parra, 2011). The third volume is entitled "From Analysis to Action".

For each phase, in addition to the publication of a report, a series of workshops are organised. The MDCR methodology is based on quantitative economic analysis, as well as qualitative approaches including foresight and participatory workshops. Quantitative methods include standard approaches as well as a comparative analysis with a selection of countries, referred to here as the benchmark economies.

This overview chapter provides a broad historical overview of Panama's social and economic development over the past decades, and the challenge presented by the middle-income trap. The chapter looks at possible qualitative and/or individual outcomes of Panama's national development strategies and aspirations by presenting the main results of the OECD well-being framework for Panama and a participatory exercise where citizens described life in an ideal future in Panama. The chapter also presents the approach and methodology used in this MDCR. It summarises the main constraints to achieving further inclusive development, overcoming the middle-income trap and consolidating the middle class in Panama.

From crisis to high economic performance to further inclusive development in Panama

The social and political unrest of the late 1980s affected development in Panama. Following the political crisis driven by political unrest with citizens requesting the end of 21 years of dictatorship and the removal of the corrupt Manuel Antonio Noriega from power, the country experienced a sharp drop in international confidence and an economic crisis in the late 1980s (Chaikin, 2013). Private investment decreased dramatically to 5.8% of GDP in 1988 from 17.2% of GDP in 1986. In addition, foreign direct investment net inflows were 2.3% of GDP on average between 1985 and 1990, and in 1988 were less than -10% of GDP. This means that the economy contracted by more than 1.8% in 1987 and 13.3% in 1988. Between 1985 and 1990 GDP per capita growth decreased by 1.7% and by more than 15% in 1988.

Panama's economic context improved considerably in the 1990s. Average annual economic growth exceeded 5.5% in that decade, which contributed to reducing the income per capita gap with developed countries. In addition, annual GDP per capita growth was close to 3.5% in that period, higher than the average of Latin America (1.0%), upper-middle income countries (1.4%) and high-income countries (1.8%). This macroeconomic performance has been supported by a stable macroeconomic framework. The stable monetary framework, based on dollarisation of the economy in which the US dollar has been legal tender since 1904, was characterised by annual inflation rates below 2%. By the end of the 1990s, public debt had dropped by more than 20 percentage points to less than 60% of GDP.

However, the improvement in the economic performance that started in the 1990s has not fully translated into all social benefits. While the portion of the population living in extreme poverty (defined as living on 1.90 USD a day or less, 2011 PPP) declined by close to 8 percentage points during the 1990s to less than 15% at the end of that decade, significant inequalities continue to exist. The Gini coefficient remained high, at close to 0.58 in that period, and regional disparities persisted. Informality also persisted, with more than one-third of informal workers as a percentage of non-agricultural employment.

Since the beginning of the 21st century, Panama has exhibited considerable socio-economic progress. Over the last ten years, levels of investment have been higher than OECD and Latin American averages. Following the Torrijos-Carter treaties signed in 1977 which were implemented through a process concluded in 1999, revenues from the Canal are a key source of income for the government. Linkages between GDP growth and trade also increased after Panama joined the World Trade Organisation (WTO) at the end of 1997. In the period 2005-15, GDP per capita grew considerably, averaging 5.8% annually. This good performance contrasts to the sluggish annual average growth of 1.9% in Latin American economies and 0.9% in high-income countries in the same period. Extreme poverty continued to decline dramatically

and it stood around 5% of the population since 2010. The effect of growth, rather than reduction of inequalities, was responsible for most of the reduction in poverty. Overall well-being is relatively good compared to countries of the same level of development, in particular in areas such as social connections, life evaluations, life expectancy and, more generally, material conditions.

A new development model is needed to overcome the Middle Income Trap and expand the benefits of growth to all citizens

Panama's impressive economic performance in the past decade is not without its challenges. Most of the economic growth and the improvements in labour productivity over the 2004-14 period have been explained mainly by factors associated with physical capital and commerce, both retail and wholesale (Figure 1.1). Panama remains a middle-income and an upper middle-income country since 1955 and 1998 respectively, highlighting the need to overcome the Middle Income Trap (MIT). The MIT occurs when a country can no longer rely on its traditional drivers of growth to make further progress (OECD/CAF/ECLAC, 2016; OECD, 2014). Even if Panama were to sustain its recent strong macroeconomic performance (4.5% of average per capita GDP growth rate in the past ten years), it would need four more years, until 2021, to become a high-income country. This would mean that it had remained a middle-income country for more than 67 years.[1] The majority of countries in Latin America attained upper middle-income status during the 2000s. But Panama, like Mexico (since 1990) and Venezuela (since 1997), has remained in middle income status for longer (see Chapter 2).

Figure 1.1. **Impressive productivity growth but still middle income status**
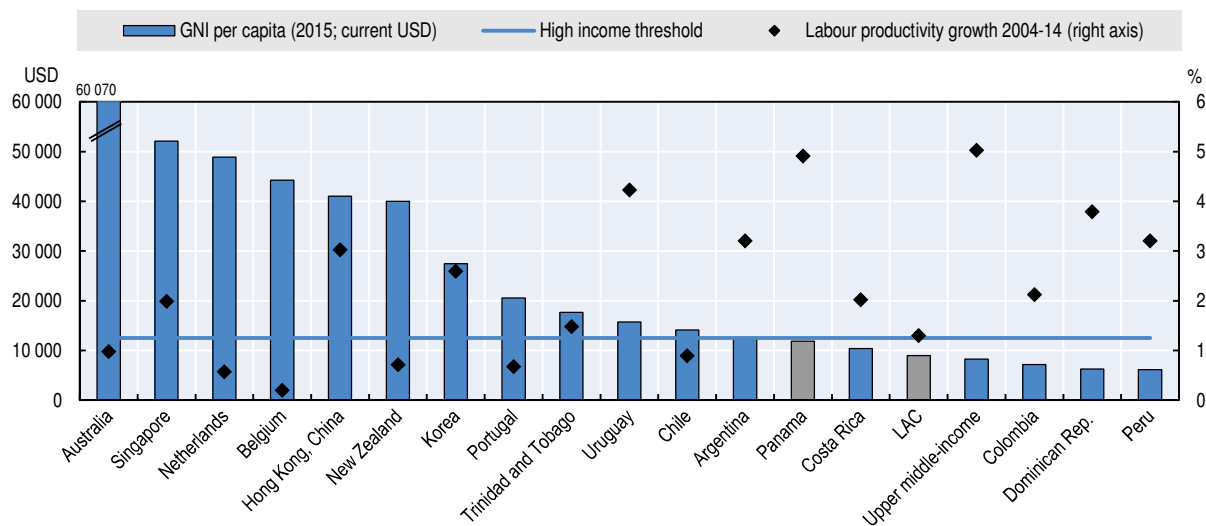
Note: LAC refers to Latin American and Caribbean countries. Labour productivity growth is the compound annual growth rate in the period 2004-14 of GDP per person employed (constant 2011 PPP USD).

Sources: World Bank, *World Development Indicators*, OECD, *National Accounts Statistics*, International Labour Organization, *Key Indicators of the Labour Market* (database) (accessed 1 February 2017). The threshold for high-income countries follows World Bank's definition and is described at *https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups*.

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Looking forward, policies promoting the shift to a more diversified and knowledge-driven growth from a conventional pattern of investment driven growth are crucial. Overcoming the MIT will require a set of public policies that should improve labour productivity in Panama. High levels of investment have been positive, but Panama nevertheless should improve several areas that contribute to improved labour productivity.

Following the experiences of countries that tackled the Middle Income Trap, improvements in the quality of education, governance, rule of law, the taxation system and liquidity in the equity market are the main domains that should be prioritised to tackle the MIT (Melguizo et al., 2017).

Absolute income poverty rates fell considerably since 2007. However, income inequality, which is understood as one dimension of social inclusion, has improved very little. Indeed, while economic growth had been able to lift the income of important shares of the population, there is room to reduce further income inequalities. For instance, even though the middle class saw significant income growth, it was not large enough to narrow the income gap. Panama remains therefore an unequal country, with income inequality levels higher than most of the benchmark economies and significantly above the OECD average (Figure 1.2).

Figure 1.2. **Declining but still high inequality (Gini coefficient)**
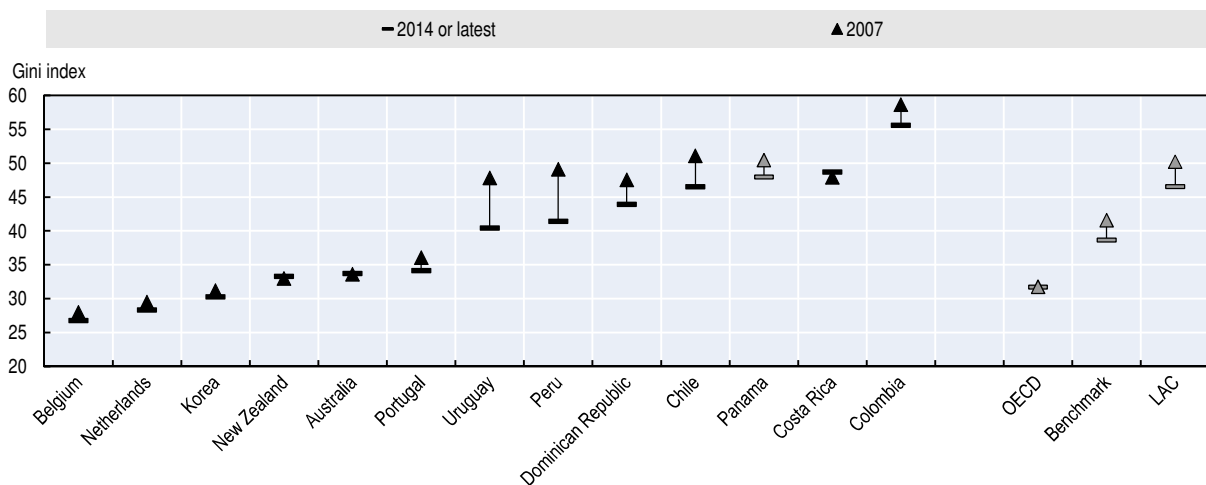
Note: The category "2014 or latest" refers to 2015, for Costa Rica; 2013 for Belgium, Chile and Portugal: 2012 for New Zealand; 2011 for Colombia; and 2014 otherwise. The category "2007" refers to 2010 for Costa Rica; 2008 for Australia, Colombia and New Zealand; and 2006 for Chile.

Source: OECD Income Distribution Database; estimates for Dominican Republic, Ecuador, Panama, Peru and Uruguay are based on country microdata as available through CEDLAS (see Box 3.1 for further details).

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The improvements in living standards and reduction of poverty have not benefitted all groups equally. Access to public infrastructure and services differ across regions, contributing to discrepancies in the well-being of the population. A great divergence exists between the urban and rural areas in various dimensions such as income, education, health, housing and sanitation, and especially between those areas with high concentrations of indigenous populations versus the rest of the country.

The Multi-dimensional Country Review methodology explores development from all perspectives

Development is multi-dimensional in the sense that it implies an aggregate improvement in a set of desirable outcomes, as opposed to progress along a single dimension. Development is often considered synonymous with economic growth, and yet growth in GDP is only one element of development. If aggregate increases in productivity and material wealth do not produce meaningful gains in the overall well-being of a country's population, development

has failed in both human and economic terms. Economic growth is only a means to an end – the sustainable and equitable improvement of people's lives.

The OECD's Multi-dimensional Country Reviews analyse development challenges from a wide variety of perspectives, using a combination of tools. These include a gap analysis across a dashboard of indicators, detailed cross-country benchmarking with a set of comparator countries, and a visioning exercise. The MDCR dashboard of indicators covers three broad areas: well-being, drivers of long-term growth, and structural characteristics and development dynamics. The well-being analysis plays a key role in determining not only "how's life in Panama?", but also in assessing development outcomes.

To accurately assess Panama's economic and social strengths and weaknesses, the MCDR goes beyond describing average outcomes and adopts a more analytical approach by comparing Panama with a set of relevant benchmark economies. No two countries face the same combination of development challenges or opportunities, and therefore no perfect comparison country exists. The idea of creating a benchmark group is to allow comparative evaluation of Panama's performance over a variety of dimensions. The aim of the comparison is to draw upon a range of policy successes that relate to the multiple challenges and opportunities that Panama faces. In particular, benchmark economies were selected according to criteria that include similar characteristics to Panama when the benchmark country transitioned to the status of high income from middle income (Melguizo et al., 2017); successful economies with similar economic structure to Panama (e.g. maritime transportation is an important driver of growth) that have achieved growth and inclusiveness; recent experiences of economies with useful development paths; and countries in the region with similar socio-economic challenges to Panama.

The 16 benchmark economies were selected in conjunction with the Ministry of Economy and Finance of Panama. Seven of them are OECD member countries: Australia, Belgium, Chile, Korea, Netherlands, New Zealand and Portugal. In addition to Chile, seven other Latin American and Caribbean (LAC) countries were chosen: Argentina, Colombia, Costa Rica, Dominican Republic, Peru, Trinidad and Tobago, and Uruguay. Hong Kong, China and Singapore are also are included because of their growing economic power and their economic characteristics. Throughout the analysis, Panama is also compared to the Latin America and the Caribbean average and the OECD member average.

In addition to this quantitative dimension, the OECD MDCR methodology includes a series of participatory workshops used to complement the quantitative analysis and enhance understanding of the local context. These workshops aim to enable the OECD team to connect with different perspectives of Panamanian society and together to reflect on the challenges to inclusive, sustainable development. The workshops also serve the purpose of ensuring that the context in which policy responses will be implemented informs the analysis and development of recommendations in the early stages of the MDCR. The workshops also act as a platform for dialogue to exchange ideas, share and receive feedback on emerging findings, and test recommendations to ensure these are both targeted and pertinent. Each workshop for each phase of the MDCR serves a specific purpose, and follows a specific methodology.

The first workshop, "Panama: Vision and Challenges", was organised in the context of the diagnostic phase of the Panama MDCR, and was hosted by the Ministry of Economy and Finance. The aim of the workshop was to define the country's development and gain a better understanding of the local context. To do this, the workshop followed a strategic foresight methodology, and brought together participants representing different perspectives

of Panamanian society. Gender-balanced group of more than 40 people participated from government ministries, the private sector including people involved in the Panama Canal, academia and civil society, notably those dealing with indigenous and cultural issues.

Strategic foresight: Embracing local engagement to envision Panama's development future

To better understand Panamanian citizen aspirations for the future of their country, a visioning exercise was carried out where participants were asked to imagine the life of a citizen in 2030 (Annex 1.A1), projecting what their country and citizens' lives would be like if development objectives were realised. This exercise has been carried out in all MDCRs led by the OECD Development Centre in partnership with countries to better understand each country's developmental goals through citizens' normative view of the future, the local context and cultural preferences.

A clear aspiration for Panamanian citizens participating in the workshop is the consolidation of a broad middle class. The stories depict citizens from different parts of the country, including the Comarcas, thriving with good quality jobs and comfortable middle-class lives. Citizens have cars, recycle, use nurseries, are connected online, and enjoy leisure time and cultural activities. Much of their imagined success is linked to the performance of the national public education and health systems. Emphasis is placed on good-quality jobs and an environment where people can access investment to start their own companies or thrive in companies that provide opportunities for career development. The stories are all of women who are all well-educated and actively participate in the labour force, which reflects a good work-life balance. The stories also depict an aspiration for a well-connected country in terms of infrastructure as well as public transportation and further territorial development. Migration to major cities is not needed anymore to live middle-class lives. The stories also reveal an aspiration for active local engagement and civic participation, where local customs are transferred from one generation to the next, and citizens want to contribute to their communities.

How's life in Panama? An overview of the OECD well-being framework

Part of the OECD MDCR benchmark analysis examines a range of well-being indicators in Panama. Well-being is a multi-dimensional concept and can be difficult to define in isolation as it covers many areas of people's lives. However, the core idea is relatively intuitive: well-being encompasses those aspects of life that people would consider essential to meet one's needs, pursue one's goals and feel satisfied with life (Box 1.2).

Box 1.2. **Using the OECD's "How's Life" framework to measure well-being in developing countries**

The OECD has developed a framework for measuring well-being in OECD countries based on national initiatives undertaken in several countries and several years of collaboration with experts and representatives from national governments (OECD, 2011). This "How's Life" framework has also been adapted to measure well-being in non-OECD countries, taking into account the literature on measuring development outcomes and embracing the realities of these countries. Its dimensions have been redefined to better match the availability of data, the priorities and critical concerns of these countries (Boarini, Kolev and McGregor, 2014).

Box 1.2. **Using the OECD's "How's Life" framework to measure well-being
in developing countries** (*cont.*)

This adjusted framework, like the original framework, measures well-being outcomes in two broad pillars. The first pillar, material conditions, comprises the dimensions of consumption possibilities, work and housing conditions and infrastructure. The second pillar, quality of life, comprises health status, education and skills, social connections, empowerment and participation, vulnerability and life evaluations, feelings and meaning — i.e. the main aspects of subjective well-being (Figure 1.3). These ten dimensions are used to measure current well-being. They are complemented with another set of indicators to measure the sustainability of current well-being in the future. The framework emphasises the importance of preserving the natural, human, economic and social resources that are essential for ensuring the well-being of future generations.

The OECD well-being framework is informed by a number of analytical principles. First, it is concerned with the well-being of individuals rather than aggregate economic conditions. Second, it focuses on well-being outputs rather than inputs, recognising that outcomes may be uncorrelated with the resources devoted to achieve them. Third, it emphasises the need to measure the distribution of well-being outcomes to identify inequalities across and within population groups. Finally, it considers both objective and subjective indicators, as people's own evaluations and feelings about their lives matter as much as the objective conditions in which they live.

Figure 1.3. **OECD well-being framework for developing countries**
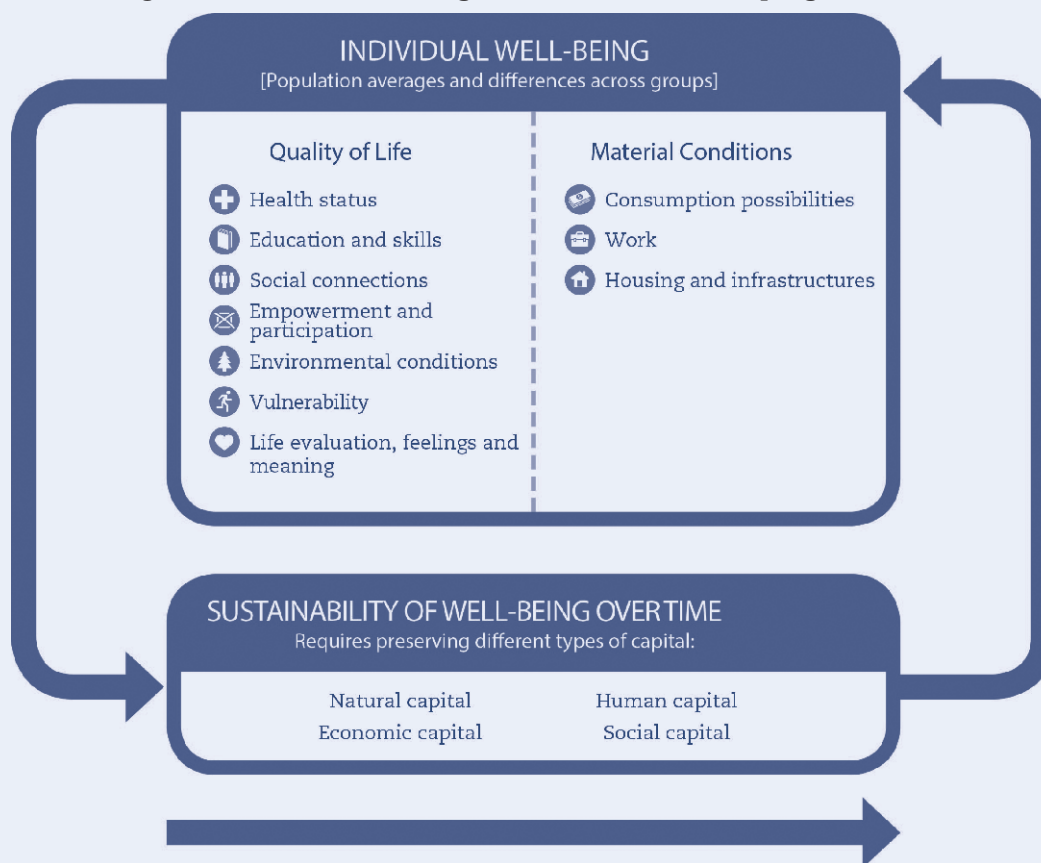
Source: Boarini, Kolev and McGregor (2014), "Measuring well-being and progress in countries at different stages of development: Towards a more universal conceptual framework", *http://dx.doi.org/10.1787/5jxss4hv2d8n-en* and OECD (2011), *How's Life?: Measuring Well-being, http://dx.doi.org/10.1787/9789264121164-en.*

Panama's performance is mapped across a range of indicators that represent the ten dimensions of the OECD's well-being framework (Figure 1.4). Panama's actual performance (the blue bars) is shown in contrast to its expected performance given its level of economic development (the black circle). Results that are outside the circle represent better-than-expected outcomes; results inside the circle show lower-than-expected outcomes. The longer the bar is, the better Panama's performance in that indicator is in relation to its expected outcome.

Figure 1.4. **Current and expected well-being outcomes for Panama: Worldwide comparison**
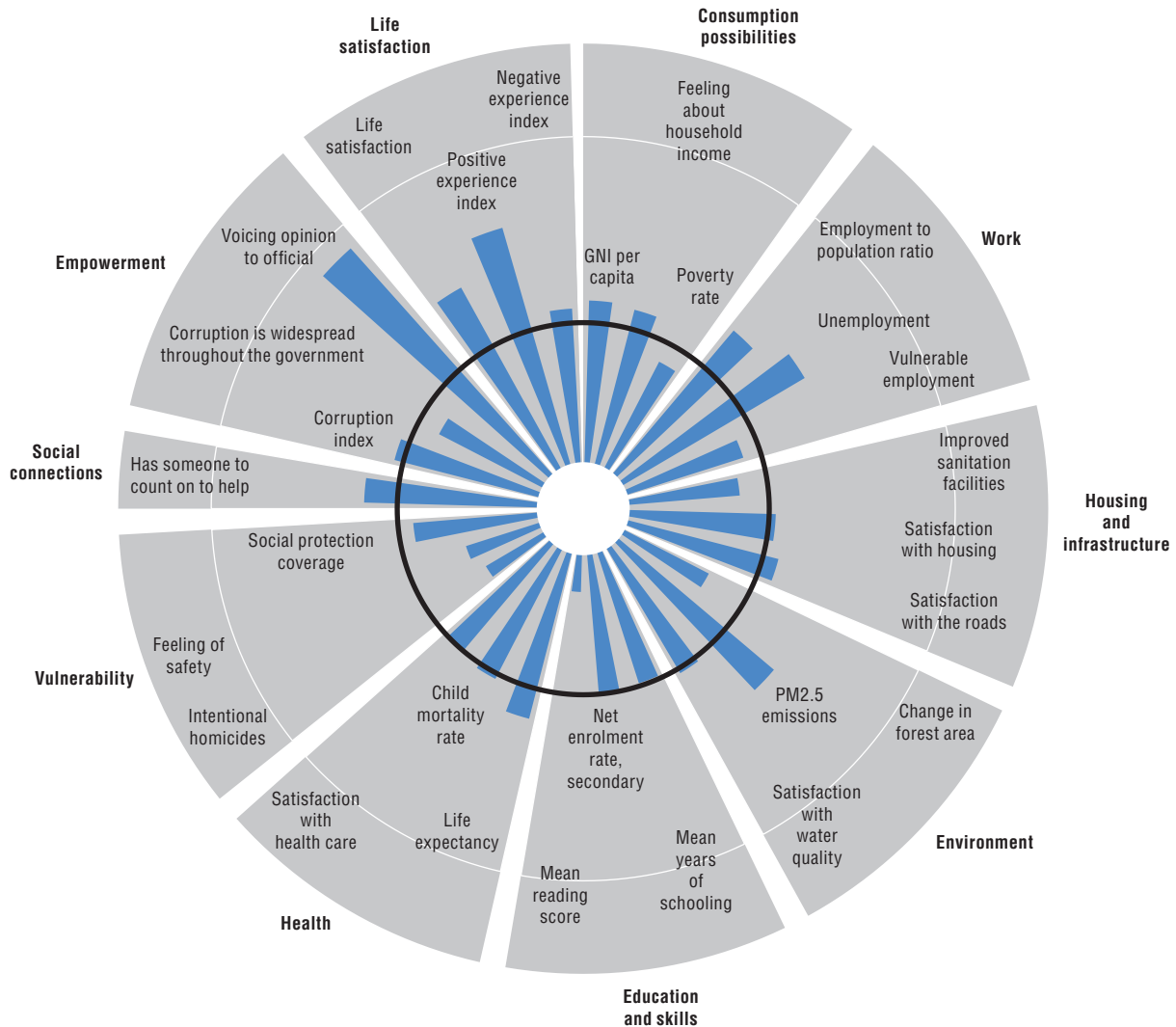
Note: The bars represent the observed well-being values for Panama and the black circle shows the expected values based on Panama's level of GDP per capita obtained from a set of bivariate regressions with GDP as the independent variable and the various well-being outcomes as dependent variables from a cross-country dataset of around 150 countries with a population over a million. All indicators are normalised in terms of standard deviations across the panel. The observed values falling inside the circle indicate the areas where Panama performs poorly in terms of what could be expected from a country with a similar level of GDP per capita. All indicators had been normalised so that the longer the bar, the better the outcome.

Source: Gallup (2016), *Gallup World Poll*, *http://www.gallup.com/services/170945/world-poll.aspx* (accessed 1 February 2017), World Bank (2017), *World Development Indicators* (database), Washington DC, *http://data.wroldbank.org*, UNESCO Institute of Statistics (UIS), PISA scores (2009), and Transparency International (2016), *Corruption Perception Index*, *http://www.transparency.org*

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When it comes to well-being, Panama has areas of strengths and weaknesses (Figure 1.4). Panama performs reasonably well in the areas of social connections and life evaluations and more generally on material conditions, however, it underperforms in the areas of education and vulnerability. In most dimensions, the average situation is relatively good compared to countries of the same level of development, but inequalities remain high.

Material conditions are reasonably good in Panama, but inequalities remain high

Although income per capita is high compared to most Latin American economies, further increases are needed to overcome the Middle Income Trap (see Chapter 2). Gross national income (GNI) per capita in 2014 was USD 18 800 (2011 constant PPP), well above the Latin American average of USD 14 400. However, Panama's income per capita remains well below the average of both the OECD economies and high-income economies, which in 2014 were close to USD 37 700 and USD 42 200, respectively (both at 2011 constant PPP).

Given its level of economic development, Panama has good results in the area of consumption possibilities, but nonetheless a large share of the population report difficulties in getting by on their income. Although more than three out of four Panamanians report being satisfied with their living standards, significant disparities among the population exist. In 2014, 8.4% of the population were living on less than USD 3.10 a day, more than what could be expected for a country with a similar level of development. Similarly, data from the Gallup World Poll show that in 2015 more than one-third (36%) of Panamanians do not feel that their household income is enough to get by on or to live comfortably, 42% report that they do not have enough money for food and 33% for shelter.

Panama performs relatively well in terms of its employment rate even though the quality of employment is just below what can be expected. More than 60% of people over the age of 15 are employed, and the unemployment rate is very low at around 4%. However, Panama shows slightly lower performances in terms of job quality and women's participation. The share of vulnerable employment in the Panamanian labour market (i.e. unpaid family workers and own-account workers) is around 30%. Informal employment (i.e. those who will not have the right to a pension or work in a firm with five or fewer employees and are non-professional self-employed, or have zero income) is relatively high at 40% of total non-agricultural employment. Almost one-quarter of this informal employment is within formal private businesses (see Chapter 3). Informality mainly affects less-skilled Panamanians and those with lower-paying jobs, contributing further to inequality. The employment gap between women and men is larger than in most OECD and benchmark economies.

Access to decent housing and infrastructure is a challenge for Panama. Satisfaction with the availability of good and affordable housing and with the quality of the roads and highways is close to the expected level for Panama, based on the experience of countries with similar GDP per capita. However, Panama lags behind regarding access to improved sanitation facilities. Only three-quarters of its population have access to sanitation facilities in their house – i.e. flush or pour flush toilet (to piped sewer system, septic tank and pit latrine), ventilated improved pit latrine, pit latrine with slab, or composting toilet.

Quality of life outcomes are unbalanced but subjective well-being remains high

Variability is seen amongst different measures of environmental conditions, but based on the experience of countries with a similar GDP per capita, the overall outcome is around the expected level for Panama. It experienced a 3.5% reduction in forest area over ten years, and therefore stands slightly below what could be expected. Air pollution is much lower than

the expected level for a country with Panama's level of industrialisation. According to World Bank data, Panama's $PM_{2.5}$ level – a measure of particulate matter (PM) of 2.5 micrometres, a size that has severe health effects – was only 6.8 micrograms per cubic metre in 2013. These mixed results continue with subjective measures of environmental quality. Around three-quarters of the population report being satisfied with water quality, a share that is close to what could be expected given Panama's level of GDP.

Panama has significant weaknesses in the area of education and skills (see Chapter 3). In terms of attainment and access to education, Panama performs as expected given its GDP per capita. Mean years of schooling of the population aged 25 and above are 9.04 and the net enrolment rate of secondary education is 78%. However, completion rates and quality of its education are major challenges. In 2014, only 52% of the population aged 25 and above have completed secondary education and one out of five young Panamanians drop out of upper secondary school (OECD/CAF/ECLAC, 2016). Even those who complete secondary education graduate with skills that rank well below international standards. On the quality side, while basic literacy skills are almost universal (95%), the cognitive skills of 15-year-olds as measured by the Programme for International Student Assessment (PISA) are remarkably low. Panama's mean PISA reading score was 370 in 2009 and ranked significantly below what could be expected (PISA measures the cognitive skills of 15-to-16 year-olds in the areas of mathematics, reading and science, assessing their competencies when they reach the end of compulsory education).

Panama performs well in terms of average life expectancy but shows more mitigated results when other aspects of health status are considered. Good health is a major determinant of quality of life and a core dimension of well-being. In addition to its intrinsic value, it is vital for people's ability to work and participate in social life. Panamanians report very high outcomes regarding their personal health. Their life expectancy at birth is 78 years, above the expected value and only 2.5 years behind the OECD average. According to the Gallup World Poll, 91% of people surveyed in Panama report being satisfied with their health conditions and 82% say they have no health problems. However, despite these high objective and subjective outcomes, Panama shows less impressive results when it comes to child mortality or satisfaction with the health care system. These lower outcomes – although in line with what could be expected – are partly explained by regional differences (see Chapter 3).

Panama's results are lowest in terms of vulnerability, which is understood in the OECD well-being framework as the exposure to risks such as food or income insecurity, job loss, illness, or physical violence. In 2013, its rate of intentional homicides per 100 000 people was 17.4 – much lower than the Latin America and Caribbean average (23.2 per 100 000 people) but still much higher than what could be predicted given Panama's GDP per capita. Its rate is significantly above the world average of 5.3 per 100 000 inhabitants (UNODC, 2017). At the same time, people's perceived level of safety is relatively low: in 2015, only half of Panamanians surveyed reported that they felt safe walking home alone at night, which is much lower than the expected value. Although less significant than violence, economic insecurity is another salient issue. Around one-third of Panamanians are not covered by any social protection, less than what could be expected in countries with a similar GDP per capita.

Social connections in Panama are relatively strong. Good proxies of the strength of close personal networks in a country are the share of people feelings that they can count on others in times of need and the amount of time people spent with friends and family. In Panama, 88% of those surveyed said that they have at least one friend or a relative that they can turn to for help in a time of need, slightly above the world average (Gallup, 2016).

Panama shows very mixed results in the area of empowerment and participation (see Chapter 5). On one hand, the selected indicators show that civic engagement is amongst the highest of the South American continent. On the other hand, trust in government and institutions is relatively low. Civic engagement can be measured through voter turnout but also goes well beyond electoral participation. If Panama shows average results regarding the former (voter turnout was 77% at the last presidential elections, see Chapter 5), other forms of political participation may be higher. For example, more than one-third of Panamanians say they have voiced their opinion to a public official, a much higher level than that expected for countries with Panama's GDP per capita. Panama also ranked in the middle in terms of public trust and corruption in Transparency International's Corruption Perception Index (2016), which ranks countries based on how corrupt their public sector is perceived to be by business people and country analysts (87 out of 176 countries or territories). This is broadly similar to countries with the same level of economic development. However, citizen's perception of the quality of government is rather low: 84% of those surveyed think corruption is widespread in government, only 39% of Panamanians have confidence in national government and only 44% believe in the honesty of elections, putting Panama in the upper half of the worst-performing countries in Latin American (Gallup, 2016).

Despite this complex reality, with areas of strong and poor performance, subjective well-being in Panama is above what could be expected. Life evaluation is measured through three distinct channels to disentangle people's daily experiences (feelings and emotions) from overall life satisfaction. These measures are based on the idea that people are the best judges of how their own lives are going (OECD, 2011). Using the Cantril Ladder, a measure which asks respondents to rate their lives as a whole on a scale of 0 to 10, with 0 representing the worst possible evaluation and 10 representing the best, average life satisfaction in Panama is 6.6, as compared with a Latin American average of 6. Using a set of ten positive and negative "experiences", Panama shows more unbalanced results (higher-than-expected on the positive experiences but lower-than-expected on the negative experiences). These experiences include, on the one hand, feeling well-rested, laughing and smiling, enjoyment, feeling respected, and learning or doing something interesting, and on the other hand, include stress, sadness, physical pain, worry and anger. The high overall level of subjective well-being relative to the level that could be predicted based on the country's GDP per capita is a feature that Panama shares with most other Latin American countries.

The well-being framework within each dimension: The case of gender inequalities

The OECD well-being framework also accounts for inequalities within each dimension, consistent with the idea that community welfare reflects both average outcomes and how they are distributed across people with different characteristics. For instance, gender inequality is a cross-cutting issue that should be gauged across every dimension of well-being. Women tend to have lower outcomes in most of the dimensions of well-being and are significantly lagging behind in the areas of jobs, vulnerability and life evaluation (Figure 1.5). In particular, regarding jobs, they are more likely to be out of the labour market and have a higher risk of being unemployed. Close to one-quarter of young women (from 15-to-29 years old) is in neither education, employment nor training (NEET), compared to 11% of young men in the same age group (see Chapter 3). Conversely, women tend to report higher results in education, health and social connections.

Figure 1.5. **Difference of well-being outcomes by gender**
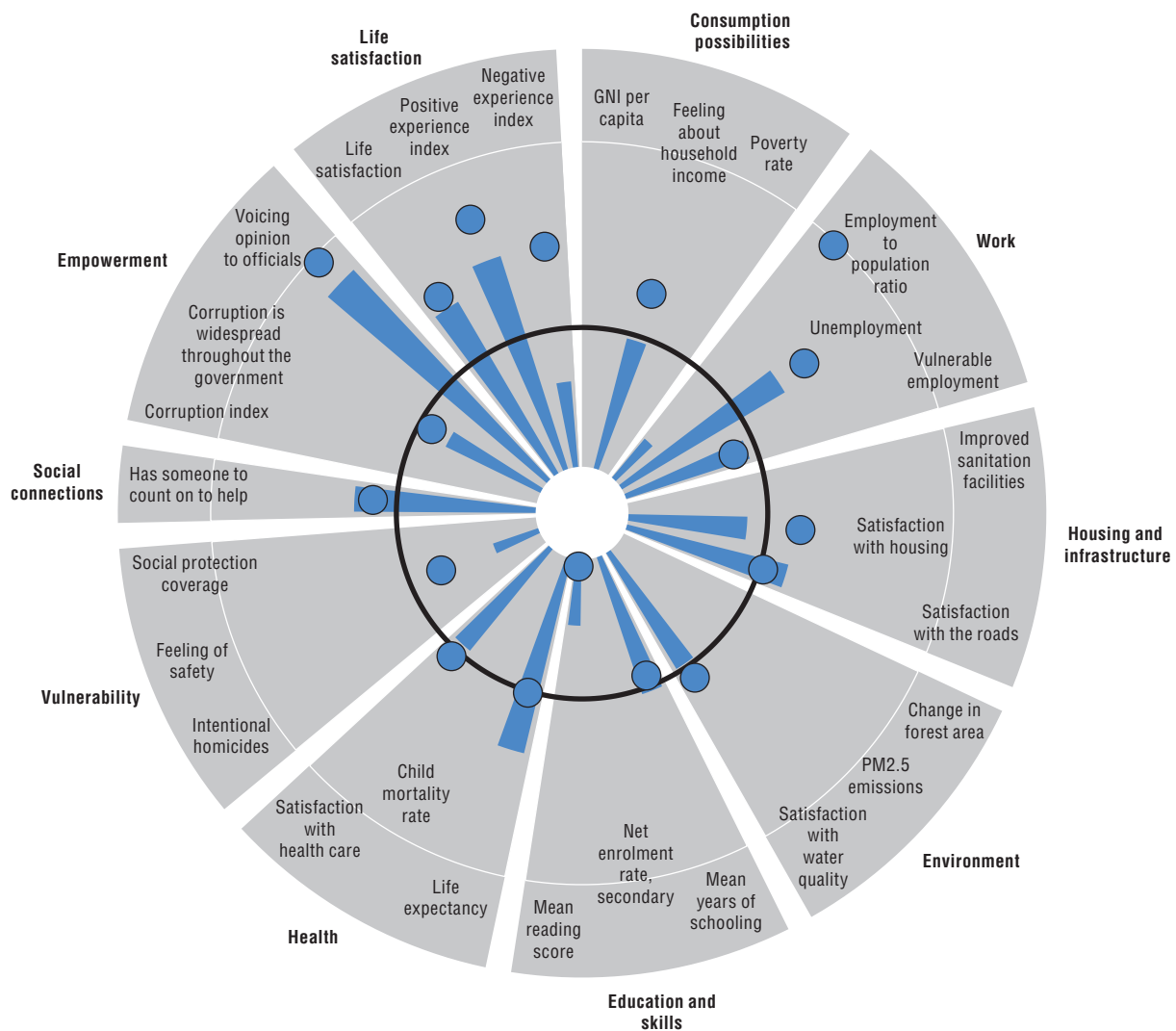
Note: The bars represent the observed well-being values for women in Panama. The dots stand for the observed well-being values for men. The black circle shows the expected values based on Panama's level of GDP per capita obtained from a set of bivariate regressions, with GDP as the independent variable and the various well-being outcomes as dependent variables from a cross-country dataset of around 150 countries with a population over one million. All indicators are normalised in terms of standard deviations across the panel. The observed values falling inside the circle indicate the areas where Panama performs poorly in terms of what could be expected from a country with a similar level of GDP per capita. All indicators have been normalised so that the longer the bar, the better the outcome. For some indicators, such as the GNI per capita or poverty, the disaggregation by gender was not possible.

Source: Gallup (2016), *Gallup World Poll*, *http://www.gallup.com/services/170945/world-poll.aspx* (accessed 1 February 2017), World Bank (2017), *World Development Indicators* (database), Washington DC, *http://data.wroldbank.org*, UNESCO Institute of Statistics (UIS), PISA scores (2009), and Transparency International (2016), *Corruption Perception Index*, *http://www.transparency.org*

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Sustainable Development Goals and citizens' views on well-being

The OECD well-being framework presented above for the case of Panama provides similarities but also complementarities to the Sustainable Development Goals (SDGs), which Panama committed to achieve as an United Nations (UN) member (Box 1.3).

Panamanians who participated in the workshop for this MDCR identified these dimensions of the OECD well-being framework and the inequalities within each dimension as important. The multi-dimensional approach of the well-being framework provided an assessment of people's lives in Panama according to its level of development. These

dimensions were also considered as essential by the Panamanians participating at workshop to pursue better satisfaction with life. In the participatory workshop participants depicted a desired future for Panama through imagined stories of citizens in 2030. Participants then worked to identify different dimensions of these stories, which were clustered and mapped onto the OECD "How's Life?" framework. In this exercise, all dimensions of the OECD framework were identified. When participants discussed the different dimensions, sustainability emerged as a cross-cutting issue in several dimensions including life satisfaction, education and the environment, as well as income and wealth. Inequalities and social inclusion also emerged as a cross-cutting issue, and were discussed in relation to multiple dimensions including the financial system, health, employment, income and wealth, and governance and participation. In relation to well-being, participants focused on questions of culture, national identity and citizenship.

Box 1.3. **The Sustainable Development Goals and the OECD well-being framework**

Following the adoption of the 2030 United Nations Agenda for Sustainable Development, Panama, like the other 192 UN Members, committed to achieving a series of Sustainable Development Goals (SDGs) in a wide range of areas.

These commitments, which are grouped into five categories (People, Planet, Prosperity, Peace and Partnership), focus on improving outcomes in areas such as education, health, the fight against poverty, violence and corruption, gender equality, the environment, innovation, and access to adequate employment and housing. They also include the objective of helping north-south and south-south co-operation on the path of sustainable development through financial support and co-operation. There is a lot of overlap and complementarity between the OECD well-being indicators and the UN Sustainable Development Goals, with both similarities and differences between the two approaches. For instance, the OECD well-being framework is an analytic and diagnostic tool to assess the conditions of a community, whereas the 2030 Agenda is a list of policy commitments agreed by world leaders.

The policy commitments in the 2030 Agenda touch on practically all of the dimensions considered in the OECD well-being framework, with the exception of two aspects. The first is SDG 17 (means of implementation), which reflects the choice to focus on universally-valued outcomes rather than the country-specific policies needed to attain them. The second is the 2030 Agenda's focus on the "shared responsibility" of all countries in delivering global public goods and avoiding negative global impacts. This element does not feature in the OECD framework because of its focus on describing the conditions prevailing in each community, rather than the drivers (some of them external) shaping both current well-being and its sustainability. Conversely, the two OECD dimensions of "social connections" and "subjective well-being" do not correspond to any of the SDGs, although "promoting well-being for all" is part of SDG 3 on health.

Major bottlenecks to inclusive development

The quantitative and qualitative analyses of well-being outcomes complement the in-depth analysis of the dimensions associated with inclusive development in Panama that are the focus of the remaining chapters of this report.

Chapter 2 assesses the macroeconomic performance and productivity and competitiveness challenges, as well as infrastructures, logistics and innovation outcomes. Panama needs to improve the potential benefits of specific activities, such as the Canal and

Special Economic Zones, to the rest of the economy and move towards an innovation-driven growth with improvements in labour productivity across regions and economic sectors.

Chapter 3 studies the social and territorial challenges including health, education and the labour market. Higher investment in education, for example, is needed to promote further inclusiveness. As is the case in other countries in Latin America, the poor quality and high drop-out rates in secondary schools stand as key challenges since they thwart students' path towards higher education, exacerbate inequalities and narrow the skill base of the labour force. Despite a significant increase over the past two decades, social expenditure in Panama is below that in benchmark economies, and should be increased.[2]

Chapter 4 analyses the financing for development in Panama, highlighting the public and private resources to finance development and the structure and sustainability of these resources. Regarding the resources that are available for development activities, further resources from the public sector should finance social challenges. An effective and efficient tax-and-transfer system, together with employment promotion and good quality jobs, are direct and powerful instruments to redistribute income.

Chapter 5 focuses on several aspects affecting institutions and sustainable development. Panama needs to improve the effectiveness of its institutions. Confidence in institutions remains low. Trust in government, for instance, through greater transparency on the part of institutions, is needed to build public trust in government. Panama needs to improve evidence-based decision making and increase its capacity for long-term strategic foresight to move forward in the reforms aimed to increase inclusive development. Although Panama has a comprehensive National Development Plan (*Plan Estratégico de Gobierno, 2015-19*) and is currently working on a strategic plan with a 2030 horizon (CCND – Consejo de la Concertación Nacional para el Desarrollo –, 2016), planning and evaluation processes should be improved by strengthening technical capabilities within most of the ministries. Finally, to improve the reputational risk of the country, Panama should continue implementing the measures to increase transparency and improve exchange of information on taxes with other countries, especially those recently adopted.

Table 1.1 presents a summary of the main constraints to achieve further sustainable and inclusive development and related areas of action identified in this report.

Grouping these constraints into three blocks of the most salient and cross-cutting issues, the second phase of the Panama Multi-dimensional Country Review (MDCR) will develop in-depth policy recommendations and provide OECD expertise on:

● **Promoting social inclusiveness at the provincial level**. Several dimensions such as vertical co-ordination, planning and evaluation of education, transport infrastructure and other public services will be included.

● **Boosting formal jobs**. Better skills and training policies will be part of this study. Other factors such as policies to enhance SMEs and labour market regulations will be included as well.

● **Better public and private financing policies for development**. Strengthening the taxation system to increase efficiency and equity, and sound regulatory and institutional frameworks for public-private partnerships, will be two key elements of this study.

Table 1.1. **Main constraints and action areas to further inclusive development in Panama**

Chapters of the MDCR Panama Volume 1	Main constraints identified	Action areas being implemented or to be implemented
Chapter 2	Stagnated productivity in the agricultural sector, linked with lack of technological transfer.	Improve the potential benefits of specific activities, such as the Canal and Special Economic Zones, to the rest of the economy.
Chapter 2	Modern service sectors are unarticulated with traditional sectors, and services contribute little value-added to other sectors' exports.	The economic structure needs to be upgraded and shifted towards innovation-driven growth.
Chapter 2	Innovation outcomes remain low.	Increase innovative policies and spending in research and development, particularly by the private sector.
Chapters 2 and 3	Quality of and access to infrastructure are unequal across regions.	Prioritise interventions in infrastructure at sub-national level and develop co-modality in the transport sector.
Chapter 3	Marked territorial differences in several public services including health, education and housing, and also on income and well-being.	Expand investment and build capacities in Comarcas and rural areas.
Chapter 3	Low quality of education, combined with large inequalities in access to education and performance across socio-economic groups.	Expand education resources by increasing government spending, especially for pre-primary and secondary; improve teacher quality through better teacher training.
Chapter 3	Poor levels of skills, which are not aligned with current and future needs of the labour market.	Expand the offer of technical and vocational secondary and tertiary non-university programmes.
Chapter 3	Two-fifths of the workforce are in informal employment, with low wages and no job protection.	Increase workplace controls and promote workers' registration in the formal sector; expand training and active labour policies for informal and low skilled workers.
Chapters 3 and 4	Untargeted social spending and subsidies.	Continue improving the effectiveness of public expenditures.
Chapter 4	Low fiscal revenues and ineffective tax structure to finance development.	Increase tax receipts by reducing tax expenditures, raising some direct and indirect taxes, and facilitating compliance.
Chapters 4 and 5	Relatively weak assessment and coverage of the underlying risks of the financial system.	Increase the time frequency and in-depth analysis of a public and comprehensive financial stability report.
Chapter 5	Low confidence in institutions and the government.	Promote further transparency across public entities, improve the planning and implementation of policies, and implement further exchange of information.
Chapter 5	Weak private sector involvement in infrastructure.	Better regulation and institutional frameworks for public-private partnerships.
Chapter 5	High environmental impact of growing mining sector.	Improve the institutional framework to promote green growth.

Source: Authors' elaboration.

Notes

1. Panama is not an isolated case in the region of Latin America and the Caribbean (OECD/CAF/ECLAC, 2016). However, the performance of other countries indicates that a more rapid transition from a middle-income to a high-income economy is possible. For instance, it took Korea 27 years, Portugal 46 years and Chile 55 years to make that transition.

2. Social expenditure is compared across countries according to Economic Commission for Latin America and the Caribbean (ECLAC) data and the OECD Social Expenditure (SOCX) database.

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ANNEX 1.A1

Vision exercise workshop: Stories of the future

The OECD Multi-dimensional Country Review (MDCR) methodology includes a series of participatory workshops used to complement the quantitative analysis and enhance understanding of the local context. These workshops aim to enable the OECD team to connect with different perspectives of Panamanian society and together reflect on the challenges to inclusive, sustainable development. The workshops also serve the purpose of ensuring that the context in which policy responses will be implemented informs the analysis and development of recommendations in the early stages of the MDCR. They also provide a platform for dialogue; an exchange of ideas; sharing and receiving feedback on emerging findings; and testing recommendations to ensure these are both targeted and pertinent. Each workshop, for each phase of the MDCR serves a specific purpose, and follows a specific methodology.

As part of the MDCR approach, a visioning exercise was carried out during the participatory workshop where Panamanians were asked to tell a story of a citizen in 2030, imagining what their country and citizens' lives would be like if development objectives were realised. This exercise is carried out in all MDCRs to better understand the country's developmental goals through citizens' normative view of the future, the local context and cultural preferences. The exercise is also carried out to better understand how the country's development objectives relate to the OECD's well-being framework. Below are a sampling of these stories that emerged during the workshop.

- María González is 30 years old in 2030. She is a healthy middle-class professional, is married and has a healthy baby son. María has finished university studies and today works as an electromechanical engineer. She is entrepreneurial and has recently become a consultant. María was born in the Comarcas and has three brothers. Her parents made sure she grew up learning her customs and traditions. She did her secondary studies in public schools in the region, which has good access to basic services and access to technology. María is health-conscious, has a healthy lifestyle and, she makes sure she eat healthy foods. She speaks Spanish, English and her native language. She is currently studying for a Master's degree at the Technological University of Panama that has been recognised as one of the best in the region.

- Esperanza is from the Ngäbe Comaraca. In 2030, she is a doctor and works in the Central Hospital of the region. Esperanza initially left the Comarca to pursue her education. However, upon completing her studies, she returned to where she grew up because she felt she had the opportunity to help the community. Esperanza is happy because the region today has hospitals in adequate condition, and new infrastructure has significantly

improved the living conditions of the people. They now have good education, health care facilities and roads that have reduced travel time and increased connectivity to other parts of the country. These improved conditions have also meant that people have more leisure time, and the opportunity to focus on cultural activities and environmental sustainability.

- Esperanza Buenaventura lives in the city of Panama, in Santa Libuada. She is an engineer in the logistics sector, working on finance and technology. Esperanza is happy: she has a job that she loves with good remuneration and purchasing power which allows her to buy goods and services. Esperanza enjoys a good work/life balance; she is a manager in a company that offers flexible working hours that enable her to take care of and enjoy her children. She also has spare time to volunteer and contribute to society. Panama has efficient public transportation, and quality health and education. Esperanza enjoys her life in Panama, and feels safe going around the community, her city, and her country. Esperanza has confidence in the justice institutions and political system, and therefore pays her taxes diligently as she believes they are used for wise public investment. Since there are recycling facilities, she recycles, as she is aware of the importance of protecting the environment.

- Valentina is 30 years old. She is married with two children and has a disability. Valentina is pursuing a Master's degree in human resource management with a major in human rights. She studied in public school and university. Valentina speaks English very well and works in a multinational company's human resources department. Her company has well-developed and inclusive policies that provide employment and development opportunities: her company's educational grant enabled her to enrol in her Master's degree programme. The company has a special agreement with local nurseries so her children are taken care of while she works. Valentina has health insurance, and feels she has a fulfilling life and a lot to do and potential to develop. In her spare time Valentina is tech-savy and a social entrepreneur: she broadcasts her own YouTube programs related to gender, disability and issues that affect her generation. She lives in Capira, in a region that was successfully reforested and today has many green areas and inclusive infrastructures that allow her to go out and enjoy the clean air and nature. In her district, she has access to quality water, energy and sanitation, and everything is recycled. Valentina feels she has everything she needs around her, but when she wants to go to the city, she has safe and adequate public transportation and it only takes 15 minutes.

- María is 30 years old and lives in Puerto Armuelles. She is an independent entrepreneur who has her own food production company with her husband. María is married to Carlos Rodríguez, who has a Bachelor's degree in logistics and, like her, graduated from a state university. María and Carlos have two children who were born in the CSS and currently, like their parents, study in a public school of excellence. María and Carlos benefitted from the opportunity of a business financing programme built on returnable seed capital. María and her family commute a lot every day.

Chapter 2

Boosting productivity and value-added in Panama to keep up with growth

This chapter focuses on the current drivers of economic performance in Panama and the challenges the country faces to consolidate sustainable growth. It analyses the macroeconomic conditions underlying the rise in income per capita and the shifts in productivity over the past decade, as well as the uneven growth of labour productivity across economic sectors and regions. The analysis further looks at Panama's export profile, which concentrates on services exports, and assesses the exports' value-added and the contribution of services to other exports. The chapter also presents the impact of foreign direct investment on specific economic sectors and its important contribution to total investment. After describing two major actors in the economy, the Canal and the Special Economic Zones, this chapter evaluates sectorial policies, such as infrastructures, logistics and innovation.

Panama's successful economic growth in the past decade has contributed to reducing the GDP-per-capita gap with OECD economies. Construction, real estate and commerce (wholesale and retail) drove most of the economic performance. Challenges remain to carrying forward the past decade's economic performance into the future. To achieve this, boosting labour productivity across sectors and increasing value added in exports will be essential.

The Canal and, to a lesser extent, the Special Economic Zones have played a considerable role in the economy. Both present unexploited opportunities to foster development and to address the challenges of Panama's dual economy, in which a few sectors with high wages and links to global trade contrast with the rest of the economy. In particular, export capacity and productivity levels remain low in the industrial and agriculture sectors. Specific areas including infrastructure, logistics, innovation, inclusiveness in education and skills (see Chapter 3), and business regulation (Chapter 5) should contribute to this purpose.

This chapter examines the evolution of economic growth in Panama, and the challenges to boosting sustainable growth and improving productivity and competitiveness. First, it summarises macroeconomic conditions and economic performance in the past decades. It also highlights the recent trends in productivity among economic sectors and regions. Second, it studies the trade profile in Panama, focusing mainly on the value-added of its exports. Third, it summarises the components and challenges of foreign direct investment to Panama. Fourth, it describes two major actors – the Canal and the Special Economic Zones – and their potential for the economy. Fifth, it focuses on the sectorial areas of infrastructure, logistics and innovation that should contribute to economic development in Panama. The conclusion of the chapter presents the main messages of this assessment.

Boosting productivity is a condition to maintain high and sustainable growth

Impressive macroeconomic performance in the past decade compared to other countries in the region has contributed to closing the income-per-capita gap with OECD economies. The stable macroeconomic framework combined with the boom of some economic sectors including construction, real estate and commerce (retail and wholesale) have played a key role in recent economic performance. Service sectors made a remarkable contribution to that. Most of the labour productivity performance was driven by increases in physical capital. A key challenge to sustaining economic development is therefore to extend the high productivity to other sectors and other regions of Panama.

Strong economic growth has contributed to improving GDP per capita

Gross domestic product (GDP) per capita has grown at a faster rate since the 1990s. The social and political unrest of the late 1980s affected development in Panama and GDP per capita decreased by 1.7% between 1985 and 1990. In 1988 alone, GDP per capita decreased by more than 15%. Since this period, income per capita growth has accelerated. Between 1991 and 2004 the average annual growth rate was 2.7%. In the period 2005-15 it increased considerably, to 5.8% year-to-year on average. This good performance in the past

decade contrasts with the sluggish annual average growth in benchmark economies (2.6%), Latin American economies (1.9%), and high-income countries (0.9%). Even compared to upper-middle income (4.9%) and middle-income (4.5%) countries, increases in the GDP per capita have been remarkable over the past decade, recovering from pre-1990s sluggish rates (Figure 2.1).

Figure 2.1. **GDP per capita in Panama, 1980-2015**

Constant 2011 USD, base 100 = 1980
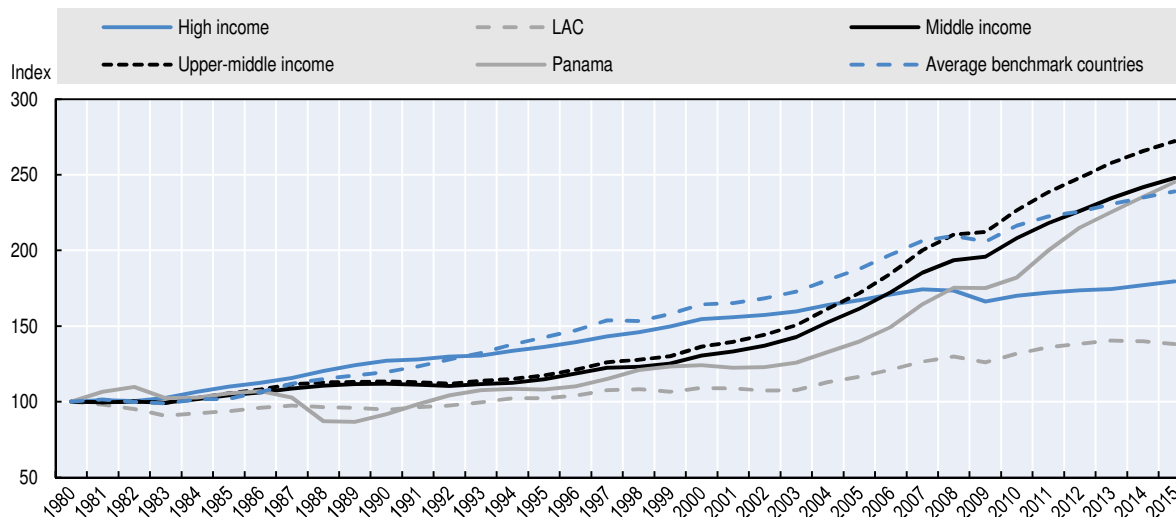
Note: LAC refers to the average of Latin American and the Caribbean countries.

Source: World Bank (2017), *World Development Indicators* (database), Washington, DC, *http://data.worldbank.org* (accessed 10 May 2017).

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GDP per capita growth over the past decade has been associated with consistent macroeconomic performance. Among Latin American economies, Panama exhibited the highest GDP growth with an average 7.3% over the period 2007-16, competing with emerging Asian countries and above all the benchmark economies (2.9% on year-to-year average during the same period). In particular, while benchmark economies were in recession in the global financial crisis (-0.9% on average in 2009), Panama exhibited resilience; its economy grew by 1.6% in 2009 and more than 5% yearly in the post-crisis period. For example, in 2016 Panama exhibited the second highest performance compared to Latin American and benchmark economies (Figure 2.2).

The stable monetary framework, achieved through dollarisation of the economy, and lower volatility of fiscal expenditures have contributed to sustainable economic growth. Lower business cycle volatility improves welfare in two ways. First, it reduces economic uncertainty, thereby fostering investment and boosting economic growth (Hnatkovska and Loayza, 2004). Second, it reduces income volatility, which can have a strong impact on households' well-being. Welfare improvements from lower business cycle volatility can amount to up to 10% of consumption in Latin America (Loayza et al., 2007). In Panama, inflation rates over the past ten years (2007-16) have remained relatively low compared to emerging and developing countries; on average the annual inflation rate was below 3.8% in that period. In addition, since the beginning of the 2000s the volatility of public expenditures decreased considerably and it remained one of the lowest when compared to benchmark economies (Figure 2.3, Panel A).[1] These monetary and fiscal conditions contributed to guaranteeing high but stable economic growth compared to the benchmark economies

(Figure 2.3, Panel B). An improved macroeconomic framework is perhaps the government's most important asset for conducting economic policy. Continuing to strengthen this should be the cornerstone of future policy making and the foundation on which to build a competitive economy and social equity.

Figure 2.2. **Economic growth in Panama versus benchmark economies**
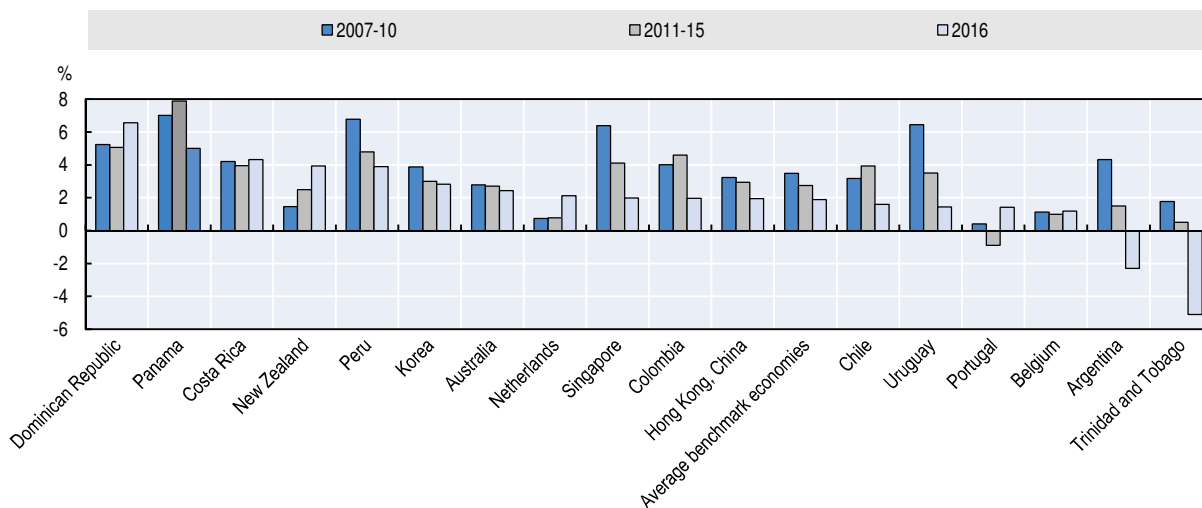
Note: 2007-10 and 2011-15 are the annual GDP growth averages.

Source: IMF (2017a), *World Economic Outlook*, April 2017 edition (database), International Monetary Fund, *www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx* (accessed 1 June 2017).

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Figure 2.3. **Macroeconomic performance and volatility in Panama versus benchmark economies (2007-16)**

Panel A. Volatility of public expenditures
(Percentage of GDP)

Panel B. GDP growth adjusted for its volatility
(Standard deviation)
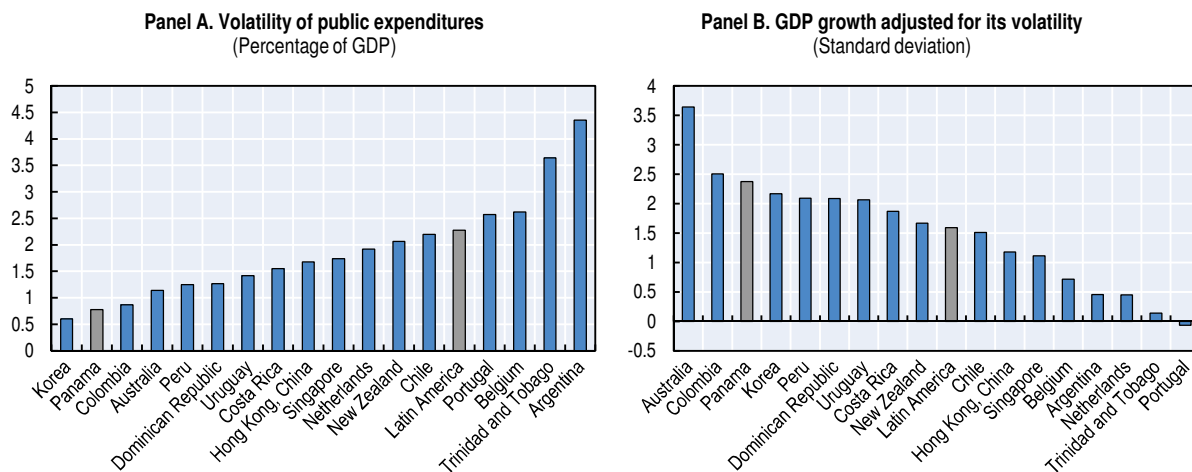
Note: Latin America includes Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

Source: OECD calculations based on IMF (2017a), *World Economic Outlook, April 2017 edition* (database), International Monetary Fund, *www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx* (accessed 1 June 2017).

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The Panamanian economy depends mainly on four sectors: commerce, construction, transport and real estate. In the period 2011-16, 60% of total GDP was represented by commerce (retail and wholesale); construction (both private and public investment in residential and non-residential infrastructure); real estate; and transport, communications

and storage.[2] This pattern reoccurs in 2016 as well, where each of these sectors represented at least 14% of Panama's total GDP (Figure 2.4, Panel A). In contrast, manufacturing and agriculture and fishing only represented 5.1% and 2.2% of total production in 2016, respectively. This highlights the concentration of the Panamanian economy in services.

Figure 2.4. **Share and contribution of economic activities in GDP**

Panel A. Share in GDP, 2016 (percentage)

Panel B. Contribution to GDP growth, 2011-16 (percentage)
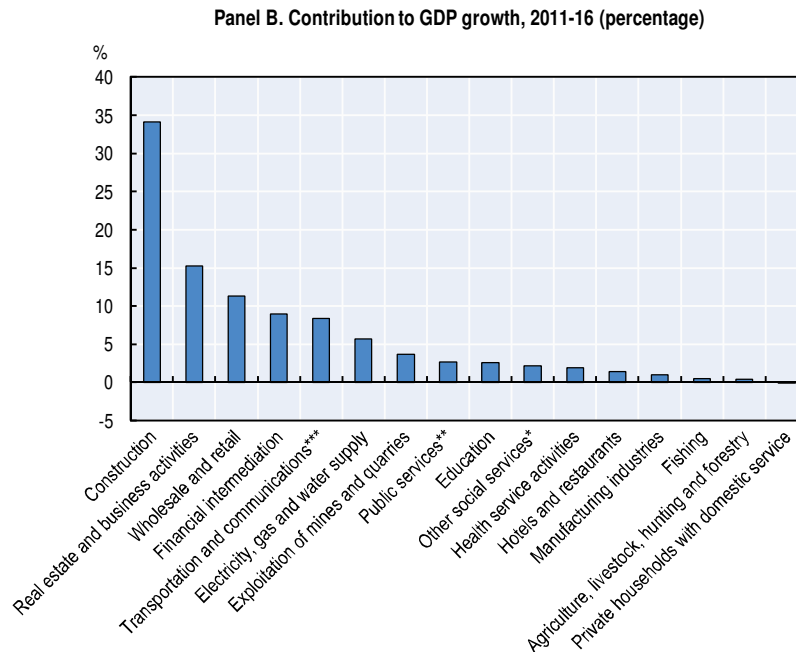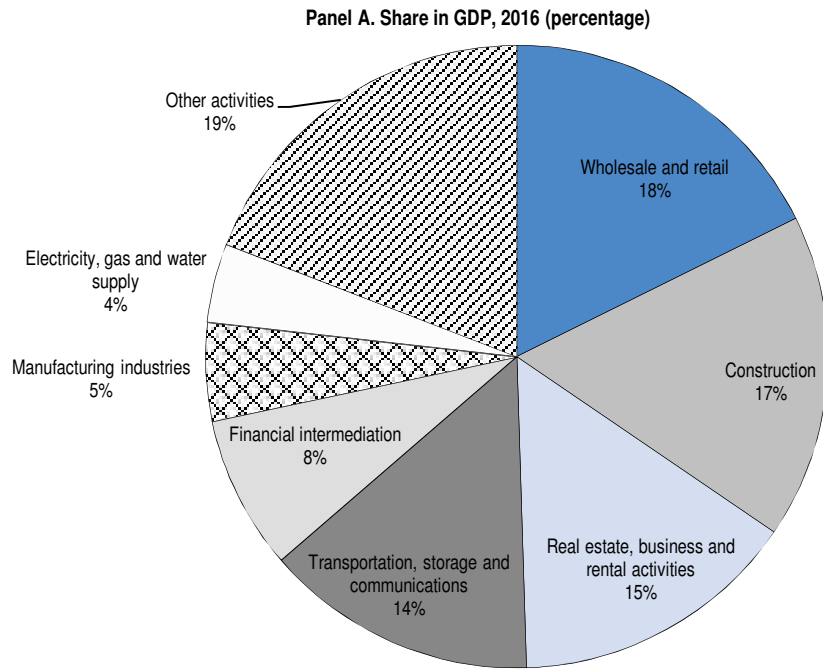
Note: Panel B, the contribution to GDP growth of each economic sector is the change in constant prices of that sector as a share of constant increase in total GDP between 2011 and 2016. *Other social services include other community, social and personal services activities. **Public services include public administration, social security and defence. ***Transport and communications include storage as well.
Source: OECD calculations based on data from CGRP, webpage, *https://www.contraloria.gob.pa/* (accessed 5 January 2017).
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Similarly, services and construction, rather than manufacturing and agriculture, drove most of the macroeconomic performance in past years. The four sectors mentioned above, combined with financial services, accounted for close to 78% of the economic growth between 2011 and 2016 with construction alone representing 34% of GDP growth. Manufacturing, agriculture and fishing combined only represented less than 2% of the total economic growth in that period (Figure 2.4, Panel B).

The Canal plays an immense role in Panama's economic development and growth

The importance of the Canal in the economy, estimated at around 40% of total activity, renders Panama highly dependent on world trade, and more precisely on maritime transportation. In 2014, the Canal generated fiscal revenues of about USD 2.6 billion (5.4% of GDP). It also represents 16% of Panama's services exports (travel, tourism, commercial and financial services), and plays an important role in economic development.

Starting in 2013, Panama's economic growth has slowed to around 6%, and has decreased to 4.9% more recently, mainly reflecting the winding down of the Canal expansion and a normalisation of public investment. While most sectors in the service-driven economy remain buoyant, activities in the Colón Free Trade Zone continue to decline, in part owing to difficulties in trade relations with Venezuela and Colombia and lower demand from the region.

In the medium term, growth is expected to be in the 5-7% range, according to the authorities and International Monetary Fund (IMF) projections (IMF, 2017b). This projected growth is based in part on the benefits expected from the extension of the Canal and the development of a logistics hub in Panama. The *Medium-Term Fiscal Framework 2018-2022* projects an average annual rate of 6.2% of GDP growth during this period. Stable and credible fiscal and monetary frameworks support this scenario (MEF, 2017). The inflation rate is projected to remain low in that period, at 1.8% in 2018 and 3.3% in 2022. Public debt is expected to be reduced by close to 4 percentage points of GDP, reaching 33% of GDP in 2022 and the primary balance should remain positive at 0.4% of GDP in 2022 from 0.7% of GDP in 2018. The planned annual contribution of the Panama Canal Authority (ACP) to the state for this five-year period is higher than 2.0% of GDP on average, at 2.6% of GDP in 2018 and 2.2% of GDP in 2022 (MEF, 2017).

Nevertheless, low global trade could have a negative impact on that medium-term scenario Linkages between GDP growth and trade have increased since Panama joined the World Trade Organization (WTO) at the end of 1997 (Figure 2.5).[3] Anaemic world trade growth is one of the main drivers of the recent poor world growth performances. The number of trade restrictive measures in G20 countries has increased to 1 196 in mid-2016 from 324 at the end of 2010, and container demand growth lags global GDP growth (Boston Consulting Group, 2016; WTO, 2016). Furthermore, world trade growth is expected to remain muted in the medium term (OECD, 2016a). Under such an uncertain and downside global risk scenario in terms of trade and shipping, economic activities linked to the Canal should affect inclusive development in Panama.

However, some resilience could reduce the external shock referred above. Indeed, while total cargo has declined, Canal revenues have increased in recent years. Looking forward, the Canal has already started to recover some of its pre-expansion market share and it is therefore expected that the growth in Canal traffic could be somewhat higher than world trade growth. Additionally, the gains from further integration with other countries in the

region could be even greater in a scenario of global trade frictions (IDB, 2017). In this context a more comprehensive integration with other countries in the region, beyond the Central American Common Market (CACM) is welcome.

Figure 2.5. **Global trade and GDP in Panama (annual growth rates)**

Source: IMF (2017a), *World Economic Outlook, April 2017 edition* (database), International Monetary Fund, *www.imf.org/external/pubs/ft/ weo/2017/01/weodata/index.aspx* (accessed 1 June 2017).

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Other risks are linked to the stability of Panama's financial system and Panama's reputation in international markets. Panama should improve the assessment of underlying risks, such as in the construction sector and in the sustainability of special zones, to anticipate any shock to the stability of financial intermediaries (see Chapter 4). In addition, to increase the credibility of financial markets and to avoid reputational costs, the implementation of international transparency standards and the exchange of information mechanisms are required (see Chapter 5).

Labour productivity improvements are key to overcoming the Middle Income Trap

Despite this favourable performance in terms of GDP per capita and GDP growth, Panama has since 1998 remained an upper-middle-income country. The majority of countries in the region attained upper-middle status during the 2000s. But Panama, like Mexico (1990) and Venezuela (1997), has retained this status since the 1990s.[4] This highlights the need to overcome the so-called Middle Income Trap (MIT). This phenomenon occurs when a country can no longer rely on its traditional drivers of growth (e.g. low labour costs or the accumulation of labour as a major source of growth) to make further progress (OECD/CAF/ ECLAC, 2016; OECD, 2014). Panama's recent period of high GDP growth helped it to consolidate its position as an upper-middle-income country, but this success is not without its challenges.

Overcoming the MIT will require a set of public policies that should improve labour productivity in Panama. While high levels of investments have contributed to closing the gap, Panama should improve several areas that contribute to boosting labour productivity. The experiences of other countries that tackled the Middle Income Trap show that improvements in the quality of education, governance, the rule of law, the taxation system and the liquidity in the equity market are the main domains that should be

prioritised (Melguizo et al., 2017). If Panama were to sustain the strong macroeconomic performance of recent years, which saw 4.5% average per capita GDP growth rate over the past ten years, it would become a high-income country in 2021. This would mean Panama's trajectory from middle-income to high-income country took 67 years, and 24 years from upper middle-income to high-income country. Compared to neighbouring Latin American economies, Panama is not an isolated case (OECD/CAF/ECLAC, 2016). Globally, however, there are examples of countries that transitioned more rapidly. For instance, it took Korea 27 years, Portugal 46 years and Chile 55 years.

Indeed, labour productivity remains low compared to OECD economies, and it is the source of most differences in income per capita from OECD economies. These differences can be broken down into gaps in labour productivity and gaps in labour utilisation, measured as employment as a share of population. Panama, like most emerging economies, features relatively high labour utilisation; the main culprit stifling GDP per capita is labour productivity. Panama's labour productivity shortfall compared to the richest 17 OECD countries was close to 53 percentage points in 2014. In this, it outperformed Latin America and the Caribbean (LAC) overall, where the average labour productivity is 70% lower than that of the top OECD economies. Despite recent progress, Panama's labour productivity represents less than 60% of the average for OECD member countries. While labour productivity in OECD countries is more than 1.75 times greater than in Panama, labour utilisation in OECD economies is barely 5% higher than in Panama (Figure 2.6).

Figure 2.6. **Sources of income per capita differences with the upper half of OECD economies, 2014**

Percentage of GDP per capita, labour resource utilisation and labour productivity differences
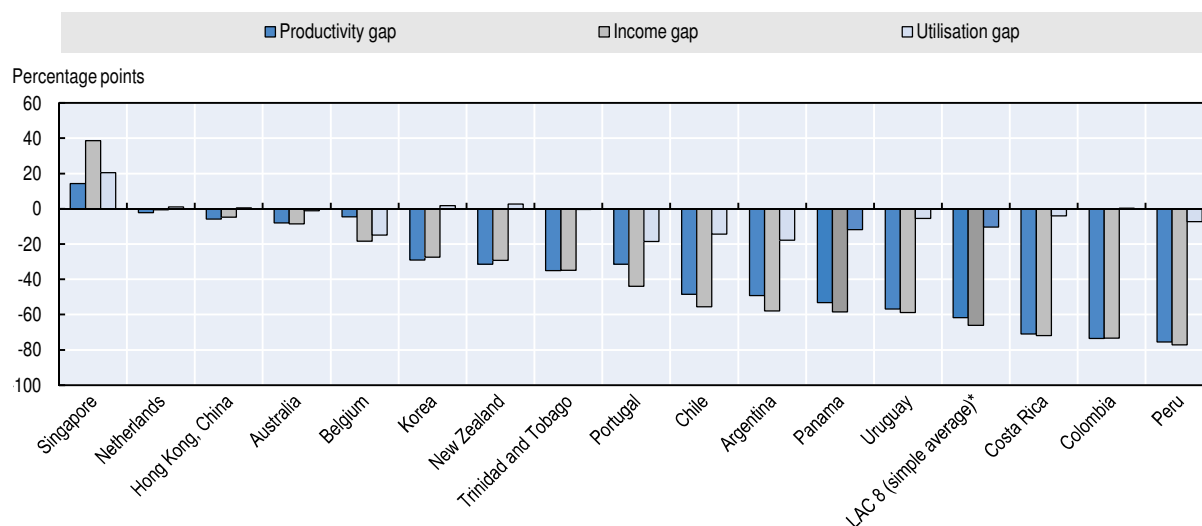
Note: *LAC 8 includes Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay and Venezuela. Compared to the simple average of the 17 OECD countries with the highest GDP per capita in 2014 based on PPPs (2011 USD). The sum of the percentage difference in labour resource utilisation and labour productivity does not add up exactly to the GDP per capita difference since the decomposition is multiplicative. Labour productivity is measured as GDP per employee. Labour resource utilisation is measured as employment as a share of population.

Source: OECD calculations based on Feenstra, Inklaar and Timmer (2015), "The Next Generation of the Penn World Table", *American Economic Review*, 105(10), 3150-3182, available for download at *www.ggdc.net/pwt*.

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While its labour productivity remains low in comparison to OECD economies, Panama has made significant gains in the past decade. In the 1990s, and like other Latin American economies, its labour productivity performance was low compared to other middle-income countries and in particular to high-income economies. But in the past decade, Panama pulled away from Latin America. Labour productivity improved remarkably, tracking the path to other middle-income economies (Figure 2.7). Compared to benchmark economies, Panama also exhibited good performance in terms of labour productivity, measured as GDP per person employed in constant purchasing power parity (PPP), since the beginning of the 1990s. Only a few emerging economies performed better than Panama: the Dominican Republic; Hong Kong, China; Korea; and Singapore.[5]

Figure 2.7. **GDP per person employed**

Constant USD 2011 PPP, base 100 = 1991
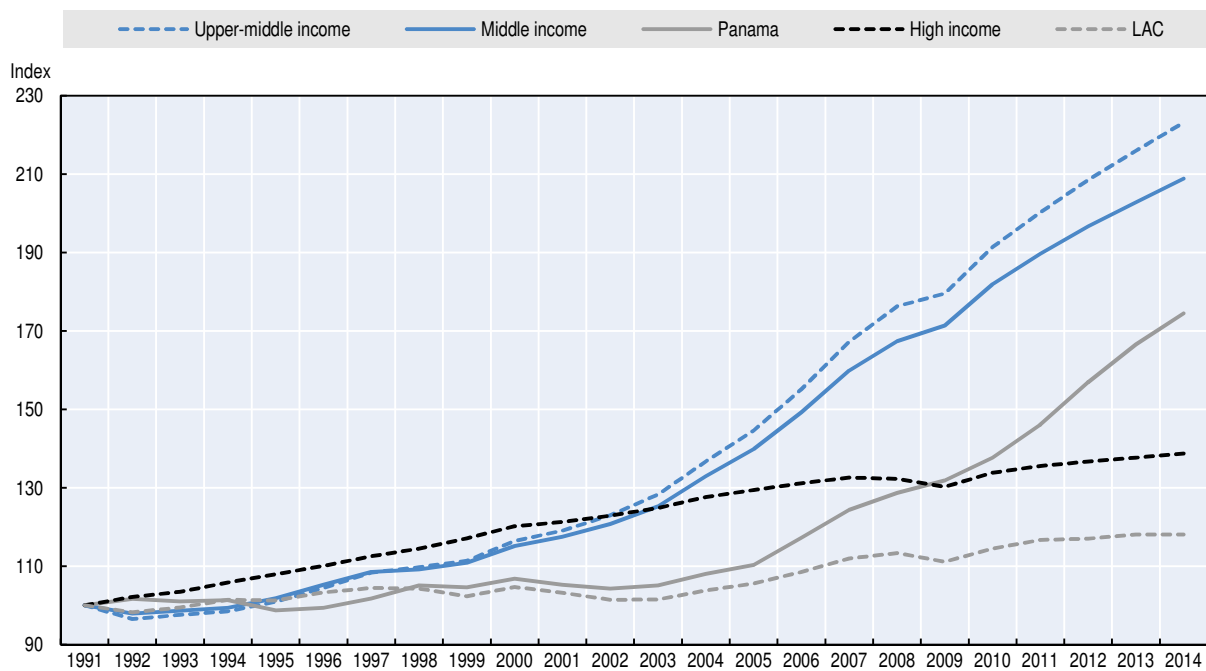
Source: World Bank (2017), *World Development Indicators* (database), *http://data.worldbank.org* (accessed 10 May 2017).

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Most of the labour productivity gap is explained by the low performance in human capital and total factor productivity (TFP). Labour productivity in Panama has experienced relatively high rates of growth, on average 4% since 2000 and mainly driven by total physical capital per worker accumulation. On the other hand, human capital and TFP have contributed very little to increases in labour productivity, although their contribution increased compared to the end of the 2000s (Figure 2.8). Nevertheless, these high labour productivity growth rates have not been enough to close the gap with more developed economies.

Labour productivity growth has been particularly high in economic sectors where the concentration of jobs remains relatively high. In absolute numbers, labour productivity was driven mainly by the services sector, most notably within the construction sector, and the industry in the period 2003-12 (Figure 2.9, Panel A).[6] Adjusted for the labour intensity in each of the economic sectors, total productivity improvement in that period (46.9%) occurred mostly in the service sector (accounting for 32.3 percentage points) and the industry sector

(accounting for 14 percentage points), while the agriculture sector's productivity remained low (0.6 percentage points) (Figure 2.9, Panels A and B).[7] Close to 65% of the jobs are in the service sector, and 18.3% and 16.7% of the jobs are in the industry and agriculture sectors, respectively. The divergence in labour productivity grew more accentuated in the last decade, mainly owing to the slow reallocation of labour among sectors. The changes in productivity can be broken down into a "within-sector" effect (driven by technical change and capital accumulation), a "between-sector" effect (driven by reallocation of labour resources between sectors) and a "cross-sector effect" (driven by the interaction between productivity changes and employment shares). In the period 2003-12, both the effect of reallocations of labour and the cross-sector effect accounted only for 2.8% of the change, while the within-sector effect explained the remaining 97.2% of the labour productivity growth (Figure 2.9, Panel B). The within-sector effect, pushed by capital accumulation per worker, occurred primarily in the service sector, where retail and wholesale, and transport and communications led the advance. Despite progress in productivity, the slow effect of labour reallocation is worrying since it reinforces the productivity and income gap between fast-growing and slow-growing sectors.

Figure 2.8. **Labour productivity growth and its components in Panama**
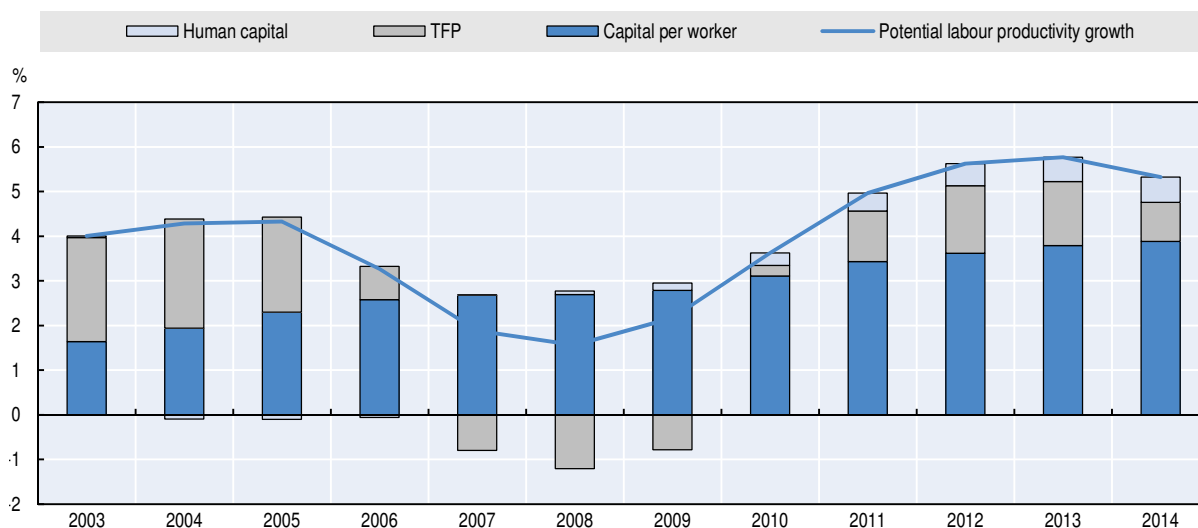
Note: Total factor productivity and the sources of GDP per worker growth are estimated by using the standard Cobb-Douglas function. Human capital is adjusted for the years of schooling. The capital-share production function parameter is set equal to 0.433 (Klenow and Rodríguez-Clare, 2005). All input variables are filtered using HP filter, lambda 7.

Source: OECD calculations based on Feenstra, R., R. Inklaar and M. Timmer (2015), "The next generation of the Penn World Table", *American Economic Review*, 105(10), 3150-3182, available for download at *www.ggdc.net/pwt*, and Barro and Lee (2013).

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Similar results are observed from surveys of enterprises in Panama for a more recent period, although not all sub-sectors are covered (e.g. construction, and livestock and crop production). In particular, for the period 2012-14, commerce (retail and wholesale) grew more than 18.6%, explaining most of the total labour productivity growth (21.9%). Among the three effects described above, the within-sector effect grew at 17.7%. This corroborates that most of the changes in productivity were due to technical and capital accumulation changes rather than labour reallocation across sectors (Figure 2.9, Panel C).

Figure 2.9. **Sectorial changes in labour productivity in Panama**

Panel A. Evolution of sectorial labour productivity 2003-12
(Constant 2010 USD)

Panel B. Typology of productivity changes 2003-12
(Percentage points)

Panel C. Labour productivity changes in selected economic sub-sectors, 2012-14
(Percentage points)
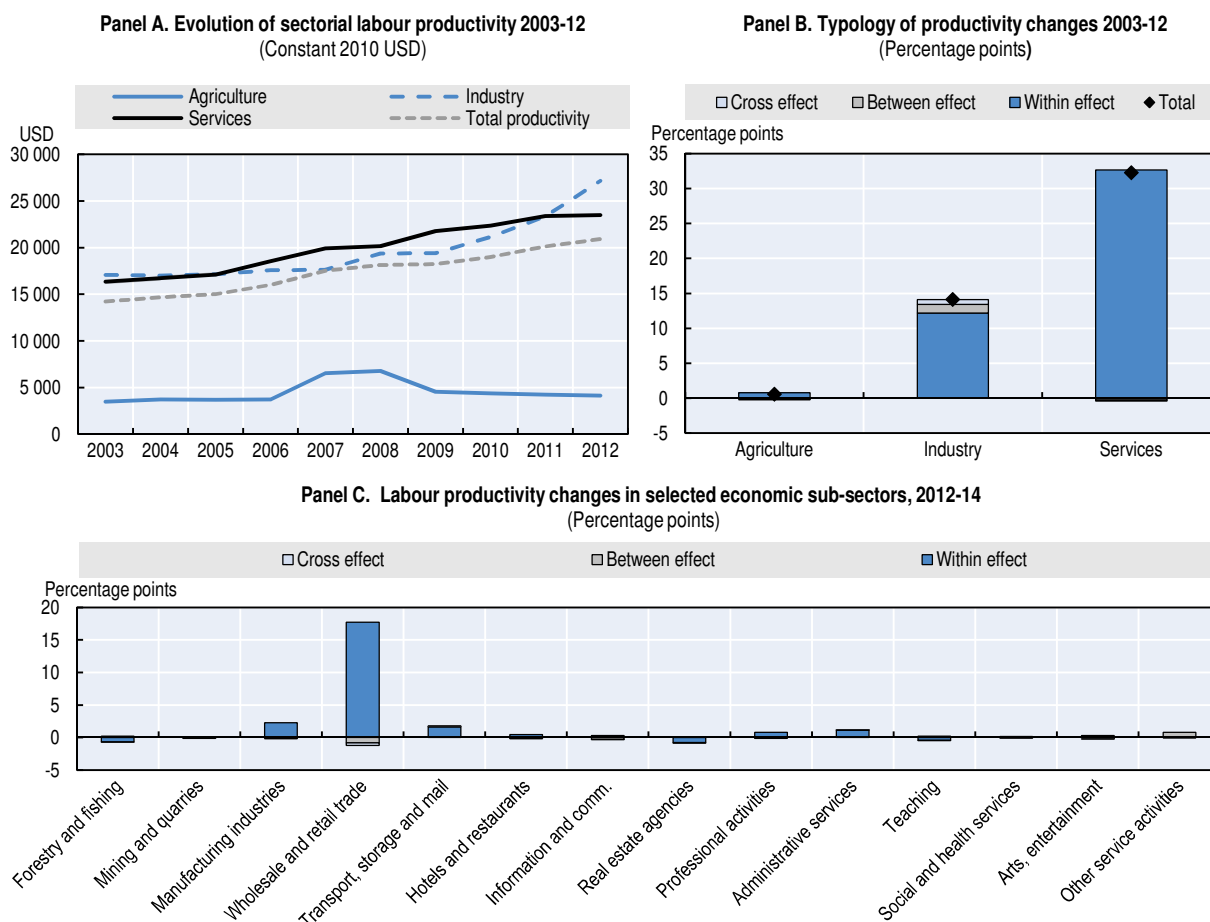
Note: Panels A and B: Industry (ISIC divisions 10-45) includes manufacturing, mining and quarrying, construction, electricity, water and gas.

Source: Panels A and B: OECD calculations based on World Bank (2017) for value-added and employment share data, and on CGRP for employment data. Panel C: CGRP (2015), website, (*Comptroller General of the Republic of Panama*), *www.contraloria.gob.pa/INEC/Publicaciones* for non-enterprises surveys.

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Labour productivity and other dimensions vary across regions

Segmented labour productivity across economic sectors translates to high disparities at the regional level. Panama exhibits high heterogeneity across provinces in terms of GDP per capita, labour productivity and several social dimensions (see Chapter 3 for the social dimensions). Although there are no reliable data covering all sub-national authorities (i.e. some key productive and social variables are not available in data on the *comarcas*), estimations show that Colón and Panama exhibit a high level of labour productivity compared to other provinces (Figure 2.10). Colón is an important contributor to the economy in terms of logistics and services including the Colón Free Trade Zone (*Zona Franca de Colón*) as well as tourism and port activities. Modern services such as in logistics and a variety of commercial and trade services have potential for diversification in Colón. Such development could advance existing manufacturing sectors close to Colón, such as the plastics, foodstuffs and paper industries (Hausmann, Morales and Santos, 2016). Panama province exhibits a diversity

of economic sectors, including financial services, construction, real estate and activities around public administration.

Figure 2.10. **Labour productivity by province, 2014 (in thousand balboas)**
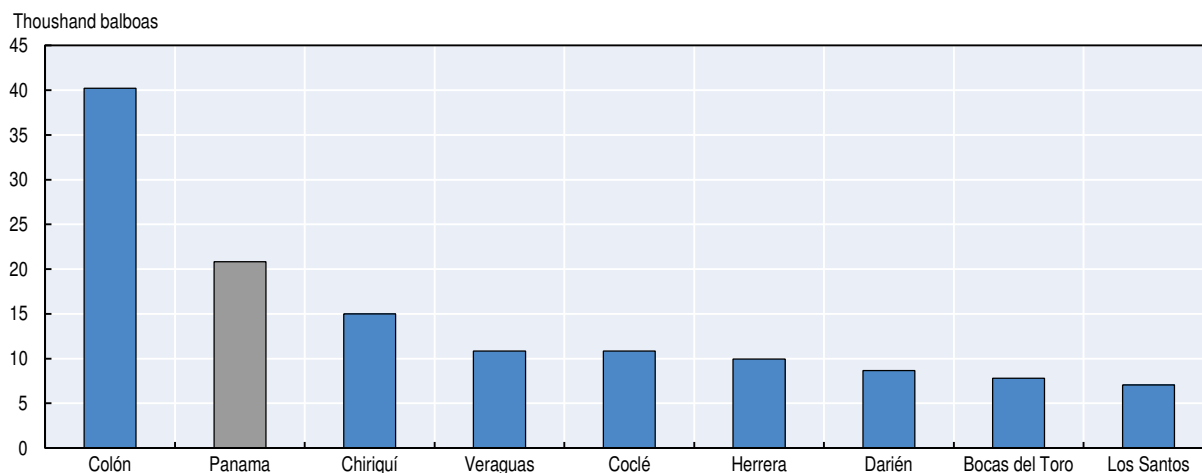
Note: Labour productivity measured as the value-added (the value of output less the value of intermediate consumption) over the annual average personnel employed per month.

Source: OECD estimations based on CGRP (2014), website, (*Comptroller General of the Republic of Panama*), *www.contraloria.gob.pa/INEC/Publicaciones*.

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The rest of provinces present low levels of labour productivity and structural challenges. In particular, provinces such as Los Santos and Darién have the least complex and connected industrial structure in Panama. The most promising sectors still have a long way to go in terms of capabilities. The government is developing policies in the poorest provinces to tackle these inefficiencies. But the urgency to improve key areas, such as education and health, demonstrates the state's low capacity to achieve effective policies in these provinces. Los Santos, for example, presents an opportunity given its strategic base is agriculture (Hausmann, Morales and Santos, 2016). The high heterogeneity among provinces highlights the need to develop productive strategies at the sub-national level, in particular in highly isolated areas, with respect to the sectors contributing to growth such as logistics and transport services and commerce. For instance, better interconnectedness between the services already located in areas neighbouring the Canal and the poorest provinces is key to developing new sectors such as the agro-industry and creating formal jobs.

Panama's exports can promote further value-added

Panama's economy depends on world trade. As a consequence it is more open than other economies in the region. The services sector is the main driver of the trade profile, just as it has been key to productivity growth in recent years. Close to 95% of total exports are based on services, where transport exhibits a high relative comparative advantage. The transport sector directly exports most of its value-added, mainly through the Canal. In contrast, some services translate value-added to other economic sectors. This is particularly the case with distribution and trade, as opposed to finance or other specific business services such as real estate activities, renting of machinery and equipment, and research and development. However, total service exports show low value-added composition compared to benchmark economies.

Although trade openness has decreased in recent years, Panama remains a more open country than the rest of the Central and South American economies and has a similar level of openness as other port economies. The combined value of exports and imports represented 104% of GDP in 2015, divided in equal parts between exports and imports. The ratio reached its peak value in 2011, at 166% of GDP, before declining to its current value. Now it is lower than in 2005, when imports and exports represented 137.5% of GDP. Like other countries where port activities are important, Panama is heavily dependent on trade (Figure 2.11). Panama scores higher than other Central and South American countries in openness to trade, with 73.1% compared to 26.5% of GDP in 2015. Nonetheless, the ratio is well below that of other port economies and financial hubs such as Hong Kong, China; Singapore; Belgium; and Netherlands (UNCTAD, 2017).

Figure 2.11. **Trade openness**

Sum of imports and exports as percentage of GDP, 2015
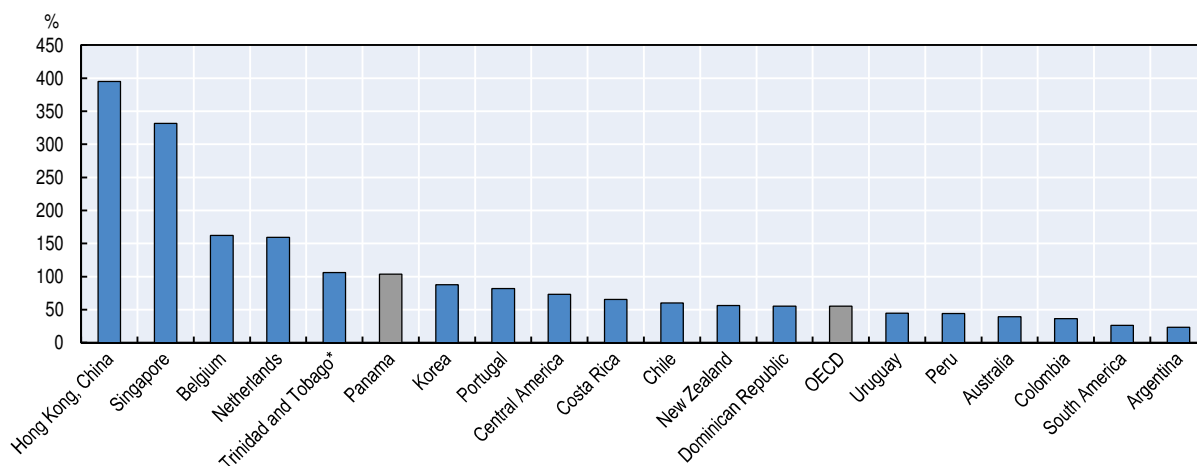
Notes: The indicator for Trinidad and Tobago is for 2011. Central America comprises Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama. South America comprises Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela. OECD includes all 37 member economies of the Organisation.

Source: UNCTAD (2017), *Trade in Goods and Services* (database), *http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_ ChosenLang=en* (accessed 10 May 2017).

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Panama imports mostly capital and consumer goods from the rest of the world. Consumer goods accounted for 59% of total imports in 2015, representing the largest share of total goods imports (WITS/UN Comtrade, 2017). These goods notably comprise manufactured goods including automobiles, medicines, electronic goods, processed foods, beverages, textiles and plastics. Capital goods, which account for an additional 21% of total goods imports, include primarily machinery, transport material and industrial chemical products. Other important imports are petroleum oils and mineral products. In 2015, the United States was the main import partner and represented 25.9% of total imports, followed by Panamanian Free Zones (16%), China (9.5%), Mexico (5.1%) and Costa Rica (3.7%) (CGRP, 2016a).

Services, which account for 95% of the total exports, are the main driver of Panamanian exports. Transport, both air and sea, and travel services represent almost 75% of exports, followed by other business services (18%) (Figure 2.12, Panel A). The re-exportation of goods that do not enter the country makes up the majority of other business services; in 2015 this represented 85% of services in this category (CGRP, 2016b).[8] However, there are no data

to assess the destination of the services exports. Similar to the case of services, exports of goods present a concentrated profile. Primary agricultural products encompass more than half of the gross export of goods (about 2.5% of total exports). Bananas, shrimps, salmonids, pineapples and fish flour are the most exported products, representing one-third of the goods basket in 2015 (Figure 2.12, Panel B; CGRP, 2016c).

Figure 2.12. **Exports profile in Panama, 2015**

Panel A. Principal service exports

- Transport
- Other business services
- Communication services
- Travel
- Financial services
- Other services

Panel B. Principal goods exports

- Bananas
- Other salmonids, fresh or chilled
- Pineapples, fresh
- Shrimp and prawns, frozen
- Fish flour
- Other goods

Notes: Transport refers to services "involving the carriage of people and objects from one location to another as well as related supporting and auxiliary services. Also included are postal and courier services" (IMF, 2009). Travel exports "cover goods and services for own use or to give away acquired from an economy by non-residents during visits to that economy" (IMF, 2009). In Panama, the re-exportation of goods that do not enter the country represents the great majority of "other business services" (85% of the heading in 2015) (CGRP, 2016b). The "Other business services" are net of the debit value of "Goods acquired in port by means of transport" to avoid including the value of imports for re-exporting.

Source: OECD calculations based on data from CGRP (2016b; 2016c).

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Composition and challenges of the exports on goods

During the past decade, merchandise exports shrank and were restricted to raw materials. Following a long period of growth, goods exports doubled between 1996 and 2007. However, the trend reversed in the following years. By 2015 goods exports declined by nearly one-fourth compared to a decade earlier, and exports per capita values were lower than in 1996 (CGRP, 2016d; CGRP, 2003). Setting aside re-exports, in 2015 the bulk of merchandise exports were raw materials (63% of total goods exports). Capital goods were an insignificant part of total goods exports, 1.7%. Intermediate and consumer goods played a secondary role, at 16.5% and 18.3% respectively (WITS/UN Comtrade, 2017).

Despite the low level of processing, agricultural products contribute considerably to the composition of the domestic value-added of total exports on goods. One US dollar of primary agricultural products exported has 71 cents of total value-added. This value-added content is even higher than that of processed foods (50 cents) and is close to that of financial

services (77 cents). Moreover, in 2011, less than 1% of the value-added of the exports of primary agriculture products came from the value-added of other Panamanian sectors (indirect backward linkages). In contrast, 12.4% of the total value-added exported by other sectors came from Panamanian primary agricultural products (indirect forward linkages) (WITS/World Bank, 2014).[9]

Panama's exported goods have "low complexity" and share few connections with more sophisticated products. Exports of new products can be considered as the result of recombining capacities already present in the economy. Therefore, some goods that involve highly specialised and diverse capacities will allow development of more potential products than others (Hidalgo and Hausmann, 2009). Such specialisation and diversity of capacities embodied in an exported product are captured by the so-called complexity indexes. Panama's current goods export basket is mainly composed of low complexity products, which comprise close to 76% of goods. High complexity products amounted only to 5% (Hausmann, Morales and Santos, 2016). Moreover, the proximity of Panama's current goods export basket to more sophisticated goods is low. The goods basket remains rather isolated, clustered around raw materials and far from capital-intensive activities, where the largest potential to develop new high-value-added products lies (Hausmann, 2012). An export basket that relies on merchandise that is labour-intensive to produce, and uses low levels of technology and processing, creates few linkages with the rest of the economy. In turn, the lack of linkages limits the possibilities for incorporating further value-added into the exports.

The Panamanian government has stressed the low performance of agriculture. The *Plan Estratégico de Gobierno 2015-2019* identifies agriculture as one of the four "potential sectors" for boosting growth and job creation (together with logistics, tourism and mining). The Plan envisions improving productivity and competitiveness in the sector by addressing a variety of bottlenecks, ranging from lack of appropriate agricultural inputs and poor infrastructure to a weak institutional framework. For improving agriculture's performance the Plan allocated 4.5% of total public investment between 2015 and 2019 (GRP, 2014).

The services sector is the outstanding actor in the exports profile

Service exports have blossomed and Panama has a marked comparative advantage in some of these products, thanks to exploitation of opportunities provided by the Canal. Evidence for this is in services exports growth: services constituted 72% of Panamanian exports in 2000; by 2015 their share had grown to 95%. A Balassa index for services illustrates Panama's strengths in this regard relative to the world. The index measures the ratio between the contribution a product makes to the exports of a country and the same product's contribution to world trade (Balassa, 1977). A value larger than "1" suggests specialisation of a product by the country. Compared to global shares of exports, Panama has a strong and increasing comparative advantage in exporting travel and transport services and is developing a comparative advantage in governmental services, and personal, cultural and recreational services (Figure 2.13).

The potential of services lies in the value-added that they embody as inputs in the exports of other sectors. The importance of service sectors extends beyond the value-added that is directly exported – i.e. the service's gross exports and the direct value-added exported (Francois, Manchin and Tomberger, 2015). When services are tightly woven into the rest of the economy, they boost the development of higher technology sectors, manufacturing exports performance and the overall economic performance (OECD, 2014; Francois and Woerz, 2008). This is largely driven by the use of services as inputs in exports. The use of services as inputs

for export in Netherlands; Singapore; Hong Kong, China; and Belgium – the leading exporting economies of services in gross value among the benchmark economies – represented, on average, 23.6% of their total value-added exported (WITS/World Bank, 2014).[10] In Panama, the ratio was 25.6% of the total value-added.

Figure 2.13. **Relative comparative advantages in Panama's service exports, 2005-15**
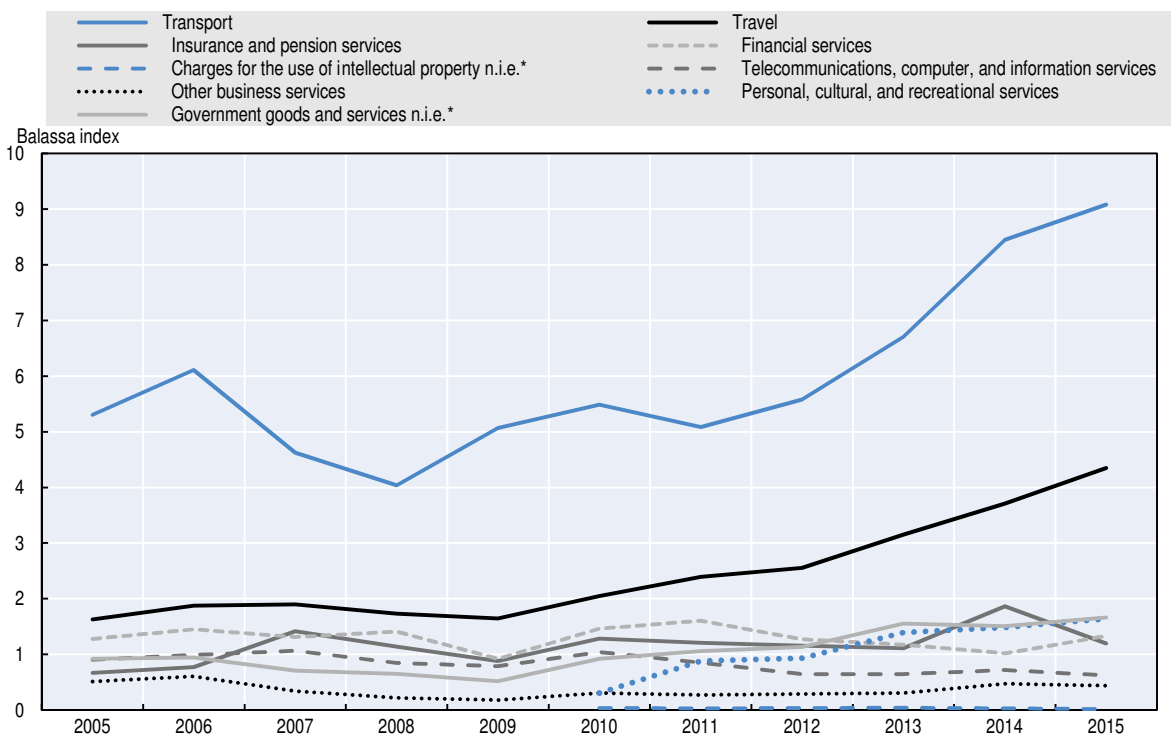
Note: * n.i.e. means "not included elsewhere". The revealed comparative advantage (RCA) is an index based on Balassa (1977) that measures the ratio between the contribution a product makes to the exports of a country and the same product's contribution to world trade. Values larger than "1" suggest specialisation of a product by the country. This measure is taken as reference to the rest of the world by excluding Panama's exports.

Source: Based on UNCTAD (2017), *Trade in Goods and Services* (database), *http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_ChosenLang=en* (accessed 5 March 2017).
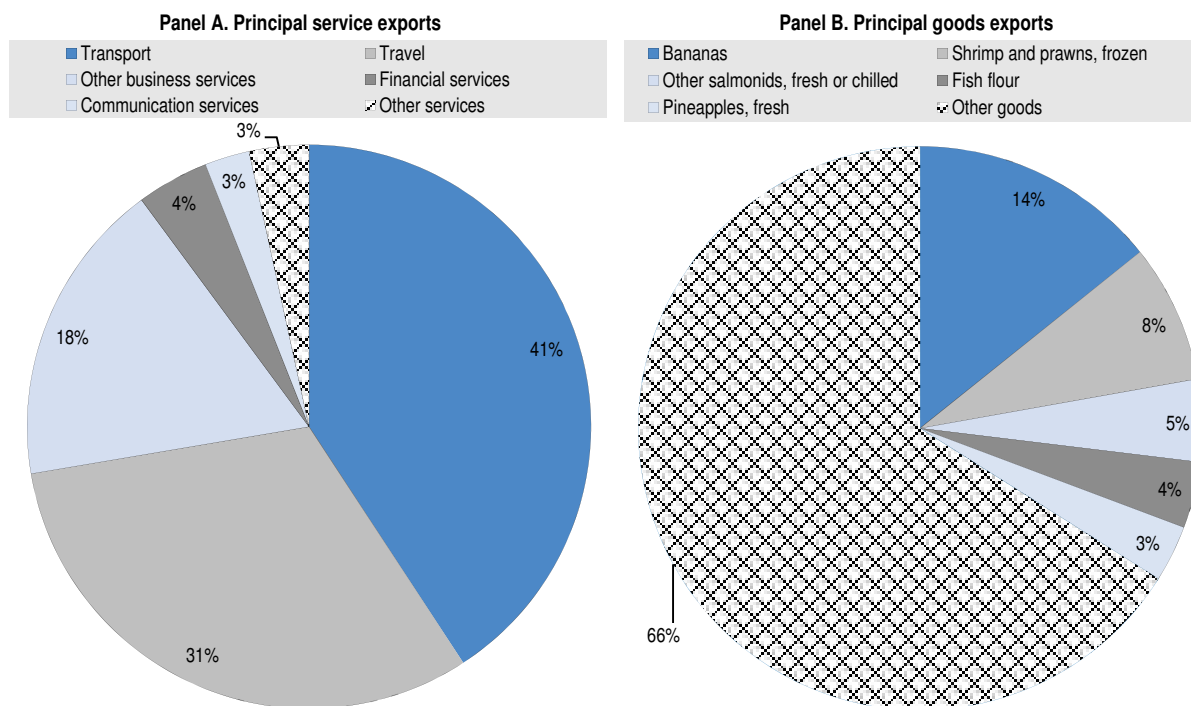
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Following the example of the benchmark economies, Panama could increase the value-added exported by services beyond the gross value of its service exports. The importance of services as inputs is all the more striking in the cases of Australia, Argentina, Chile, Korea, Peru and New Zealand. These countries leverage from their high commodities exports (Australia, Chile and Peru) or high-value-added manufactured goods (Korea) by using services as intermediate inputs to contribute to the value-added content of their gross exports. Beyond metal exports, the experience of Peru exporting agro-processed goods illustrates how chaining logistics services can boost the value-added of services (OECD, 2016b).

As mentioned above, services solely used as intermediate inputs accounted for 25.6% of the total value-added in Panama's exports, of which distribution and trade represented 16 percentage points.[11] In 2011 about 43.3% of total value-added in exports was in the form of intermediate inputs. Distribution and trade services contributed the most value-added of all sectors through intermediate inputs to other sectors' exports (Figure 2.14). In particular, 65.5% of the exports' value-added in machinery and equipment and on chemical, rubber and plastic products was explained by distribution and trade services.

Figure 2.14. **Total contribution of the service sector in exported domestic value-added to other sectors (percentage of total value-added exported, 2011)**
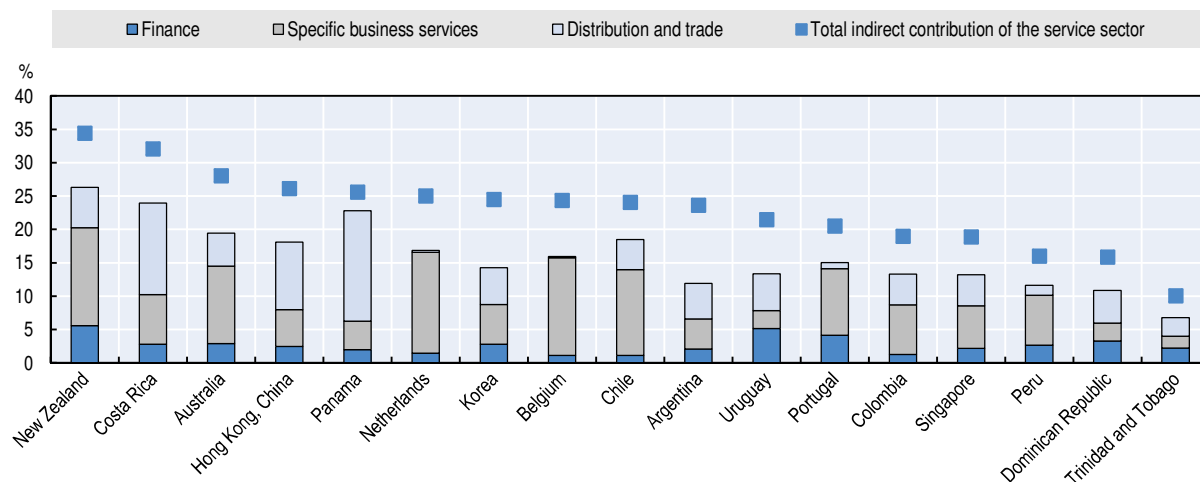
Note: The total contribution of the service sector includes the domestic value-added that originates in a service sector and goes into a different service sector's exports. The specific business services are those covered by the International Standard Industrial Classification of All Economic Activities (ISIC) rev. 3, divisions 70 to 74. These are real estate activities, renting of machinery and equipment without operator and of personal and household goods, computer and related activities, research and development, and other business activities.

Source: Adapted from WITS/World Bank (2014), *Export of Value Added (EVA) Database* (database), *http://wits.worldbank.org/analyticaldata/evad-countrystats.aspx* (accessed 5 March 2017).

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Financial services and specific business services (e.g. real estate activities, renting of machinery and equipment, and research and development) are the second-largest suppliers of intermediate inputs among services in Panama. However, they remain largely isolated from the rest of the economy. These sectors incorporated through inputs 6 percentage points of the total value-added exported by other sectors in 2011 (WITS/World Bank, 2014). However most value-added created by financial services and especially by business services in Panama remains within the same sector's exports.

Panamanian financial services are integrated in the exports of the economy to the same extent as other financial centres. Financial services exports accounted for 57% of the domestic value-added generated by finances in 2011. In addition, the share of value-added created by finances and exported through other sectors is only slightly lower in Panama (4.7% of total value-added) than in other benchmark economies with financial centres such as Hong Kong, China (7.37%); New Zealand (5.8%); Uruguay (5.69%); and Singapore (5.08%) (Figure 2.14). The benchmarking comparison suggests a good level of integration of the financial sector with the external sector.

In contrast, the specific business services mentioned above do not contribute to the value-added in other sectors' exports as much as they do in other benchmark economies. In port-economies the value-added of these specific business services into other sectors' exports ranged from 25.7% (Netherlands) to 15.9% (Singapore) of the total value-added. In Panama, the level of integration was 8.8% –17 percentage points below the best performing economy. Indeed, in 2011 52% of the value-added of these specific services stayed within the same sector. Panama has established itself as a net exporter of commercial services to the world, yet other sectors have not appropriately taken advantage of those services in their export profile.

Most of the value-added of the transport sector is directly exported by this sector itself. The Canal, which is the main supplier of transport services, is still not well integrated economically to the rest of the economy. Consequently, there remain unexploited opportunities to develop mutual benefits arising from the Torrijos-Carter treaties, signed in 1977 and implemented in 1999. The transport services can be chained to the rest of the economy in two complementary ways. First, they can be used to add value and promote the growth of (good) exporting sectors (transport as a supplier). Second, they can be chained by enhancing transport services through the usage of other services (transport as a user). However, in Panama 99.6% of transport services' value-added is exported directly by itself. At the same time, the transport services exports contain little value-added from the rest of the economic sectors. Notably, its exports incorporate only value-added originating in construction (mainly due to the infrastructure projects) and from energy extraction. As highlighted below, further linkages between the Canal and the rest of the economy remain a key challenge in Panama.

Foreign direct investment inflows have been volatile in recent years but remained high and focused mostly on services

Apart from a few years, foreign direct investment (FDI) inflows have been buoyant following the political instability of 1989. Privatisation programmes and fiscal benefits of the Colón Free Trade Zone attracted FDI inflows in the 1990s. In 1998, the enactment of the Investment Stability Law established equal treatment under the law for foreign and domestic investors. These new policies leveraged on Panama's stable macroeconomic framework and close historical ties with the United States. With the exception of economic slowdown in the 1998-2002 and 2007-08 periods, FDI inflows have increased since the 1990s. By 2015, net FDI inflows represented 8.6% of the GDP, almost three times the net FDI inflow shares of LAC countries overall (3.8% of GDP) (CGRP, 2016e; World Bank, 2017). Moreover, since 2010, FDI inflows have directly created an estimated 23 000 jobs (*Financial Times*, 2017).[12] An open investment climate in Panama has contributed to strengthening services exports through the trade-investment-services nexus. Furthermore, the expansion of the service sector was appropriate given Panama's geographical location. Compared to manufacturing exports, services exports are less determined by distance to current hubs and more by investment policies (OECD/CAF/ECLAC, 2015). FDI in services is further boosted because the segmentation of production processes across countries increases the need to connect production processes among themselves, as well as to connect with end markets, mainly through services.

Wholesale services, transport and warehousing, and finance sectors have consolidated as major recipients of FDI flows since the mid-1990s. Although FDI flows to Panama have been highly volatile year to year, these sectors have received consistently high inflows. Wholesale and retail services are the leading recipients of FDI flows and the FDI contribution has significantly increased in recent years. While the sector captured 10% of the total FDI inflows accumulated between 1994 and 1997, its share grew to 33% of the total FDI received between 2010 and 2015 (Figure 2.15). The fiscal benefits of the Colón Free Trade Zone (CFZ) have attracted investments to wholesale and retail. However, the flows towards the sector have contracted since 2010 as the activities of the CFZ slowed down (see section below on the Special Economic Zones).

Transport and warehousing activities represented 25% of FDI inflows received between 2010 and 2015. Recently this sector benefitted from the widening of the Canal, which brought large FDI investments into the surrounding areas. However, these investments have been mainly directed to storage and warehousing projects (ECLAC, 2015).

Figure 2.15. **Foreign direct investment net inflows composition by sector, 2010-15 (percentage of GDP)**
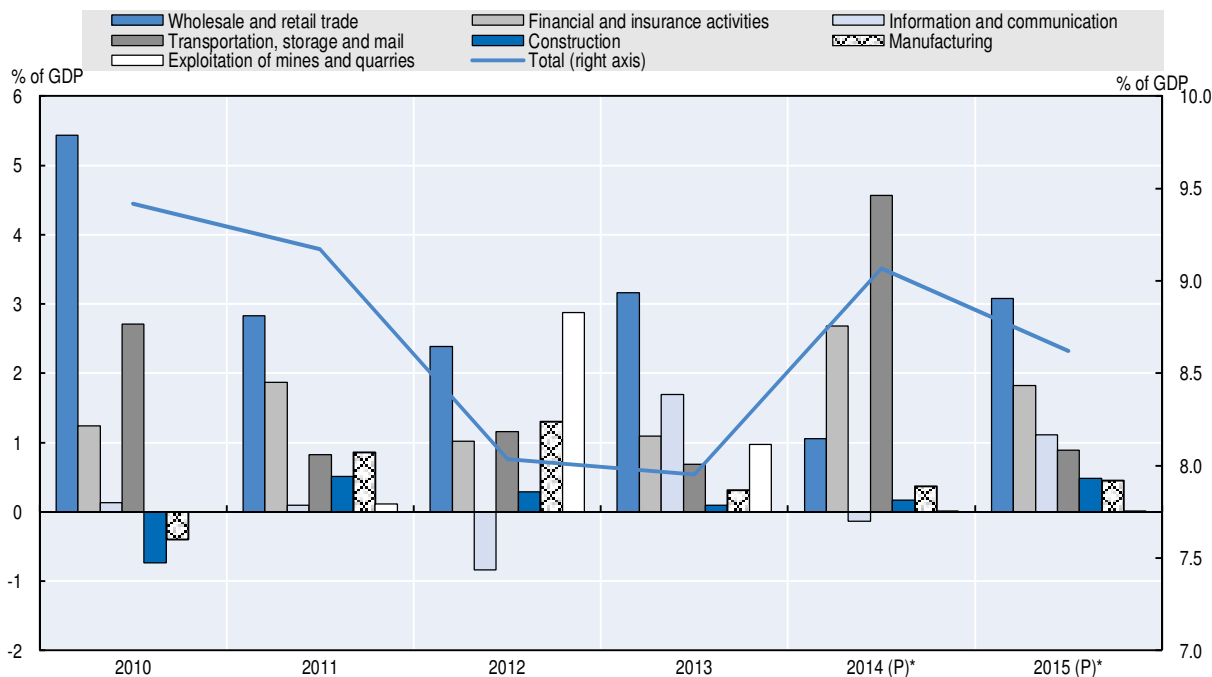
Note: *(P) refers to projection values.

Source: OECD calculations based on data for FDI flows from CGRP (2016e), "Inversión Directa Extranjera en la República, por país de residencia del inversionista y rama de actividad económica, según sector", *https://www.contraloria.gob.pa/inec/Publicaciones/subcategoria.aspx?ID_CATEGORIA=4&ID_SUBCATEGORIA=25&ID_IDIOMA=1*.

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Finally, the financial sector represented 19% of the total FDI received between 2010 and 2015. However, the financial sector showed high volatility in its inflows. Following negative net inflows between 1998 and 2002, the sector received 43% of the incoming FDI between 2003 and 2007. FDI net inflows were negative again in the 2008 economic crisis. These fluctuations highlight the growing exposure of Panama as its economy becomes more deeply ingrained in world trade and international financial systems.

In the past, mining, information and communication, and real estate activities have been added as new receptors of FDI. Since 2006, foreign investment expanded towards construction and real estate activities in response to the demand for retirement houses, as well as to demands for infrastructure to support tourism, wholesale and logistic activities. Mining too has received additional investments (in particular in 2012), as Canadian companies took copper, silver and gold concessions. Among the concessions is *Cobre Panam*á, acquired in 2013 for USD 6.4 billion and with additional investments for USD 600 million in 2014. The large investments in mining foreshadow the shift in Panama's goods exports profile towards commodities.

Although FDI inflows decreased slightly over the previous year, they remained high in 2015. Preliminary data point to a decrease of 0.5 percentage points of GDP in FDI compared to 2014 values (CGRP, 2016e). The largest drop – of 3.7 percentage points of GDP – occurred in the transport sector as investment for the Canal widening project declined. This also affected the financial system, which is estimated to have lost 0.9 percentage points of GDP. Inflows to information and communications sector, and the wholesale and retail sector slowed down too in 2014.

The absolute size of FDI inflows, however, does not tell the whole story about their contribution to the Panamanian economy (ECLAC, 2016). First, FDI flows have been directly linked to investment in past decades in Panama (Figure 2.16).[13] However, only about 35% of FDI has generally been used for physical capital formation (ECLAC, 2016).[14]

Figure 2.16. **FDI has closely followed the path of fixed capital formation, 1977-2015 (percentage of GDP)**
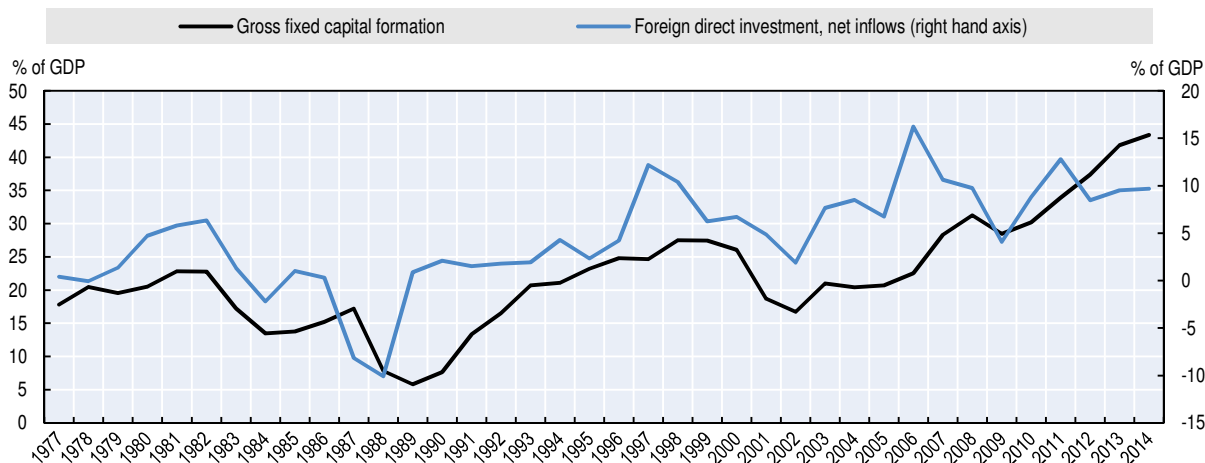
Source: World Bank (2017), *World Development Indicators* (database), *http://data.worldbank.org* (accessed 10 May 2017).

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Second, FDI can contribute to knowledge spillovers and the formation of so-called "intangible capital". Long-term benefits stream from the creation of new production linkages, transfers of technology, and improved managerial skills and worker capacities (ECLAC, 2016). Looking ahead, therefore, a large part of future benefits will be contingent on the technology intensity of investments and will be effective only as long as the foreign firms integrate well with the local economy.

Under these conditions, FDI inflows, human capital and international trade reinforce each other. Incoming FDI increases the economy's international trade, which in turn raises the demand for skilled workers. This growing demand for skilled workers is reflected in rising salaries, which in turn increases the incentives and pressures to supply them. Finally, the productivity improvements from a better-qualified workforce attract additional FDI (Aizenman and Noy, 2005). Firm-level evidence of favourable productivity gains from knowledge spillovers has been found in the context of the SEZs in Panama (Hausmann, Obach and Santos, 2016).

Nonetheless, the lack of skilled workers in Panama is hindering further FDI inflows. Growth diagnostics exercises for Panama have also shown a shortage of skilled labour as a binding constraint (Hausmann, Espinoza and Santos, 2016). Chapter 3 further analyses the issue in terms of education and skills. Based on surveys of local business leaders, Panama ranks as the fifth country where FDI brings more new technology (World Economic Forum, 2016). Nevertheless, only 13% of the FDI projects announced between 2010 and 2016 mentioned the availability of a skilled workforce within their reasons for investing in Panama (*Financial Times*, 2017).

To increase interconnectedness, Panama has benefitted from two key activities: The Canal and the Special Economic Zones

The canal and to a lower extent the Special Economic Zones have played a considerable role of Panama in the global context but also in the local economy. First, the Canal has permitted the development of competitive service sectors, such as logistics, transportation, financial services, communications and trade. The importance of the Canal in the economy is estimated to 40% of total activity, including direct and induced output. In addition, the government has also actively promoted place-based policies to attract foreign firms and spur innovation, through the creation of an array of Special Economic Zones (Hausmann, Obach and Santos, 2016). The CFZ alone, located in the Atlantic entrance of the Canal, employed close to 25 300 workers and represented nearly 5.8% of GDP in 2016.[15] This largely explains why Panama is often characterised as a dual economy. On one hand, it has a formal sector featuring high wages in specific sectors and linked to global trade (Bussolo et al., 2012). On the other, export capacity and productivity levels remain low in the rest of the economy, in particular the industrial and agriculture sectors.

Special Economic Zones: New opportunities to traditional challenges

The Special Economic Zones (SEZs) serve as key platforms to integrate Panama with the rest of the world. This integration is based on the development of outwards-oriented economic activities by establishing tailored migration, labour, customs and tax regimes. Foreign workers and investors benefit from special visas, and firms are exempt from limits on hiring foreign workers. Other incentives include tariff and tax exemptions that vary according to a firm's activity. The most sought-after activities by SEZs are logistics firms; high-technology firms; and research, education, health and environmental organisations.[16] The SEZs provide high-quality logistical and financial services for companies and investors that relocate into these zones.

There are three major SEZs, each one serving distinct purposes. The Colón Free Trade Zone (CFZ), the pioneering SEZ, specialises in re-exporting and manufacturing for exports. The more recent Panamá Pacífico is a residential and industrial zone that seeks to attract multinational headquarters, service companies, and high-value-added manufacturing firms, among others. Finally, the City of Knowledge is orientated towards knowledge-intensive enterprises, privileging innovative enterprises, research institutions and international organisations.

The CFZ has been successful in terms of volume of trade, but tensions with trading partners have slowed down re-exporting operations. The zone serves as a bridge, importing manufactured goods from China, Singapore and the United States (e.g. machinery, chemical and electrical goods, and textiles), and re-exporting them to Venezuela, Colombia, Puerto Rico, other Central American countries and the rest of Panama. Since 2012, operations in the zone have dropped to USD 14.8 billion in 2016 from USD 30.7 billion in 2011.[17] The decrease in activity responds to difficulties with its trading partners; Venezuela, for example, imposed controls on foreign exchange payments and Colombia raised tariffs on footwear and textiles (IMF, 2016).

The SEZs have played a positive role in job creation and attracting FDI. Despite its recent decline, the CFZ accounted for 6% of the non-financial jobs in 2015 (IMF, 2016). However, job creation in Panamá Pacífico and CFZ has not evolved above the trend in the rest of Panama, but the SEZ provide more formal jobs and higher wages than outside the SEZs. Regarding capital flows, the SEZs have played a secondary role. CFZ and Panamá Pacífico, the only

major SEZs for which there is available information, accounted for 64% of total FDI during its pick year in 2007. Its participation has been declining since to 8% in 2014 (Hausmann, Obach and Santos, 2016). CFZ mainly attracts FDI for wholesale and retail, and logistics and transportation. Panamá Pacífico has received investment in high technology and financial institutions.

The long-term benefits of the SEZs are in labour productivity and wages, driven by upgrades in human capital. The higher inflows of educated immigrants have created agglomeration economies and knowledge spillovers. Estimates show that firms within Colón Free Trade Zone are 90% more productive than other firms in Colón, and firms in Panamá Pacífico are 29% more productive than in Panama City. The advantages are mostly streamed by the adoption of foreign technologies, manufacturing know-how and managerial practices (Hausmann, Obach and Santos, 2016). It is therefore important to continue efforts to improve the expansion of productivity gains in these SEZs to the rest of the economy. The government is aware of the value of the SEZs in the formation of human capital. In that context, the laws regulating the SEZs demand the design of firm policies towards improvements in skills and training of workers.

While SEZs provide benefits, they also carry costs to the economy

Yet more assessments and accountability studies of the relative costs and benefits of the SEZs are needed. The benefits from the SEZs can carry opportunity costs from uneven competition conditions and forfeited tax revenues. On one hand, the legal privileges of the SEZs can concentrate investment needed from the development of other regions and profitable economic activities. On the other hand, the cost of forfeited tax revenues could limit the financing of other development activities and regions (Chapter 4 analyses tax expenditures in Panama). Furthermore, tax breaks can subsidise activities that would be unprofitable otherwise. In light of these trade-offs and empirical assessments in other countries, more information is needed to evaluate the benefits and costs derived from the different incentives that are granted to these SEZs (Engman et al., 2007; Hausmann, Obach and Santos, 2016).

To increase competitiveness in the country, the SEZs do bring new opportunities to address traditional challenges linked to regional disparities in labour productivity, low creation of value-added and poor human capital. The SEZs have promoted migration and connections in trade and investment by establishing fiscal and customs regimes. In particular, re-exporting activities have been developed in these SEZs. Panama can use those connections to reduce regional inequalities in labour productivity and boost value-added in other regions. However, there is a need to evaluate better the benefits of the SEZs to fully exploit their potential. Following Costa Rica's experience, Panama could grant differential fiscal benefits according to the level of development of the zones where future SEZs are located relative to the rest of the country (Martínez, 2015; OECD, 2016c). The decrease in the activity of the CFZ highlights the risks associated with the volatility of world trade. New Zealand presents an alternative set of policies to boost competitiveness based on indirect public stimulus with low fiscal duties rather than stabilising free zones (Martínez, 2015; OECD, 2015a).

The expansion of the Canal: Towards further operations and relevance to the overall sectorial composition of Panama

Since June 2016, the widened Canal welcomes vessels that nearly triple its previous maximum carrying capacity. The conclusion of the project should increase the volume of operations and fiscal revenues. In turn, the larger volumes could also allow the surrounding

cluster to tap into the scale economies of maritime transport. Going beyond the Canal area, the project should ripple into the overall sectorial composition of Panama. GDP is expected to grow faster as the Canal multiplies its transit capacity and labour moves to the new higher productivity jobs (Bussolo et al., 2012).

Direct benefits to the government through the expansion come from raising non-tax revenues. The Canal is managed by an autonomous public entity, the *Autoridad del Canal de Panama* (ACP). The net profits of the ACP, known as the Panama Canal Authority in English, are transferred to the National Treasury according to the Organic Law of the ACP. The ACP also pays the state a fee per ton transported and for the use of public services. In 2016, these payments amounted to USD 1 013 million, nearly identical to those in 2015 (Ernst and Young Limited Corp., 2016). The Canal is expected to raise non-tax revenues in the following years. The anticipated contributions of the ACP to the state over the next five-year period range from USD 1 360 million in 2017 (2.3% of GDP) to USD 2 130 million in 2021 (2.8% of GDP).[18]

The expansion of the Canal has a ripple effect beyond the realm of the ACP. A wide variety of firms have clustered around the Canal to satisfy the demands created by maritime transport including aiding ships to transit through the Canal, vessel maintenance and merchandise distribution to ports nearby. This cluster encompasses eight loosely defined sectors including services for the vessels, services for the load, international transport of load, tourism, telecommunications and financial services (Nathan Associates Inc., 2012). Even before work was completed, the Canal widening led to further domestic and foreign investments in warehouses and distribution centres and air transport facilities (ECLAC, 2015). However, despite the positive impact of the increased trade in containerised merchandise, the consequences for the CFZ – a key piece of the cluster – remain uncertain.

In the future, the types of services offered should widen and specialise as more and larger ships transit the Canal. The *Plan Estratégico de Gobierno 2015-2019* (Government Strategic Plan 2015-2019) anticipates the Canal will diversify activities towards energy including generating electricity, exploiting the trade of liquefied natural gas (LNG) and liquefied petroleum gas, and bunkering (GRP, 2014). The expansion may allow the development of hub-spoke economies (i.e. moving cargo from smaller to larger vessels for the longer hauls). Construction of shipyards in the Atlantic entrance of the Canal for post-Panamax ships is also foreseen, as well as carrying out top-off operations for ships that do not satisfy the draught restrictions.

Some benefits of the expansion are already clear. The expanded Canal, first and foremost, will increase labour demand in the Canal cluster, and in particular demand to fill high-skilled jobs, given the Canal cluster's intensive use of educated workers. (See Chapter 3 for further analysis on the labour market.) Wages in the Canal and for related services should continue rising well above wages in the economic activities not related to the Canal. In 2016, the average ACP worker was in the top 2% highest salaries in Panama (CGRP, 2017). Estimates suggest that in the coming five years the skill premium will increase 31 percentage points more than had the Canal not been expanded (Bussolo et al., 2012). Estimates also show tourism, merchant marines, land transport, retail and distribution, and air transport will be the biggest winners, while fishing, agriculture, construction and business services will face stagnant growth rates (Nathan Associates Inc., 2012).

To increase competitiveness and equity in Panama, future benefits of the Canal should expand to other sectors and regions. The sectorial shifts and rising wages in the Canal cluster underscore a larger concern about loss of competitiveness and concentration of economic

activities. On top of rising labour costs, the rising prices of intermediate goods and labour will make the agricultural, manufacturing and certain services sectors less competitive. While the Canal is a fundamental source of high-quality jobs and high salaries, there is a risk of increasing the concentration of production and exports around it unless the Canal's direct benefits and spillovers are further expanded in Panama.

Infrastructure, logistics and innovation in Panama: From improvements to challenges

To boost productivity and consolidate sustainable economic development Panama should enhance policies aimed at taking advantage of its comparative advantages. Initiatives contributing to expanding the benefits of the Canal and the Special Economic Zones to other sectors of the economy demand a combination of better infrastructure, logistics, innovation, education and skills (Chapter 3), financing for development (Chapter 4) and entrepreneurship (Chapter 5). Panama has made considerable progress in increasing investments in infrastructure and better soft solutions to increase international connectivity. However, these improvements should be more inclusive with all areas of the country. In addition, policies promoting research and development and higher innovation outcomes are crucial to move from an infrastructure-driven growth to a more diversified and knowledge-driven growth.

Infrastructure investment has been buoyant but more inclusiveness remains a concern

Investment has been considerably high in Panama and represents a key source of growth. Following the political and economic crisis at the end of the 1980s, investment has resurged. In the last decade, levels of investment have been higher than OECD and Latin American averages (Figure 2.17, Panel A). Compared to benchmark economies and at more than 40% of GDP, Panama's investment ratio is the top performer and is above the average of high-income as well as middle-income countries (Figure 2.17, Panel B). As highlighted above, investment has been a key player of GDP growth and in contrast to total factor productivity (TFP) and human capital, physical capital has been a key source of labour productive growth in the past years.

Regarding investment in infrastructure, Panama has also performed well compared to Latin American economies. In the past years, infrastructure investment has remained high compared to the region, in particular thanks to public investment (Figure 2.17, Panel C). Most of the good performance in infrastructure investment has been explained by transport infrastructure (close to 4.3% of GDP in 2015), which represented more than 85% of the total investment in 2015. This includes energy, telecommunications, and transport and water management infrastructure.

The quality of overall infrastructure has improved in the last decade. While overall quality of infrastructure on average in benchmark economies improved by 6.7% between 2007 and 2016, Panama's infrastructure quality increased by more than 10.5% in the same period (Figure 2.18). This good performance was greater than that of Latin American economies, which improved 9.2% in that period. Although Panama's quality of infrastructure remains below that of OECD and Asian benchmark economies, its performance places it better than Latin American benchmark economies. In 2007, Panama's overall quality of infrastructure was ranked 51st out of 131 countries; in 2016, it improved to 37th out of 138 countries.

Figure 2.17. **Investment in infrastructure has been considerable**

Panel A. Gross fixed capital formation versus benchmark economies (percentage of GDP), 2015

Panel B. Gross fixed capital formation (percentage of GDP), 1970-2015

Panel C. Infrastructure investment Panama versus Latin America (percentage of GDP)
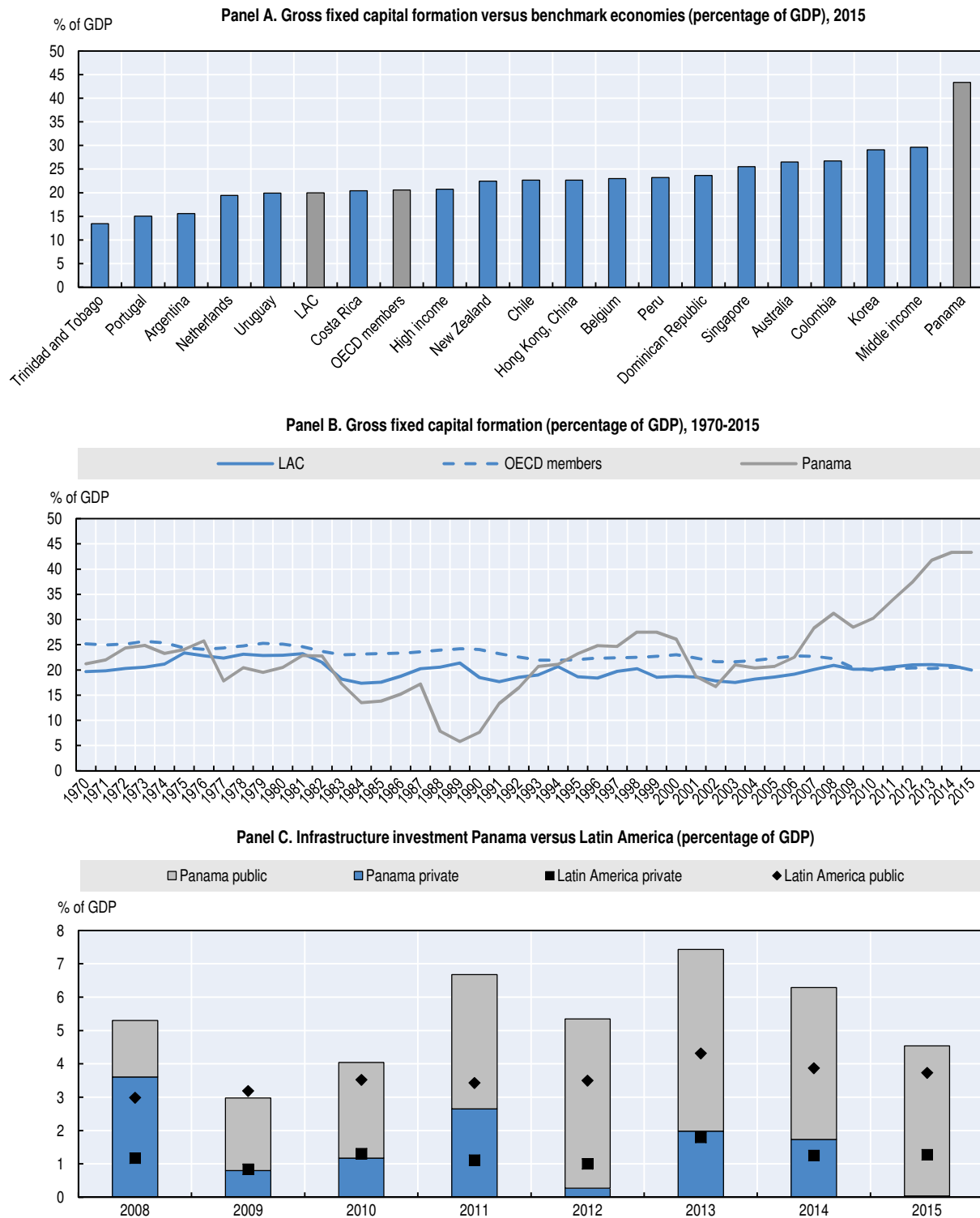
Note: For Panel C Latin America refers to a simple average (depending on data availability) of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico Nicaragua, Panama, Paraguay, Peru and Dominican Republic.

Sources: Panels A and B: World Bank (2017) *World Development Indicators* (database), *http://data.worldbank.org*. Panel C: ECLAC/IDB/CAF (2016), *INFRALATAM Database*, *http://en.infralatam.info/home* (accessed 1 April, 2017).

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Figure 2.18. **Perceived quality of overall infrastructure has been improving, 2007-16**
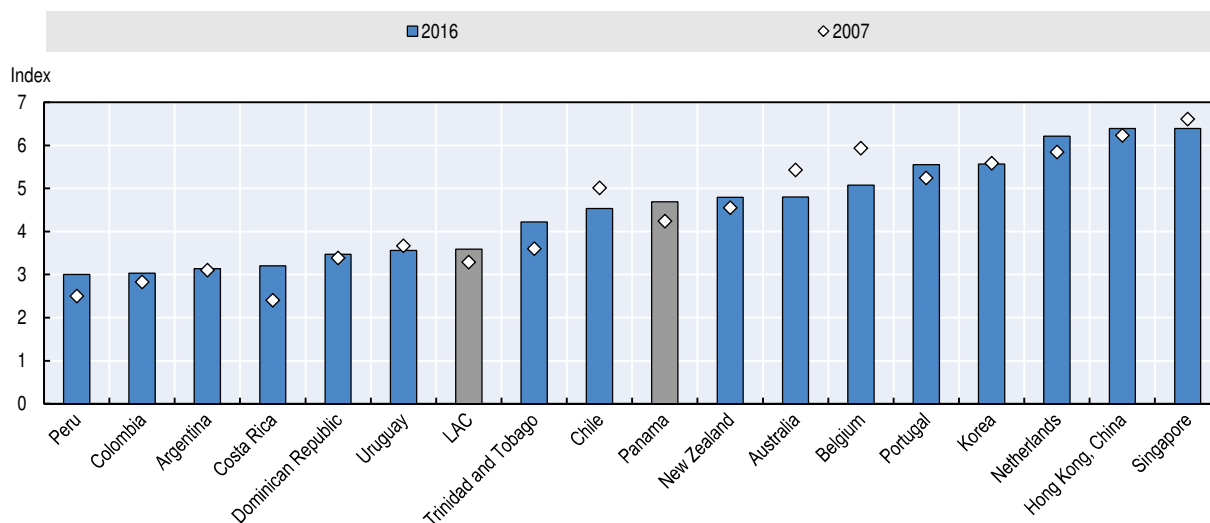
Note: This indicator uses a scale from 1 to 7 where a higher score means a better quality of infrastructure. LAC is the average of the following countries: Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay and Venezuela.

Source: World Economic Forum (2016), *The Global Competitiveness Report 2016-2017*, *http://www3.weforum.org/docs/GCR2016-2017/05FullReport/ TheGlobalCompetitivenessReport2016-2017_FINAL.pdf*.

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Despite some heterogeneity in the access and quality of different infrastructure sectors, Panama exhibits good performance relative to other Latin American economies and to a lesser extent to other benchmark economies by infrastructure sectors. The quality of Panama's energy, telecommunications and transport infrastructures has improved since 2007. In some specific items, such as the quality of port infrastructure and mobile telephone subscriptions, Panama ranks well above Latin American economies and achieves similar levels to benchmark economies (Figure 2.19).

Regarding the energy sector, access to energy remains unequal and inefficient although Panama produces more than it consumes. Total energy consumption was equivalent to 82% of total generation in the period 1999-2014 (Hausmann, Espinoza and Santos, 2016). Access to electricity remains relatively low compared to benchmark economies. According to latest comparable data, in 2012, 91% of the population had access to electricity, lower than all benchmark economies (99% on average). This is particularly evident at the rural level where more than 20% of the rural population does not have access to electricity (World Bank, 2017). Regarding firms, a high proportion of electricity is provided by generators. Indeed, 90% of electricity among firms owning a generator comes from it (Hausmann, Espinoza and Santos, 2016). As in other Latin American economies, electric power transmission and distribution losses in Panama are relatively high at 13.5% of the output, making it one of the worst compared to benchmark economies (8.2%).[19] Panama ranks better than Latin American economies in terms of the quality of electricity supply, but below the rest of benchmark economies (Figure 2.19). Its improvement of 2.4% in the period 2007-16 was lower than Latin American economies and benchmark economies, which improved by 5.4% and 3.7%, respectively.

Figure 2.19. **Quality of selected public service infrastructures, 2016**
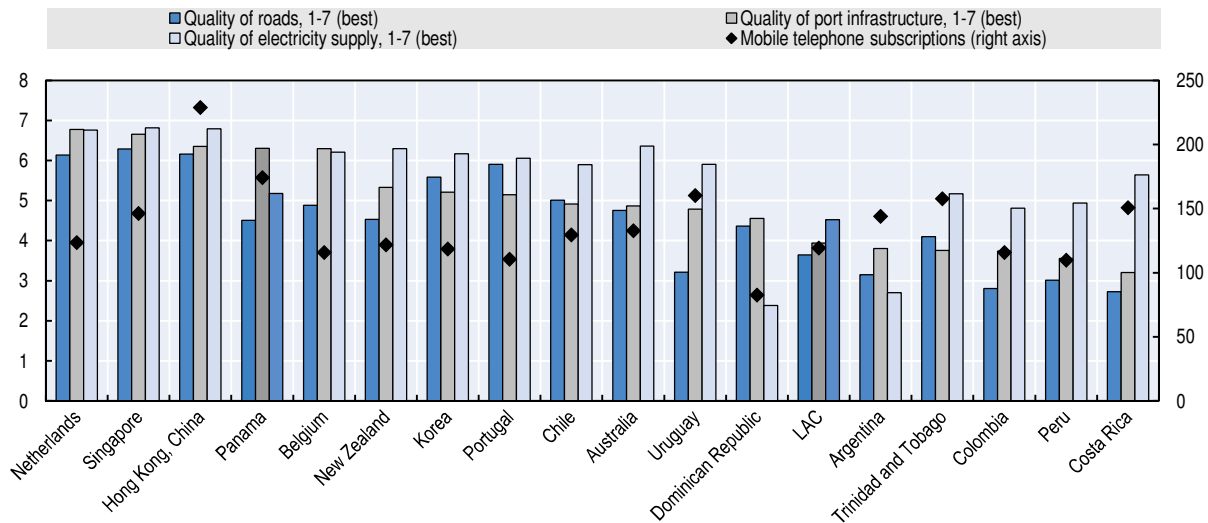
Note: Mobile telephone subscriptions refer to the number of mobile-cellular telephone subscriptions per 100 population. LAC is the average of the following countries: Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay and Venezuela.

Sources: World Economic Forum (2016), The *Global Competitiveness Report 2016-2017*, *http://www3.weforum.org/docs/GCR2016-2017/05 FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf* and International Telecommunication Union (2016), ITU World Telecommunication/ICT Indicators June 2016 (June 2016 edition), *http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx*.

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The government aims to expand energy supply and update the quality to meet the country's growth requirements. Among its projects is the finalisation in 2017 of the third line going through Veladero, Llano Sánchez, Chorrera and Panamá. This new line will complement the energy now solely supplied by lines 1 and 2, the latter dating from 15 years ago. In addition, public bidding is expected to be opened for a fourth transition line.

Airport and port infrastructure rank well compared to transport infrastructure in benchmark economies. In terms of air transport quality, Panama also ranks well: the World Economic Forum (2016) found that among benchmark economies only Hong Kong, China; Netherlands and Singapore rank higher. Registered carrier departures have been increasing over the past five years and are high relative to those in other Latin American economies and benchmark economies. Registered carrier departures rose in 2015 to nearly 132 000 from nearly 73 000 in 2010 — a figure representing close to 3.4% of the population, a higher proportion than in the average of benchmark economies and Latin American economies (1.7% and 0.45%, respectively).[20] Forty percent of Central American cargo passes through Tocumen International Airport, and a new free trade zone has been approved for Tocumen. However, there is a critical need for the airport to start expanding its cargo capacity to accommodate increased activity. Tocumen is also a hub for passenger transport, with half of them transit passengers. Recent investments to expand the airport envision greater services through a connectivity and logistics hub, and passenger transport capacity is expected to triple by 2030.

Port quality improvement has been impressive, increasing by 32% between 2007 and 2016, compared to 9.3% and 7.1% for Latin American and benchmark economies, respectively. Among benchmark economies only Hong Kong, China; Netherlands and Singapore rank better than Panama in regards to port infrastructure (Figure 2.19). Private ports play a

considerable role in the activities linked to the Canal. Activities linked to the vessels passing through the Canal such as storage and transhipment, maintenance and cleaning of vessels have largely contributed to the expansion of port activities in Panama. Similar to past years, more than 95% of cargo movement in 2015 was to international trade and through private ports (mainly Panamá Ports Company Balboa; Petroterminal de Panamá, in Chiriquí Grande; Charco Azul; and Manzanillo International Terminal). Nearly 85% of the vessel traffic in activities linked to the Canal was short sea shipping (cabotage), and close to 80% of the 59 981 vessels that circulated Panama in 2015 passed through private ports.[21]

While infrastructure to international connectivity performs well, further development of domestic connectivity remains a key challenge. Improvements in the quality of secondary and tertiary roads should increase the connectivity in the country and in particular provide provinces with better access to the main road, *La Carretera Panamericana*. Additionally, close to 400 kilometres of paved roads were built between 2011 and 2015, bringing the total to around 11 300 kilometres. However, the ratio of paved roads to total roads has remained close to 70%. The number of cars in circulation increased by more than 45% in that period to more than 730 000 in 2015, or 19.6 cars per 100 people versus 13.8 cars per 100 in 2011.[22] Road quality remains lower than in other benchmark economies, with the exception of Latin American countries (Figure 2.19). The use of other transport modes such as railways is low; increasing this could reduce road congestion, and promote domestic multimodality as well as better economic integration with other members of the *Secretaría de Integración Económica Centroamericana* (SIECA), or the Central American Economic Integration Secretariat.[23] In addition to the railway between Panama City and Colón, and thanks to the Panama Canal Railway Company, additional railways should improve economic development in other areas of the country.

To improve land infrastructure, the *Plan Estratégico de Gobierno 2015-2019*, aims to strengthen the execution and planning capabilities of the *Ministerio de Obras Públicas* (Ministry of Public Works). Better institutional organisation will create a harmonised and strategic timetable of infrastructure works. Clear leadership from the government will also facilitate the regulation of public-private partnerships (see Chapter 5). Public works target the maintenance and rehabilitation of existing road infrastructure, including provincial secondary roads; new works should improve accessibility and connectivity to tourism and logistics assets.

Telecommunications infrastructure has improved considerably in recent years, but further inclusiveness and improvements are needed. Mobile telephone subscriptions have increased more in Panama than in the average of benchmark and Latin American economies (World Economic Forum, 2016). It also has a higher number of mobile telephone subscriptions than benchmark and Latin American economies, with the exception of Hong Kong, China (Figure 2.19). However, more than 90% of the cellular devices in use had prepaid subscriptions in 2015.[24] Just close to half of the population use the Internet, according to 2015 figures, compared to on average more than 72% who are Internet users in benchmark economies and 54% in Latin America.[25] In general, the use of information and communication technology (ICT) in Panama remains well below that in the benchmark economies, including some Latin American economies (Figure 2.20).

Figure 2.20. **Use of information and communication technology remains poor, 2016**
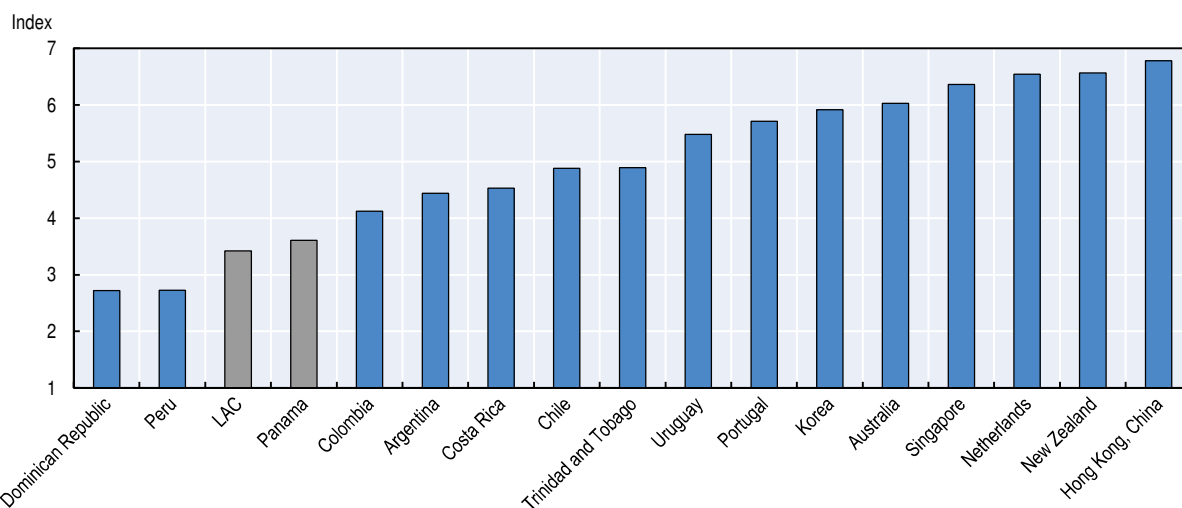
Note: The ICT use component is calculated based on Internet users, fixed broadband Internet subscriptions, Internet bandwidth and active mobile broadband subscriptions. This indicator uses a scale from 1 to 7, where a higher average score supposes a higher degree of usage. LAC is the average of the following countries: Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, and Venezuela.

Source: World Economic Forum (2017), *The Global Competitiveness Index Historical Dataset 2007-2016*, *http://reports.weforum.org/global-competitiveness-index/downloads/*.

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Increasing the efficiency of logistics should contribute to improved services and other sectors

Along with "hard" components such as transport infrastructure, the "soft" components of a country's customs and logistics performance can also contribute to boosting domestic and international connectivity. After controlling for other variables affecting economic growth, there is a significant link between improved logistics performance on the one hand, and productivity gains and sophistication of exports on the other (OECD/CAF/ECLAC, 2013).

A way to measure this is through the World Bank's Logistics Performance Index (LPI), which measures logistics across 160 countries on six dimensions of trade and divided into two groups (Arvis et al., 2014). It considers the regulatory and institutional components that public policy directly affects such as customs, infrastructure and logistics services. It also considers the components that measure the performance of the logistics chain such as timeliness of shipments, cost of international shipments, and tracking and traceability of consignments. The data used in the ranking come from a survey of logistics professionals who are asked questions about the foreign countries in which they operate. Countries that improve their score by 1 in the LPI (which scores countries between 1 and 5) improve their labour productivity by about 35% on average (OECD/CAF/ECLAC, 2013).

Panama performs well in most of the dimensions of the LPI. Between 2007 and 2016, the overall LPI has improved to 3.34 from 2.89. This exceeded the improvement in upper-middle income countries, whose LPI grew to 2.73 from 2.68 in the same period, and in Latin American economies, whose LPI grew to 2.66 from 2.57. Although Panama's LPI remains lower than that of non-Latin American economies, its overall LPI remains above the region's (Figure 2.21). Regarding the ease of arranging competitively priced shipments, Panama performs even better than some non-Latin American benchmark economies.

Figure 2.21. **Logistics performance gap to the best-performing OECD country is relatively low, 2016**

LPI (as percentage of the score of best OECD performing country)
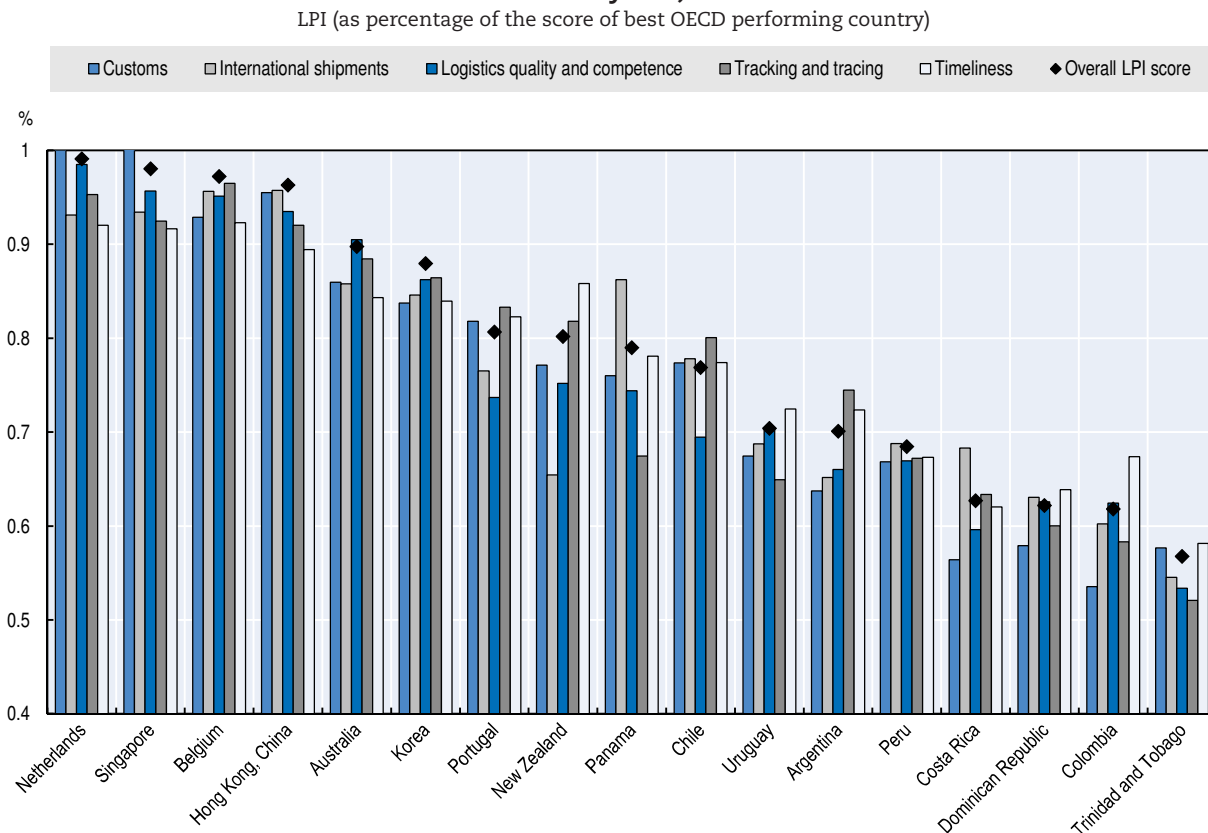
Note: The Logistics Performance Index (LPI) rates on a scale of 1 to 5, where 5 represents the best logistics performance. The gap refers to the difference for each logistics component with the best-performing OECD country, which is Germany for the overall LPI, customs, infrastructure and logistics quality and competence; Luxembourg for international shipments and timeliness; and Sweden for tracking and tracing.

Source: Based on World Bank data in the Logistics Performance Index 2016, *http://lpi.worldbank.org/*.

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However, challenges remain to improve the ability to track and trace consignments. This component improved the least in the period 2007-16, and performance is well below non-Latin American economies as well as some Latin American countries, such as Argentina and Chile. Effective and available ICT can improve the ability to track and trace consignments by lowering the cost of accessing information and encouraging efficient use of existing infrastructure. There is a positive correlation between access to ICT and logistics performance after controlling for GDP per capita (OECD/CAF/ECLAC, 2013). For instance, port gate management using ICT systems to schedule pick-up and delivery could reduce congestion at port terminals by improving tracking and tracing of consignments.

Trade facilitation – measured as port efficiency, the customs and regulatory environment, and electronic business usage – has a significant impact on trade transaction costs and trade flows. Evidence suggests that customs clearance delays in Latin America increase transport costs by 4% to -12% (Guasch and Schwartz, 2008). OECD Trade Facilitation Indicators provide information to help governments improve their border procedures, reduce trade costs, boost trade flows and reap greater benefits from international trade. These show that Panama matches or exceeds the average

performance of upper middle-income countries in the areas of information availability, appeal procedures, fees and charges, the simplification and harmonisation of documents, and governance and impartiality. Panama also performs better in these dimensions than other LAC economies. Yet it ranks below its reference income group in terms of the degree of complexity and automation of border procedures, and involvement with the national and international trade community (OECD, 2015b).

Performance has improved between 2012 and 2015 in the areas of advance rulings and appeal procedures. Also, the recent implementation of a single window to facilitate foreign trade (*Ventanilla Única de Comercio Exterior*) should improve the procedures as a policy tool to boost trade in Panama. Although Panama has improved in some areas of trade facilitation, challenges remain in several areas, such as automation of formalities, involvement of the trade community and external border agency co-operation. Areas of action to improve involvement of the trade community include further provision of adequate and timely information on regulatory changes and to provide the private sector with the opportunity to comment prior to the introduction or amendment of trade-related regulation. To increase the automation of formalities, Panama needs to promote the availability of full-time automated processing for customs and to improve the quality of telecommunications and information technology supporting the automation of border processes.

Innovation activities remain poor and unarticulated with private businesses

Transitioning from infrastructure-driven growth (i.e. investments in the housing market in Panama City, the Canal and Tocumen airport) to more diversified and knowledge-driven growth requires better and higher investments in innovation. Panama began to promote innovation and to invest in science, technology and research in 2004. Promoting innovation in a small, service-oriented economy such as Panama's is challenging. The country has managed to increase domestic research capabilities and to introduce incentives to invest in innovation. Panama is still far from achieving the critical stage to improve its innovation capacities and to score well in traditional innovation indicators consistent with its level of development.

Investment in research and development lags well behind most Latin American countries and the gap has widened during the past decade. Panama spent only 0.074% of GDP in 2013 in research and development, while the Latin American average was ten times higher (0.75% of GDP). The gap in investment is all the more striking when compared to OECD economies where such investment was 2.42% of GDP in 2013. Furthermore, this gap increased between 2000 and 2013. While Panama's expenditure on research and development decreased by 0.31 percentage points, Latin America increased its investment by 0.16 percentage points in the same period. Costa Rica in particular had similar levels of investment as Panama in 2000 but spent 6.33 times more than Panama did in research and development in the 2000-13 period (Figure 2.22, Panel A). The National Strategic Plan for Science, Technology and Innovation (PENCYT) anticipates that Panama will catch up to the regional average expenditure in research and development, or 0.7% of GDP, by 2019 (SENACYT, 2015).

In contrast to other Latin American economies and in particular OECD economies, private participation in research and development remains very low compared to public financial sources. In 2013, while the public sector spent 58% of total research and development expenditure, private participation represented only 1.9% (Figure 2.22, Panel B).

This is a low proportion compared to similar-sized Latin American countries where private firms spent significantly more on research and development. In Costa Rica, for example, the private sector accounted for 31.5% of total spending on research and development (RICYT, 2016). In OECD economies, where private companies are the main source of research and development financing, the private sector's share is between 40% and 70% (OECD, 2015c).

Figure 2.22. **Spending on research and development as percentage of GDP is low**

Panel A. Spending in R&D, 2000-13

Panel B. By performance sector, 2014
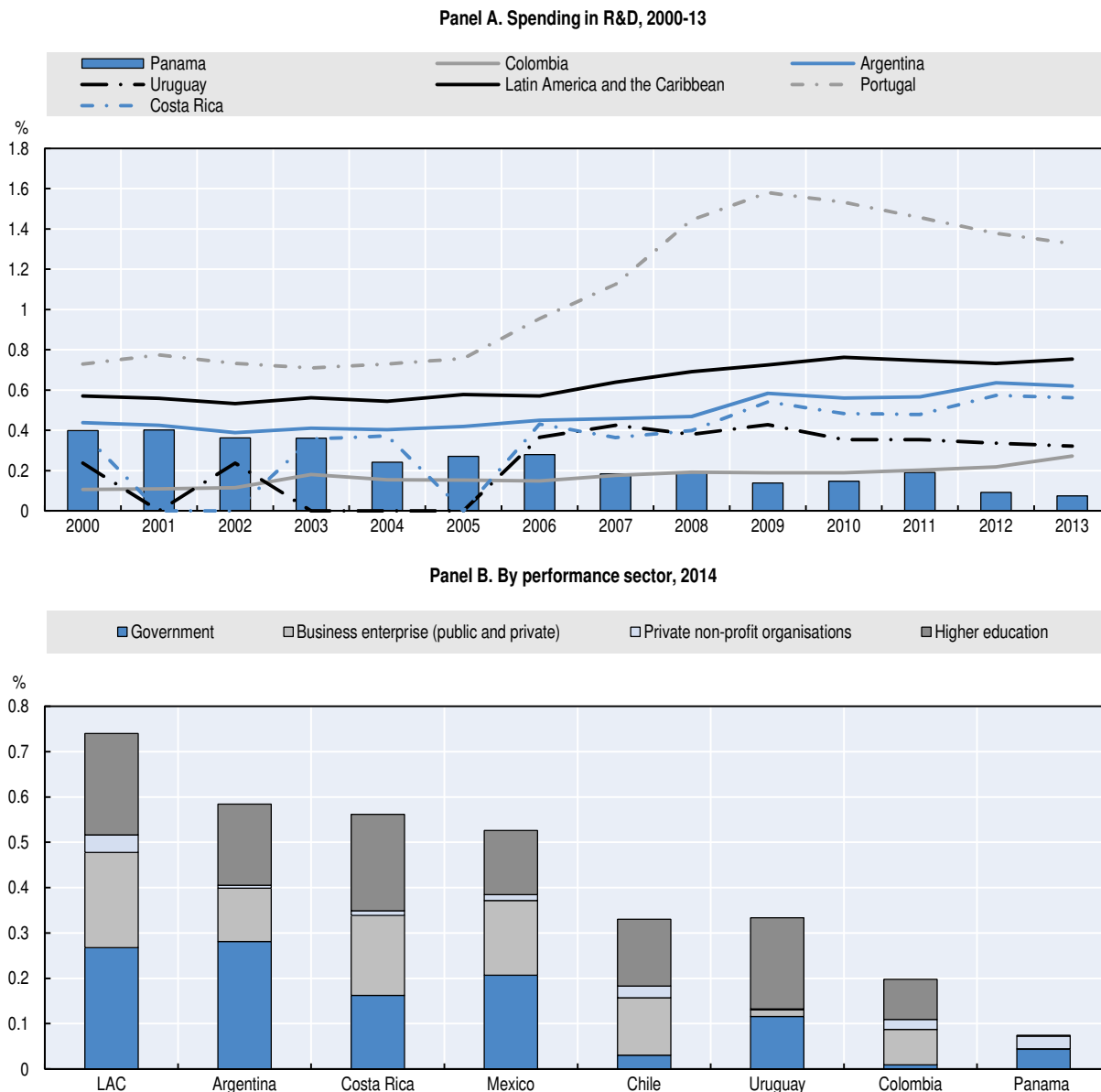
Note: Panel B: Data for Costa Rica and Panama are for 2013.

Source: Data available at RICYT (2016), *El Estado de la Ciencia: Principales Indicadores de Ciencia y Tecnología Iberoamericanos / Interamericanos 2016*. Estimates based on expenditure as share of GDP and expenditure shares by performance sector.

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The low levels of business expenditure on research and development and of private sector innovative activities in Panama are focused mainly on the import of capital equipment, suggesting poor creation of domestic value-added. According to a survey

carried out in 2010 to monitor private sector firms' innovative activities, most innovations implemented by Panamanian firms were linked to the import of capital equipment (73%) and to a lesser extent on expenditures for technology transfer (10%). About three-fourths of all innovations implemented within Panamanian firms concerned process, organisational and commercialisation improvements; only about 25% were related to new products. Only about 13% of all firms indicated they had implemented the "new to the world" type of innovation (Suarez, 2010; OECD, 2015c).

Panama also lags behind most benchmark economies in the levels of production of original knowledge, as measured by patent applications, but it is improving. Although the number of patent applications via the Patent Co-operation Treaty (PCT) has grown since the 1980s, Panama shows very low levels of patents (Figure 2.23, Panel A). Between 2000 and 2009, about 3 000 patents were filed through the Panamanian office for direct and PCT national phase entries. This is three times higher than the applications filed in the decade 1980-89, and more than four times higher than those filed in 1990-99 (OECD, 2015c). Panama's rates of patent applications (1.3 per million habitants) continue to be far below those of benchmark economies such as Hong Kong, China (64.8) or Singapore (145.8), but they are close to those of Latin American economies such as Uruguay (2.1) and Colombia (1.8).

Rates of trademark applications fare better than patents when compared to benchmark economies and other Latin American economies (Figure 2.23, Panel B). Trademarks are used to claim the specific properties of a product or service in the market to distinguish it from others. They often signal novelty or a specific brand value and are widely used as indicators to compare companies' attitudes towards commercial innovation and intangibles. The numbers of trademark applications have increased recently in Panama (OECD, 2015c). In 2011, trademark applications filed amounted to about 11 000, up from 7 000 in 2004. By 2014, trademark applications dropped below those 2010 numbers. Nevertheless, trademark applications per million population, at 2 749, are significant compared to 1 222 per million on average in Latin American benchmark countries (OECD, 2015c; World Bank, 2017).

More promotion of existing institutions to attract private investment in research and development is needed. Panama's experience in science, technology and innovation policy is quite recent and dates back to the end of the 1990s with the creation of the National Secretariat Science, Technology and Innovation (SENACYT) as an autonomous agency to elaborate and implement science and innovation policies. SENACYT is in charge of defining the strategy as set by the five-year National Strategic Plan for Science, Technology and Innovation (PENCYT) and implementing these policies (OECD, 2015c). The plan calls for innovation activities to be directed towards advancing sustainable development, social inclusion, entrepreneurship and business innovation. It also includes developing science and scientific capacities in Panama and empowering the institutional framework necessary to design, implement and evaluate science and innovation policies. Each of the objectives identifies specific actions and indicators to measure progress, stating both baseline values of 2014 and expected results in 2019 (SENACYT, 2015).

Figure 2.23. **Performance indicators in innovation (per million people)**

Panel A. Patent applications (total), 2014

Number of patents (per million people)

Panel B. Trademark applications (total), 2014

Number of trademarks (per million people)
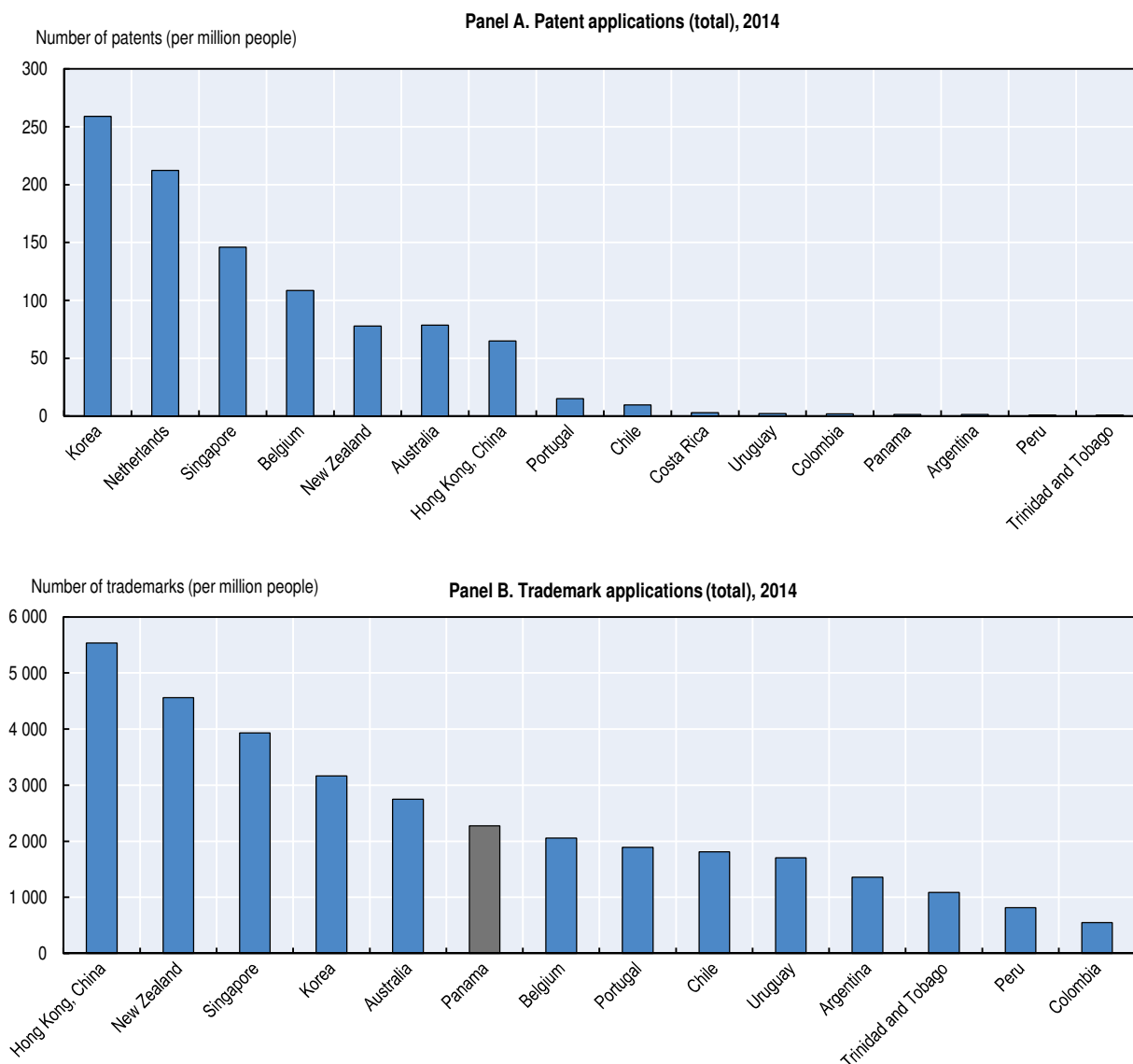
Note: In the OECD Indicators on Patents, "Patent applications" refers to total patent applications filed under the PCT, using as reference country the investor's country of residence.

Source: Population and trademark data comes from the World Bank (*http://data.worldbank.org/indicator/SP.POP.TOTL* and *http://data.worldbank.org/indicator/IP.TMK.TOTL*), accessed on June 2017. Patent data comes from the OECD (*https://stats.oecd.org/Index.aspx?DataSetCode=PATS_IPC*).

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Conclusions

Over the past decade, Panama exhibited high and sustainable economic growth driven mainly by construction, real estate, commerce (retail and wholesale) and finance, and thanks as well to a stable macroeconomic framework. This has contributed to reducing the income per capita gap with developed countries.

Challenges remain to guarantee and consolidate the economic performance of the past decade. The main driver of labour productivity performance has been physical capital, and among economic sectors within-sector effect in the services sector has played a considerable

role in that performance. Panama needs to boost labour productivity in other sectors (i.e. agriculture and industry) and regions, beyond Panama City and Colón. The logistics hub platforms settled in some areas of the country should promote further development in other regions and economic sectors, including the agro-industry.

Similarly there is a need to increase value-added in exports, and in particular the exports of services, which remain the most important component in the export profile. While exports on services represent close to 95% of total exports, the services' value-added generated for these exports remains low compared to benchmark economies.

The Canal and to a lesser extent the Special Economic Zones could contribute further to inclusive development in Panama. The Canal is estimated to represent 40% of total activity in Panama's economy including direct and induced output. Regarding the Special Economic Zones, the government has promoted place-based policies to attract foreign firms and spur innovation. The Colón Free Trade Zone alone, located in the Atlantic entrance of the Canal, employed nearly 25 300 workers and represented close to 5.8% of GDP in 2016. Panama is often characterised as a dual economy, with a few specific sectors linked to global trade featuring high wages. In the rest of the economy, in particular the industrial and agricultural sectors, export capacity and productivity levels remain low. Unexploited opportunities remain in these two sectors for domestic local development. Greater connection and linkages with other economic activities and among regions remain a challenge.

Panama has made considerable progress in increasing investment in infrastructure and better soft solutions to improve international connectivity, but further inclusiveness is needed. These improvements should be more inclusive with all areas of the country. For instance, good performance indicators on transport infrastructure relate to those infrastructures serving to connect Panama with the rest of the world (e.g. Tocumen airport and ports) rather than to connect provinces (e.g. railways and secondary and tertiary roads). Despite the expansion of infrastructure in some areas including energy and telecommunications, access to such infrastructure remains unequal. In addition, better use of information and communications technology should improve tracing and tracking of merchandise, and consequently would contribute to boosting further logistics performance.

Finally, expenditures in research and development remain very low and mostly concentrated in public spending. As a result, innovation outcomes remain poor in Panama. Policies promoting research and development and higher innovation outcomes are crucial to move from an infrastructure-driven growth to more diversified and knowledge-driven growth.

Notes

1. The volatility of public expenditures as a share of GDP, measured as its standard deviation in the previous five years, was close to four times higher at the end of the 1990s compared to the 2000s.

2. These leading sectors are followed by financial intermediation, which accounted for nearly 8% of the total production in the period 2011-16.

3. The correlation coefficient between Panama's GDP growth and global trade growth increased from -0.52 in the period 1990-97 to 0.39 in the period 1998-2016 (0.25 for the total period 1990-2016).

4. The Latin American countries that entered upper-middle-income status after Panama, and the year each did so, are: Brazil (2006), Colombia (2008), Costa Rica (2000), Cuba (2007), Dominican Republic (2007), Ecuador (2010), Paraguay (2014) and Peru (2008). For further information on the evolution of these economies in terms of GDP per capita, see *https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups*.

5. Data are from the World Bank's World Development Indicators (2017), as Panama is not included in the 2016 Conference Board Total Economy Database (in contrast to 17 other Latin American economies).

6. The industry and construction sector includes: mining and quarrying, manufacturing, electricity, gas and water supply and construction. The service sector includes: wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods, hotels and restaurants, transport, storage and communications, financial intermediation, real estate, renting and business activities and public services (e.g. education and health).

7. This productivity performance across economic sectors follows a similar pattern as other service-based economies, such as Uruguay. See OECD (2016d), *http://dx.doi.org/10/1787/9789264251663-en*.

8. Transport refers to services "involving the carriage of people and objects from one location to another as well as related supporting and auxiliary services. Also included are postal and courier services" Travel exports "cover goods and services for own use or to give away acquired from an economy by non-residents during visits to that economy". Other business services encompass three subcategories: research and development services; professional and management consulting services; and trade-related, technical and other business services. According to Hausmann, Espinoza and Santos (2016), the reported value of service exports by the CGRP is subtracted from the imports of "goods acquired in ports by means of transports" in the balance of goods to account only for the margin left by re-exports of goods that do not enter Panama. For full definitions, see *www.imf.org/external/pubs/ft/bop/2007/pdf/bpm6.pdf*.

9. The sources of domestic value-added can be divided into indirect backward linkages and indirect forward linkages. The former is the value-added that went into a single sector's exports coming from all other sectors. The latter refers to the value-added of a single sector that goes as input into all other sectors' exports. This analysis explores the composition of only exported domestic value-added, in contrast to global value-added chains analyses that focus on the origin of value-added (foreign or domestic).

10. This figure includes the domestic value-added that originates in a service sector and goes into a different services sector's exports.

11. That is the share of indirect value-added forward of the sector. Services sectors considered are distribution and trade, specific business services, finance, water supply, construction, other services, communications, other consumer services, insurance, and transport. The specific business services are those cover by the International Standard Industrial Classification of All Economic Activities (ISIC) rev. 3, divisions 70 to 74. They are real estate activities; renting of machinery and equipment without operator and of personal and household goods; computer and related activities, research and development; and other business activities.

12. Financial Times fDi Markets estimations on job creation are based on worldwide announcements of FDI projects and estimations. See *www.fdimarkets.com/*.

13. The comparison between FDI flows and the current account balance is discussed in Chapter 4.

14. The methodology explained in the 2016 ECLAC might underestimate the share of FDI destined to physical capital formation, as Panama has historically had a higher ratio of formation of physical capital to FDI.

15. Information provided by the Economics Office of the Colón Free Trade Zone.

16. The main regulation on these aspects is the Law No 32 of April 2011.

17. Information provided by the Economics Office of the Colón Free Trade Zone.

18. See *http://www.mef.gob.pa/es/direcciones/politicasPublicas/Paginas/MarcoFiscalMedianoPlazo.aspx* for further information on fiscal projections in Panama.

19. Based on OECD/IEA 2014 data, the latest available, at *http://www.iea.org/stats/*.

20. Based on estimates in the International Civil Aviation Organization's Civil Aviation Statistics of the World *http://www.icao.int/sustainability/Pages/Statistics.aspx)*.

21. Based on data provided by the Autoridad Marítima de Panamá (Maritime Authority of Panama), *www.contraloria.gob.pa/INEC/archivos/P78813%20-%20Transporte%208.pdf*.

22. Based on data provided by the Panama Ministry of Public Works, *www.contraloria.gob.pa/INEC/archivos/P78813%20-%20Transporte%208.pdf*.

23. SIECA member countries are Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. See *http://www.sieca.int*.

24. Based on data from Autoridad Nacional de los Servicios Públicos – ASEP – (National Authority for Public Services), *http://www.contraloria.gob.pa/INEC/archivos/P78813%20-%20Comunicación%209.pdf*.

25. Based on International Telecommunication Union, World Telecommunication/ICT Development Report and database, and World Bank estimates, *http://data.worldbank.org/data-catalog/world-development-indicators*.

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Chapter 3

Social inclusion in Panama

Strong and sustained economic growth over the past 15 years has translated into significant improvements in well-being outcomes. Although economic growth lifted a significant share of the population out of poverty and created jobs, Panama still faces structural challenges preventing the emergence of a consolidated middle class and equity across territories. This chapter discusses the main bottlenecks affecting inclusive growth and well-being. It begins with an overview of income patterns in the past decade and then examines the main drivers of inequality. It looks in particular at the role of income redistribution, differences across regions, urban planning, education and skills, and job quality. Assessing these drivers is key to improve the lives of all Panamanians, especially the most vulnerable.

Pro-growth policies typically focus on actions for improving a population's income and consumption potential. However, it is equally important to assess non-monetary dimensions that matter for well-being and to monitor the impact of economic trends and policies on different social groups. Employment prospects, job satisfaction and educational opportunities matter both for individuals' life satisfaction and for cohesion across society.

Panama's recent economic growth has considerably improved the living standards of most Panamanians, including those among the poorer parts of the population. Nonetheless, while absolute income poverty rates have fallen considerably in the last decade in Panama, relative poverty understood as social inclusion has improved little. While economic growth has been able to lift the income of a substantial share of the population, the improvements in living standards have not benefited all groups equally and income inequality remains high in Panama.

Policy makers have a range of instruments to promote opportunities among specific groups while promoting economy-wide growth. Together with policies that promote good-quality employment, skills and education, and women's economic participation, efficient tax-and-transfer systems constitute the most direct and powerful instrument to achieve greater equity.

This chapter examines the challenges facing efforts to boost social inclusion in Panama. The first section summarises the main poverty and inequality achievements of the past decades and identifies challenges on the horizon. The second examines the level of social spending and the effects of taxes and transfers on income distribution and poverty alleviation. The third describes territorial differences in inequality, well-being, service provision and poverty. The fourth analyses Panama's labour markets and the fifth identifies the main constraints on expanding and improving education services. The chapter concludes with the main messages resulting from this assessment.

Inequality and poverty are declining but remain very high

Panama's recent period of economic growth has considerably improved the living standards of most Panamanians including the poorer parts of the population. Nonetheless, Panama remains a very unequal country. It has the third highest levels of inequality, behind Costa Rica and Colombia, as well as income inequality levels higher than any OECD country and most of the Latin American countries assessed in the study.

Poverty is declining but exclusion remains high

Absolute income poverty rates have fallen considerably in the last decade. Estimates produced by the World Bank suggest that the incidence of poverty in Panama (measured as the share of people living on less than USD 3.10 per day) halved over the last ten years to a level of 8% in 2014. Over the same period, the proportion of people living in extreme poverty (defined as those living on less than USD 1.90 per day) decreased by two-thirds to 3% of the population (Figure 3.1, Panel A). Using other thresholds, national sources show

similar trends (Figure 3.1, Panel B). Following the World Bank approach for Latin America and the Caribbean (LAC), poverty in Panama fell and the middle class increased (defined as living on USD 10 to USD 50 per day); while vulnerability was more stable (Figure 3.1, Panel C).

Figure 3.1. **Trends in poverty and income distribution**

Panel A. Trends in poverty rates

Panel B. National poverty rates

Panel C. Changes of the income distribution
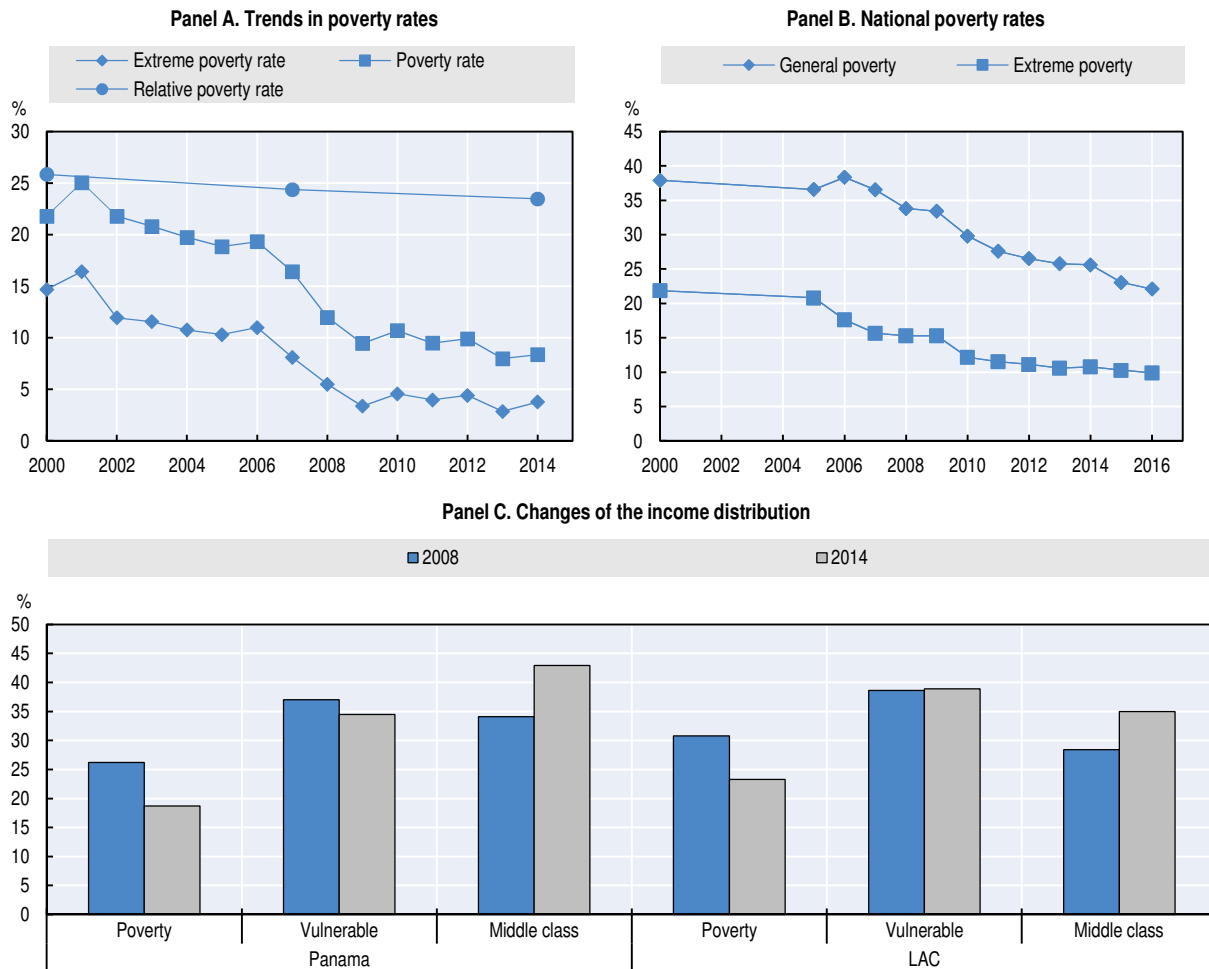
Note: Definitions of poverty, vulnerable and middle class are in Box 3.1.

Source: Panel A: Estimates for relative poverty are based on country micro-data as available through CEDLAS (see Box 3.1 for further details) and World Bank (2017), *World Bank Development Indicators*; Panel B: Ministry of Economy and Finance of Panama. Panel C: CEDLAS and the World Bank: LAC Equity Lab tabulations.

StatLink ᵃᵍˢ᠍ᵖ *http://dx.doi.org/10.1787/888933550839*

Nevertheless extreme poverty is high when compared to benchmark economies. Panama has the second highest rate of extreme poverty within the group of benchmark economies for which data are available (Figure 3.2, Panel A).

Results on poverty, however, are less impressive according to the OECD relative poverty measure, which considers individuals living on 50% of the median household income or less. Between 2000 and 2014, relative income poverty in Panama decreased only by around 2 percentage points, to 23.5% from 25.8% (Figure 3.1, Panel A). As a consequence, relative income poverty in Panama is higher than in any benchmark economy (Figure 3.2, Panel B). While indicators of relative income poverty are defined in relation to a country's general level of prosperity at a given point in time, absolute poverty measures are based on the population's ability to afford a given bundle of goods

and services (Atkinson et al., 2002). See Box 3.1 for an explanation of the internationally comparable poverty indicators used for Panama.

Figure 3.2. **Poverty levels in Panama compared to selected countries (percentage)**

Panel A. Extreme poverty (USD 1.90), latest year

Panel B. Relative poverty, latest year
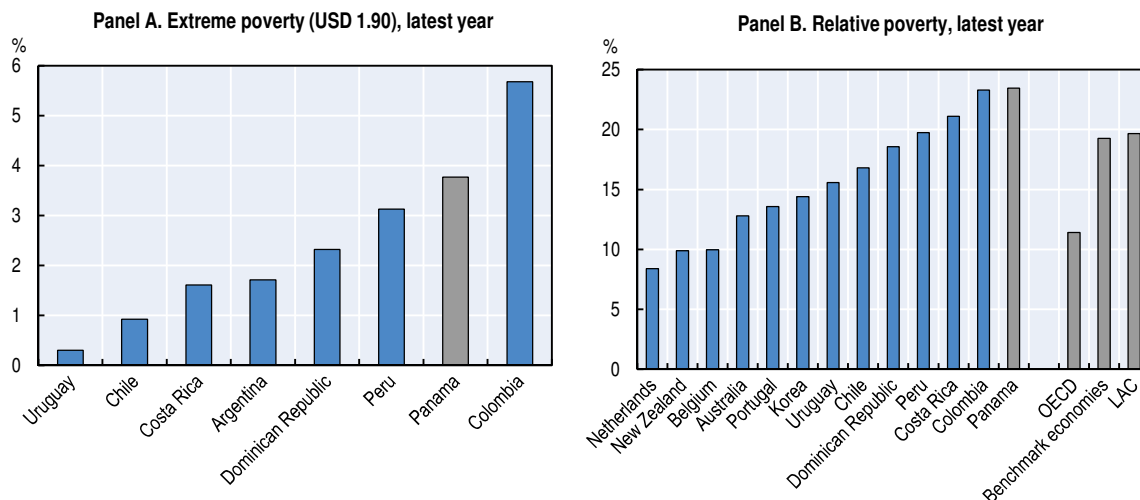
Note: Panel A: Latest year is 2013 for Chile and the Dominican Republic and 2014 for others. Panel B: Latest year is 2015 for Costa Rica; 2013 for Belgium, Chile and Portugal; 2012 for New Zealand; 2011 for Colombia; and 2014 otherwise.

Sources: Panel A: *World Bank Development Indicators*. Panel B: OECD *Income Distribution Database* for OECD countries *www.oecd.org/social/income-distribution-database.htm*; estimates for the Dominican Republic, Ecuador, Panama, Peru and Uruguay are based on country micro-data available from CEDLAS.

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Box 3.1. **Internationally comparable poverty indicators used for Panama**

Three different poverty indicators are used: extreme income poverty rate, income poverty rate and relative poverty line.

● The **extreme income poverty rate** is defined as the share of the population living on less than USD 1.90 a day at the 2011 purchasing power parity (PPP). The World Bank has used this poverty line since 2015 and it is further defined as the mean of the national poverty lines in the poorest 15 countries. This global poverty line is meant to provide an accurate picture of the costs of basic food, clothing and shelter needs around the world.

● The **income poverty rate** is defined as the share of the population living on less than USD 3.10 a day at 2011 international prices. As most countries in Latin America and the Caribbean (LAC) have low rates of poverty using international thresholds, and given the level of economic development in the region, it is important also to use higher thresholds to describe the distribution of income. These are USD 4 a day for overall poverty, USD 10 a day for vulnerability and USD 50 a day for the middle class. Poverty lines and incomes are expressed in 2005 USD PPP per day. LAC countries are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Paraguay and Uruguay.

● The **relative poverty line** is defined as 50% of the median household disposable income.

Both the World Bank and the OECD estimates are computed using the *Encuesta de Mercado Laboral* (INEC). However, there are a number of methodological differences between the approaches of the OECD and the World Bank. World Bank estimates are based on per capita income including implicit rent from house ownership. OECD estimates are based on equivalised income excluding imputed rent. Details about the OECD income Distribution Database methods and definitions are available at *http://oe.cd/idd*.

Box 3.1. **Internationally comparable poverty indicators used for Panama** (*cont.*)

The OECD Income Distribution Database estimates for Panama were computed for the 2015-16 OECD project, "Monitoring Inequalities and Fostering Inclusive Growth in Emerging Economies". These estimates are based on micro-data from the main household surveys for Argentina, Bolivia, Dominican Republic, Ecuador, Panama, Paraguay, Peru and Uruguay, as available through the Centre for Distributive, Labour and Social Issues in Latin America (CEDLAS) Universidad Nacional de La Plata, Argentina. They are also based on the same definitions and methodologies used to generate estimates for OECD countries, as available through the OECD Income Distribution Database (OECD, 2016a). However, owing to differences in survey methodologies and questionnaires' design (e.g. in terms of the recording of taxes paid and transfers received and paid by households), estimates for these Latin American countries are not fully comparable to those available for OECD countries.

However, poverty goes well beyond income. It is a question not only of monetary resources, but also of a complex range of deprivations in areas such as work, health, nutrition, education, services, housing and assets, among others. This view of poverty as multidimensional is today widely supported by poor communities as well as governments and development agencies. The Panamanian authorities (under the co-ordination of the Ministry of Social Development) together with the Oxford Poverty and Human Development Initiative (OPHI) are developing a multidimensional measure of poverty that should be available from mid-2017.

Almost one out of in five Panamanian live in multidimensional poverty households, according to the country's first Multi-dimensional Poverty Index (OPHI, 2017). This index is comprised of seventeen indicators or deprivations spread over five dimensions: education; housing, basic services and internet access; environment, neighbourhood and sanitation; employment; and health[1]. A household is considered to be in multidimensional poverty if it is deprived in five or more of the indicators. Ngäbe Bugle region is the one with the largest share of poor people with 93.4% of people are multidimensional poor, followed by the Guna Yala region (91.4%), Emberá Wounaan (70.8%), Bocas del Toro (44.6%) and Darién (40%). Coclé (22.6%) and Veraguas (19.1%) are on par with the national level. In contrast, in Colón (16.4%), West Panama (15.6%), Chiriquí (12.4%), Panama City (8.5%), Herrera (8.5%) and Los Santos Province (4.2%) the share of the population in multidimensional poverty is smaller than the national level (Gobierno de la República de Panamá, 2017).

High but slowly declining income inequality

Income inequality in Panama is high but declining slowly (Figure 3.3). Based on the OECD Income Distribution Database definitions, the Gini index was 50.7 in 2014. This level is much higher than most of the benchmark economies and significantly above the OECD average. In the past two decades, income inequality in Panama has been falling. According to CEDLAS data, the Gini index of income inequality fell on average by half a point every year to 48 in 2014 from 55 in 2000. This rate of decrease was around the midline for Latin American countries as inequality fell at a slower rate in 9 of the 18 LAC countries (Tsounta and Osueke, 2014). However, this decrease slowed down between 2007 and 2014.

This moderate decline of income inequality partly explains the gap between the trends of absolute and relative measures. Indeed, poverty reduction can be explained by disentangling the effects of growth and income distribution. For example, poverty can be declining either as a result of growth – in which case relative poverty would remain stable while absolute poverty decreased – or changes in the distribution of income. Growth benefited all income groups in absolute terms (Figure 3.4). Even though growth has been slightly higher for those in the middle of the distribution, the heterogeneity of growth across income groups is rather

low. Using the Datt-Ravallion Decomposition Analysis,[2] the Economic Commission for Latin America and the Caribbean (ECLAC) reaches a similar conclusion: the reduction in poverty in Panama was mainly driven by a growth effect (explaining up to 83% of the change between 2010 and 2014) while the reduction of inequality over time had a much lower effect during the period (ECLAC, 2016a; World Bank, 2015a). This differs from the rest of Latin America, where the drivers of poverty reduction were more balanced. Indeed, over the Latin America subcontinent during the same 2010-14 period, growth would have accounted for slightly less than 60% of poverty reduction while the changes of income distribution would have explained more than 40% (World Bank, 2015a).

Figure 3.3. **Income inequality levels in Panama and benchmark economies (Gini index)**
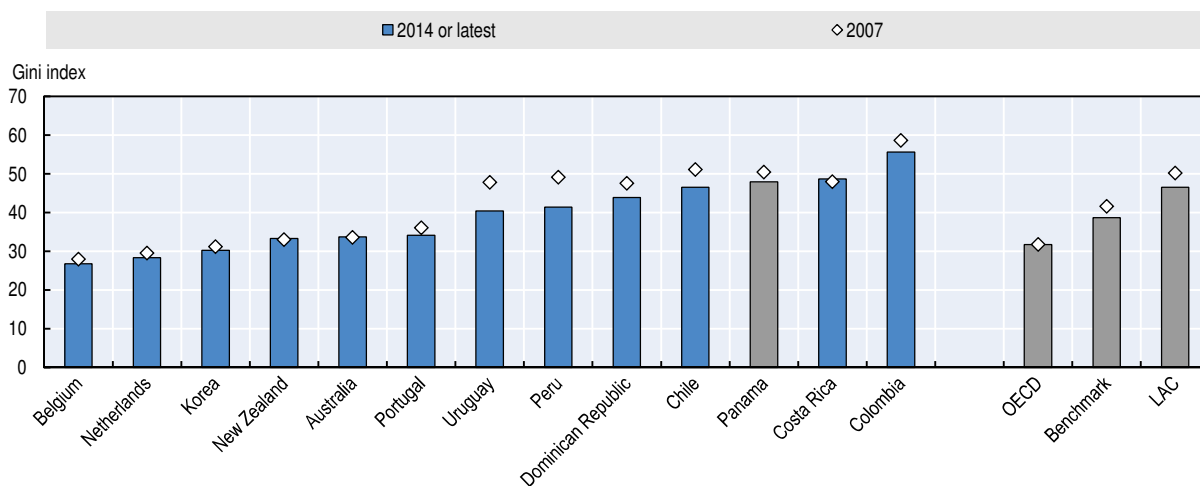
Note: The notation 2014 or latest refers to: 2015 for Costa Rica; 2013 for Belgium, Chile and Portugal; 2012 for New Zealand; 2011 for Colombia; and 2014 otherwise. The notation 2007 refers to: 2010 for Costa Rica; 2008 for Australia, Colombia and New Zealand; and 2006 for Chile.

Source: OECD *Income Distribution Database* for OECD countries, *www.oecd.org/social/income-distribution-database.htm*. Estimates for Dominican Republic, Ecuador, Panama, Peru and Uruguay are based on country micro-data as available through CEDLAS (Box 3.1 for further details).

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Figure 3.4. **Growth incidence curve (average annual growth 2007–2014), total population (percentage)**

Source: Estimates are based on country micro-data available at CELDAS (Box 3.1 for further details).

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Social expenditure is low and redistribution could be more efficient

Panama faces the challenge of increasing the effectiveness of both social spending and public resources to promote inclusiveness. On the expenditure side, higher levels of social spending, in particular on social protection programmes, is fundamental to increase inclusiveness. As is the case for other Latin American economies, improvements in the effectiveness of the taxation and transfer systems to reduce income inequalities are fundamental.

Social expenditure is low and increasing slowly

Social expenditure in Panama is considerably below what is spent on average in the benchmark economies (see Box 3.2 on definition of social expenditure used in this chapter). In 2013, public and mandatory private social expenditures were slightly below 600 USD per capita, while the benchmark average is 3 500 USD per capita (Figure 3.5); only the Dominican Republic and Peru spent less per inhabitant among the group of benchmark economies. For example, Panama had the second highest per capita public spending (below Costa Rica) but among the lowest in Latin America and the Caribbean region (Acosta et al., 2015).

Box 3.2. What do we talk about when we talk about social expenditure?

The United Nations Economic Commission for Latin America and the Caribbean (UN ECLAC) – the source used for Panama and the other Latin American benchmark economies besides Chile (which is an OECD member) – follows a different classification of social expenditures than the OECD Social Expenditure Database (SOCX). ECLAC divides public social spending into the following categories: social security (including programmes for old age, survivors, incapacity, family, active labour market programmes, unemployment and other social policy areas such as social insurance), education, health and housing. However, in order to be as comparable as possible, spending on education is not in the scope of the current analysis but will be discussed later in the chapter.

While spending on housing is relatively high, social protection expenditure remains low. Social spending on housing accounts for almost USD 300 per capita, half of total social spending and higher than in any other country of the benchmarking group. Expenditure on social security only amounts to USD 124 per capita. The very low amounts going to social protection expenditure put Panama at the bottom ranks of benchmark economies. Health-care expenditure reaches USD 171 per capita, which is also relatively low and around half the average level of expenditure in Latin America.

Social spending in Panama is higher than it was 25 years ago and has remained stable, below USD 600 per capita, since 2010 (Figure 3.6). In the 1990s, growth in social spending was mainly driven by health spending; social security spending was volatile; and spending on housing was flat and negligible (from USD 10 to USD 20 per capita). In the 2000s, housing spending jumped to USD 70 per capita and steadily increased since then to close to USD 300 per capita since 2010 (housing is discussed in more in detail below) In contrast, social security and health expenditure levels have been more stable over the same period.

Figure 3.5. **Social expenditure in Panama and benchmark economies, latest year, per capita**
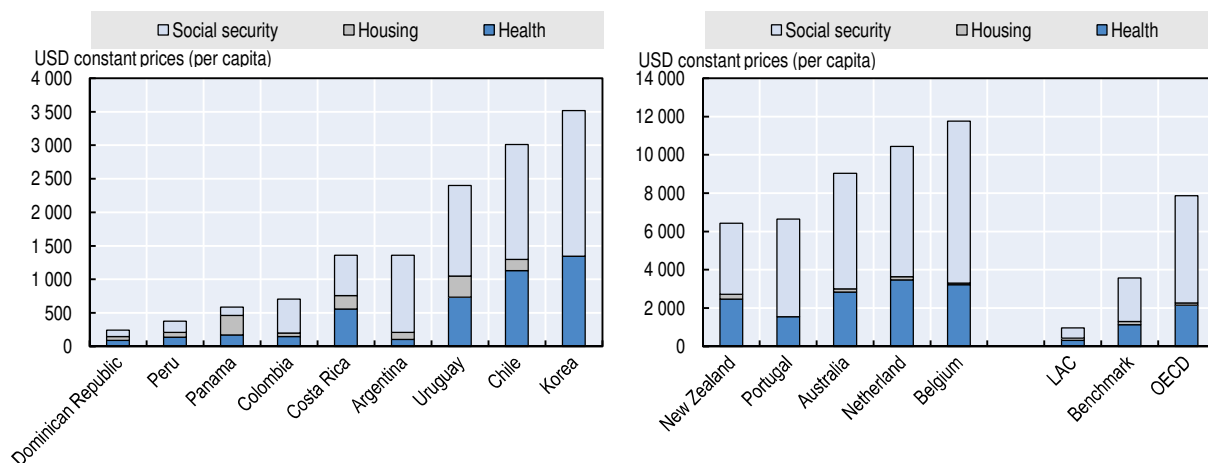
Note: Latest year refers to 2015 for Chile; 2013 for Panama, Colombia, Netherlands, Portugal and Belgium; 2012 for Peru; and 2011 for the Dominican Republic and Uruguay.

Sources: OECD (2016b), *Social Expenditure Database*, *www.oecd.org/social/expenditure.htm* for OECD countries; and ECLAC (2016b), *CEPALSTAT Statistics and Indicators*, Per capita social public expenditure by sector, *http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/Portada. asp?idioma=i* for Latin American countries except Chile.

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Figure 3.6. **Social expenditure trends in Panama, USD constant 2010 prices (per capita)**

Note: In June 2017, the ECLAC revised its methodology to allow monitoring the volume of resources spent on policies related to six functions: social protection; education; health; housing and community services; recreation, culture and religion; and environmental protection. However, for the sake of comparability, the present analysis is using 2016 data disaggregated into four functions: social protection; education; health; housing and community services.

Source: ECLAC (2016b), *CEPALSTAT Statistics and Indicators*, Per capita social public expenditure by sector, *http://estadisticas.cepal.org/ cepalstat/WEB_CEPALSTAT/Portada.asp?idioma=i*.

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Social assistance comprises four distinct programmes: *Red de Oportunidades* (2006), a conditional cash transfer; *120 a los 65* (2014) to support the elderly; *Beca Universal* (2010), a cash transfer for households with children to encourage school attendance; and *Angel Guardian* (2012), a programme targeting poor or vulnerable people with disabilities. *Red de Oportunidades* is the only programme that has been formally evaluated. Arráiz and Rozo (2011) found that this programme increased school enrolment and was able to reduce child labour in both indigenous and rural non-indigenous areas, but found no evidence of impact on the numbers of visits to health-care providers or the number of vaccines that children received. The effects of the universal scholarship and the non-contributory pension programmes have not been evaluated.

Despite the impact of public transfers on poverty, challenges related to targeting and take-up of programmes remain (World Bank, 2015b). For example, 18% of the people who make up the poorest 20% of the population receive no social assistance of any sort, while slightly more than 30% of the spending on social programmes goes to the wealthiest 60% of the population.

The housing sector is a major policy priority for Panamanian authorities and construction has also been a main driver of economic growth (see Chapter 2). The current administration has set a goal of providing 100 000 housing solutions through public construction and refurbishment. The state also provides a USD 10 000 means-tested grant for households purchasing a new home, which has helped sustain construction of housing for low-income households. However, existing programmes are not implemented on the basis of a needs assessment. Nor do they necessarily account for their increasing impact on the construction sector; in 2010, 39% of new housing built was covered by a state programme (INEC, 2015). Moreover, the ongoing decentralisation in zoning and titling and the overlapping responsibilities for extending sanitation require significant co-ordination efforts.

Assessing the impact of taxes and transfers, the Commitment to Equity (CEQ)

The Commitment to Equity (CEQ) Institute analysis suggests that taxes and transfers play a small role in shaping the income distribution in Panama. Income inequality and poverty would be slightly higher without redistribution through taxes and transfers. The CEQ analysis suggests that under the scenario where pensions are considered differed market income, direct and indirect taxes and transfers reduce the Gini index by less than 3 percentage points (Figure 3.7). This reduction is lower than those of other Latin American countries, especially compared to countries with similar levels of per capita income such as Argentina, Chile, Costa Rica and Uruguay (Lustig, 2017).

Figure 3.7. **Panama's fiscal incidence analysis**
Reduction of poverty and inequality explained by taxes and transfers, percentage points
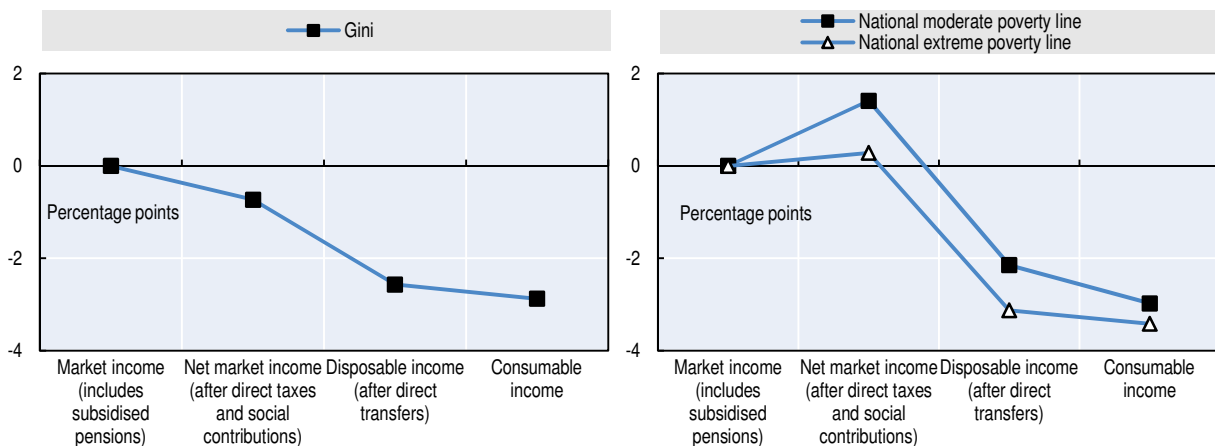
Note: Consumable income includes social security contributions, direct taxes, direct transfers and subsidies but does not include indirect taxes.
Source: OECD based on national household survey, INEC (2016).

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Most of the impact on inequality is explained by transfers rather than taxes. Indeed, around 60% of the Gini reduction can be attributed to direct transfers. Additionally, the fiscal incidence analysis on poverty measures shows an even higher effect of direct transfers, explaining most of the poverty reduction efforts.

The CEQ Institute analysis had been designed to assess the distributional impact of a country's taxes and transfers. Essentially, this fiscal incidence analysis allocates taxes (personal income taxes and consumption taxes) and public spending (social spending) to households or individuals so their impact on the distribution of income can be compared. Transfers include both cash transfers and in-kind benefits such as publicly provided government services in education and health care. Transfers may also include consumption subsidies such as those for food, electricity and fuel. This analysis will be further developed in the second volume of the *Multi-dimensional Country Review of Panama* (*In-depth Analysis and Recommendations*) but provisional results are presented in this chapter.

Territorial inequalities challenge inclusive growth

The improvement in living standards and the reduction of poverty levels have not benefited all groups equally. Indeed, access to public infrastructure and services differs substantially across regions, contributing to large discrepancies in the well-being of the population. A great divergence exists between the urban and rural areas in various dimensions such as income, education, health, housing and sanitation, and between those areas with high concentrations of indigenous populations versus the rest of the country.

Well-being indicators differ considerably across regions

Improvements in living standards and the reduction of inequality and poverty levels over the past decade have not benefitted all groups equally. Access to public infrastructure and services differ substantially across regions, contributing to large discrepancies in the well-being of the population. As discussed in Chapter 2, high discrepancies are also present in terms of productivity across provinces. A great divergence exists between urban and rural areas in various dimensions such as income, education, housing and sanitation, health and education, and also between those areas with high concentrations of indigenous populations versus the rest of the country.

Panama is divided into ten provinces and three semi-autonomous indigenous regions organised by ethnic group (known as the Comarcas). The three provinces along the Canal (Panamá, Panamá Oeste[3] and Colón) account for almost 60% of the total population (INEC, 2010). These are also mostly urban while the provinces along the borders (Bocas del Toro and Chiriquí at the border with Costa Rica, and Darién at the border with Colombia) are mainly rural (Figure 3.8). The 2010 census found that only three-quarters of Panamanians who were born in the Comarcas regions are still living in a Comarca; the others live mainly in Bocas del Toro (7%), the province of Panamá (6%), and to a lesser extent Panamá Oeste (4%) and Chiriquí (4%).

There is also great divergence in terms of well-being outcomes between the Comarcas regions and the rest of the country. Despite lower levels of unemployment, people living in the Comarcas are much more likely to live in poverty and to report lower levels of satisfaction about their living conditions. They are also at greater risk of having an informal job or not having access to drinkable water in their dwelling. However, low outcomes regarding material and living conditions do not stop at the borders of the Comarcas. Bocas del Toro, where according to the 2010 census 63% of the population is of indigenous origin, reports comparable outcomes, as does Darién, where indigenous people account for 30% of the population (Figure 3.9).

Figure 3.8. **Share of urban population by provinces and Comarcas (percentage)**

■ 2010   ◇ 1990
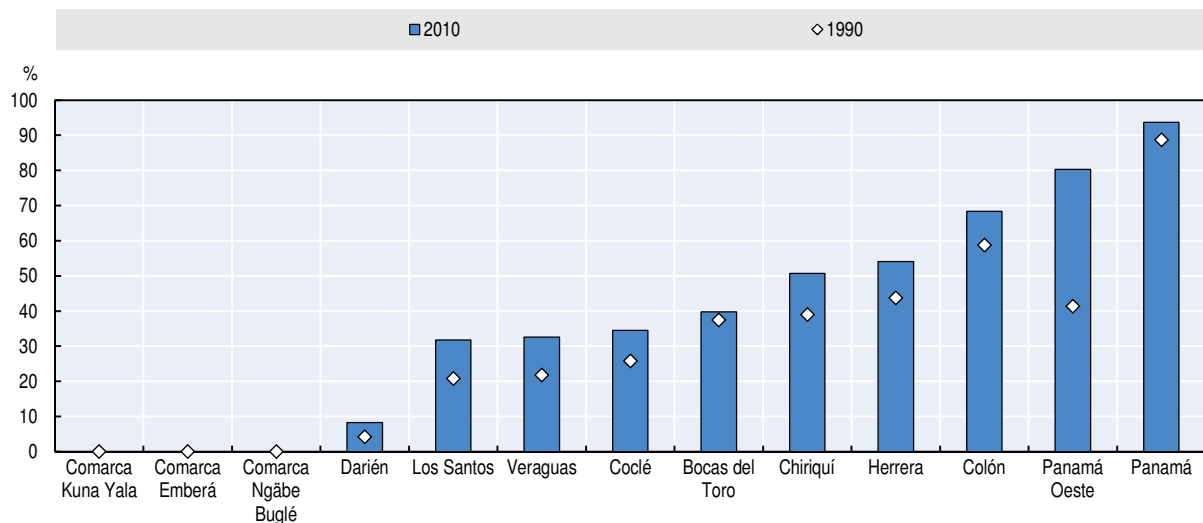
Source: INEC (2010), *Distribución Territorial y Migración Interna en Panamá: Censo 2010, https://www.contraloria.gob.pa/inec/archivos/P6691 Distribuci%C3%B3n%20Territorial%20y%20Migraci%C3%B3n%20Interna%20en%20Panam%C3%A1-Censo2010_F.pdf.*

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In addition to sanitation, access to basic services is a key area where large differences between indigenous areas and the rest of the country are observed. Panama has the lowest level of electricity coverage among the indigenous population and the largest gap between indigenous and non-indigenous coverage in the region (World Bank, 2015a). Similar inequalities are observed for piped water and Internet access.

Figure 3.9. **Material and living conditions by regions – Z-scores**

	Consumption possibilities		Work		Housing and infrastructures	
	Poverty rate	Satisfaction with living conditions	Unemployment rate	Share or formal employment	Population using improved sanitation	Satisfaction with housing
Bocas des Toro	-2	-3	1	-1	-2	-4
Coclé	-1	0	1	-1	0	0
Colón	1	1	-2	1	0	2
Chiriquí	0	-1	0	0	1	0
Darién	-2	-1	2	-3	-1	-3
Herrera	0	4	1	0	1	8
Los Santos	1	-1	2	-1	1	-1
Panamá	1	1	-1	0	1	0
Veraguas	-1	3	1	0	0	5
Comarca Kuna Yala	-4		3	-5	-10	
Comarca Emberá	3		3	-3	-4	
Comarca Ngäbe Buglé	5	-2	3	-4	-6	-1

Note: This analysis looks at the original province of Panamá, although Panamá and Panamá Oeste recently split. Z-score or standard score stands for the signed number of standard deviations by which the regional outcome is above or below the national average. This normalisation enables an assessment of how much a region's performance is deviating from that average.

Source: INEC (2016) and Gallup (2016) *Gallup World Poll, http://www.gallup.com/services/170945/world-poll.aspx.*

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The divergence between indigenous areas and the rest of the country is not so clear cut for quality of life dimensions as it is for indicators of material and living conditions. However, the Comarcas, Bocas del Toro and Darién still significantly underperform in at least two dimensions across education, health, life satisfaction and, to a lesser extent, social connections (Figure 3.10). People living in Los Santos also report lower well-being outcomes. However the structure of Los Santos' population is different from that in those four areas, with almost no people of indigenous origin (less than 1%). The dimensions in which they report being are also different (environment, social connections and life satisfaction).

Figure 3.10. **Quality of life by regions – Standardised scores**
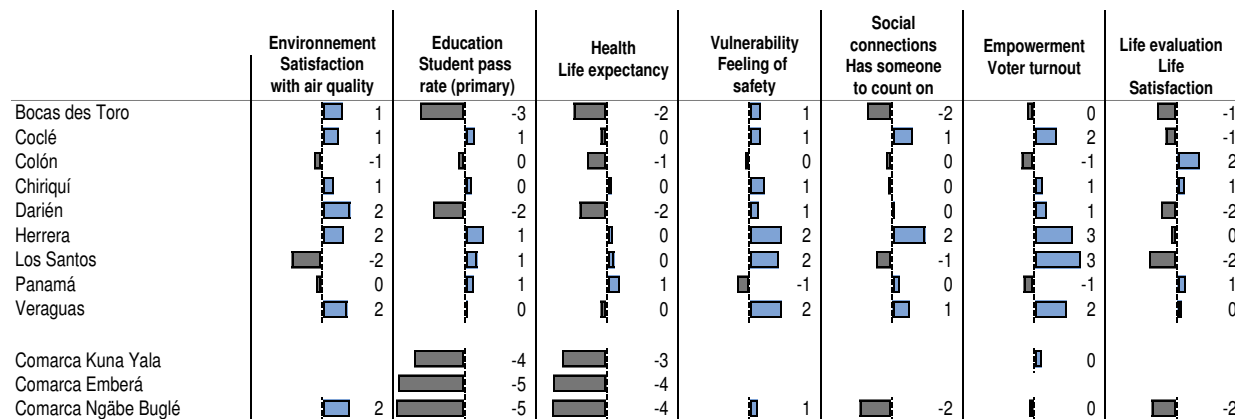
	Environnement Satisfaction with air quality	Education Student pass rate (primary)	Health Life expectancy	Vulnerability Feeling of safety	Social connections Has someone to count on	Empowerment Voter turnout	Life evaluation Life Satisfaction
Bocas des Toro	1	-3	-2	1	-2	0	-1
Coclé	1	1	0	1	1	2	-1
Colón	-1	0	-1	0	0	-1	2
Chiriquí	1	0	0	1	0	1	1
Darién	2	-2	-2	1	0	1	-2
Herrera	2	1	0	2	2	3	0
Los Santos	-2	1	0	2	-1	3	-2
Panamá	0	1	1	-1	0	-1	1
Veraguas	2	0	0	2	1	2	0
Comarca Kuna Yala		-4	-3			0	
Comarca Emberá		-5	-4				
Comarca Ngäbe Buglé	2	-5	-4	1	-2	0	-2

Note: This analysis looks at the original province of Panamá, although Panamá and Panamá Oeste recently split. Z-score or standard score stands for the signed number of standard deviations by which the regional outcome is above or below the national average. This normalisation enables an assessment of how much a region's performance is deviating from that average.

Source: INEC (2016) and Gallup (2016), *Gallup World Poll*, *http://www.gallup.com/services/170945/world-poll.aspx*.

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Greater and well-targeted investments in basic infrastructure would definitely benefit the Comarcas, where the population suffers from multiple deprivations from lower incomes, to lower access to services or poorer outcomes in health or education hindering their overall level of life satisfaction. The same is true for other rural areas such as Darién, Bocas del Toro or Los Santos. However, ensuring that such investments improve the well-being of all groups requires that proper attention be paid to the cultural norms and habits of the distinct ethnic groups that make up Panamanian society, to ensure that they lead to progress in the eyes of indigenous peoples and that investments are compatible with the degree of self-rule granted to Comarcas by law.

Urban planning and organisation are pressing challenges in Panama

Panama has experienced a constant and high rate of population growth in the past decades, in particular at the urban level. The 1950 census reported around 800 000 inhabitants in Panama. By 2010 the population had grown to nearly 3.5 million (Figure 3.11). The *World Urbanization Prospects* report (UN, 2014) estimates that the population will reach 6 million by 2050. The large migration outflows from rural areas, mainly toward urban centres near the Canal (primarily to Ciudad de Panamá), coupled with a process of demographic transition

have led to dramatic changes for the Panamanian population structure and size. Over the same period, the urban population grew by 3.5% per year while rural areas grew by 1.4%; a more granular approach even shows a slight decrease in the rural population during the 1990s. This rapid growth of cities in Panama creates challenges for citizens' well-being and will require innovative policies to ensure equal quality of public services for all citizens. In that context, a better linkage between urban and rural development policies is needed to avoid pressure on cities and improve well-being in Panama.

Figure 3.11. **Population of urban and rural areas (thousands)**

Thousands of inhabitants
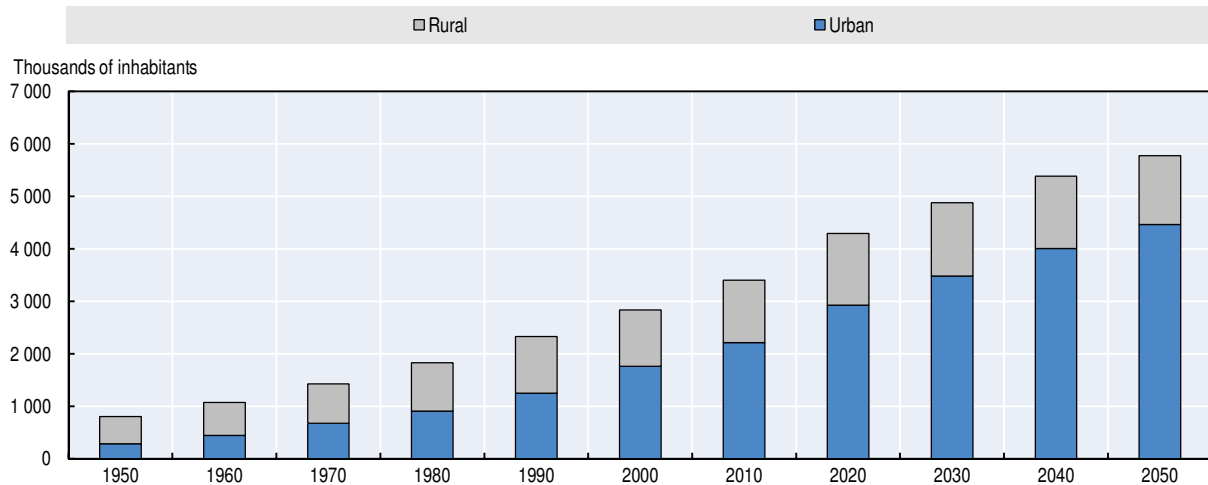
Sources: INEC (2010) and UN (2014), *World Urbanization Prospects*.

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This rapid urban growth has resulted in disorderly sprawl. According to UN Habitat, Panama is the only one of the benchmark economies (for which data are available) where the share of the urban population living in slums increased, to 25.8% in 2014 from 23% in 2005 (UN, 2015) (Figure 3.12). More worryingly, it is estimated that 41% of the dwellings in the Panamá Metropolitan Area were constructed informally (Espino and Gordón, 2015). In addition, the Ministry of Housing estimates that there are between 300 and 415 informal settlements in the country, including at least 25 that are on private land.

Rapid urban growth not only creates slums but also more challenges in the extension of public services. In Panama, access to drinkable water in urban areas is almost universal, and in rural areas access has progressed to 89% in 2015 from 76% in 2000. However, improvements in sanitation have been much slower. Access to improved sanitation increased to 75% from 59% between 2000 and 2015, which means Panama is at the bottom of the benchmark economies, just after Peru, at both rural and urban levels (Figure 3.13). Access to improved sanitation barely reaches 85% in urban areas, although data from INEC show that connections to piped sewer systems have levelled off at around 45%. A notable government response is the 100/0 programme, which aims to universalise access to improved drinking water and improved sanitation through the construction of bathrooms to replace latrines.

Figure 3.12. **Population living in slums (percentage of urban population)**
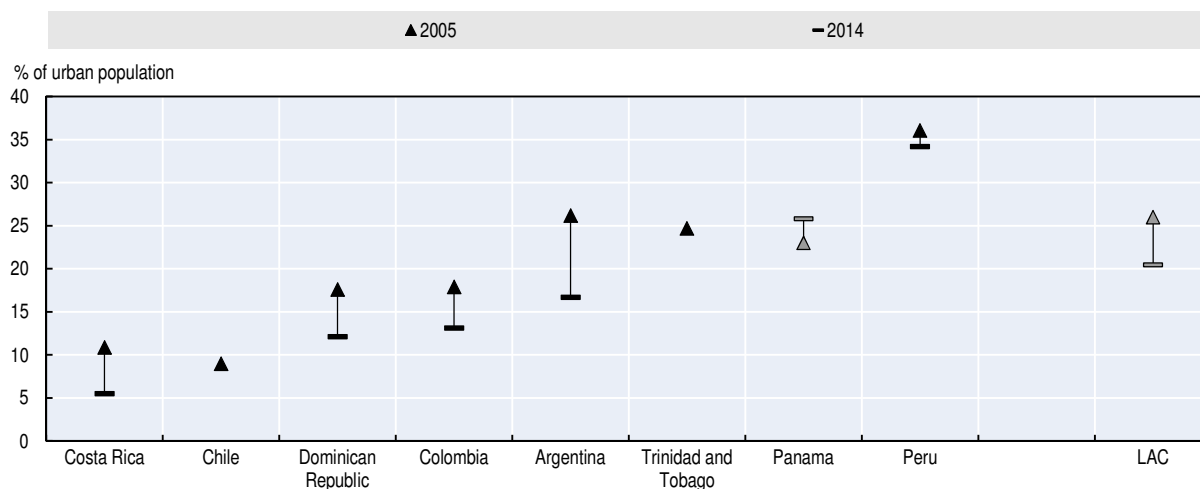
Source: UN Habitat data from UN (2015), *Millennium Development Goals Indicators* (database), *https://mdgs.un.org/unsd/mdg/Data.aspx.*

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Figure 3.13. **Population with access to improved sanitation in urban and rural areas (percentage)**
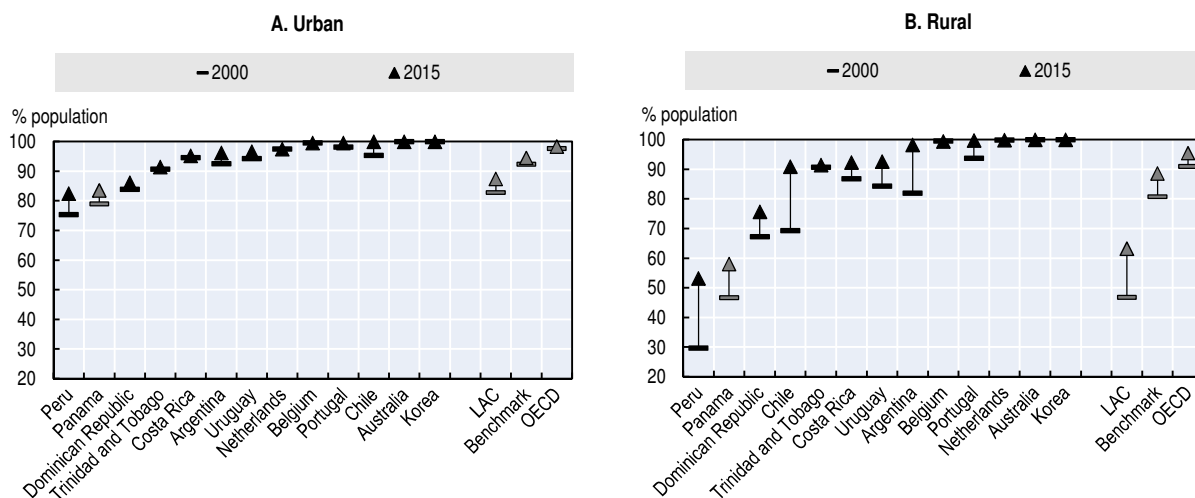
Source: WHO/UNICEF (2015), *Joint Monitoring Programme (JMP) for Water Supply and Sanitation* (database), *https://www.wssinfo.org/.*

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Lack of quality jobs hinder equity

The gaps in labour market performance across different regions and socio-economic groups are large. Labour is one of the most important assets of the poor and vulnerable, and helping them get engaged in productive activities also helps reduce poverty. Growth is translated into higher incomes and greater well-being through productive employment, improvements to real wages, and the coverage and characteristics of workers' social protection (ECLAC, 2016a); while 61% of the decline in poverty in Latin America and the Caribbean (LAC) in the past decade can be attributed to higher labour incomes, with more people working and workers earning more (World Bank, 2013).

Growth has translated into more jobs

Strong growth and macroeconomic conditions have benefitted job creation in Panama. The recent labour market performance has been remarkable and the country enjoys one of the lowest unemployment rates among Latin American countries. The employment rate has increased almost 5% since 2005 as a result of strengthening labour demand and the subsequent rise in the number of new salaried jobs created (ECLAC/ILO, 2016). Yet Panama's strong period of rising employment creation, which began in 2005 in a scenario of high growth rates, has started to slow down (Figure 3.14). Moreover, Panama ranks relatively well in terms of labour market efficiency, at 67th out of 138 countries in labour market rankings (World Economic Forum, 2017).

Figure 3.14. **Labour participation and employment in Panama**

Panel A. Evolution of labour force participation rate in Panama

Panel B. Employment trends in Panama and benchmark economies
2016
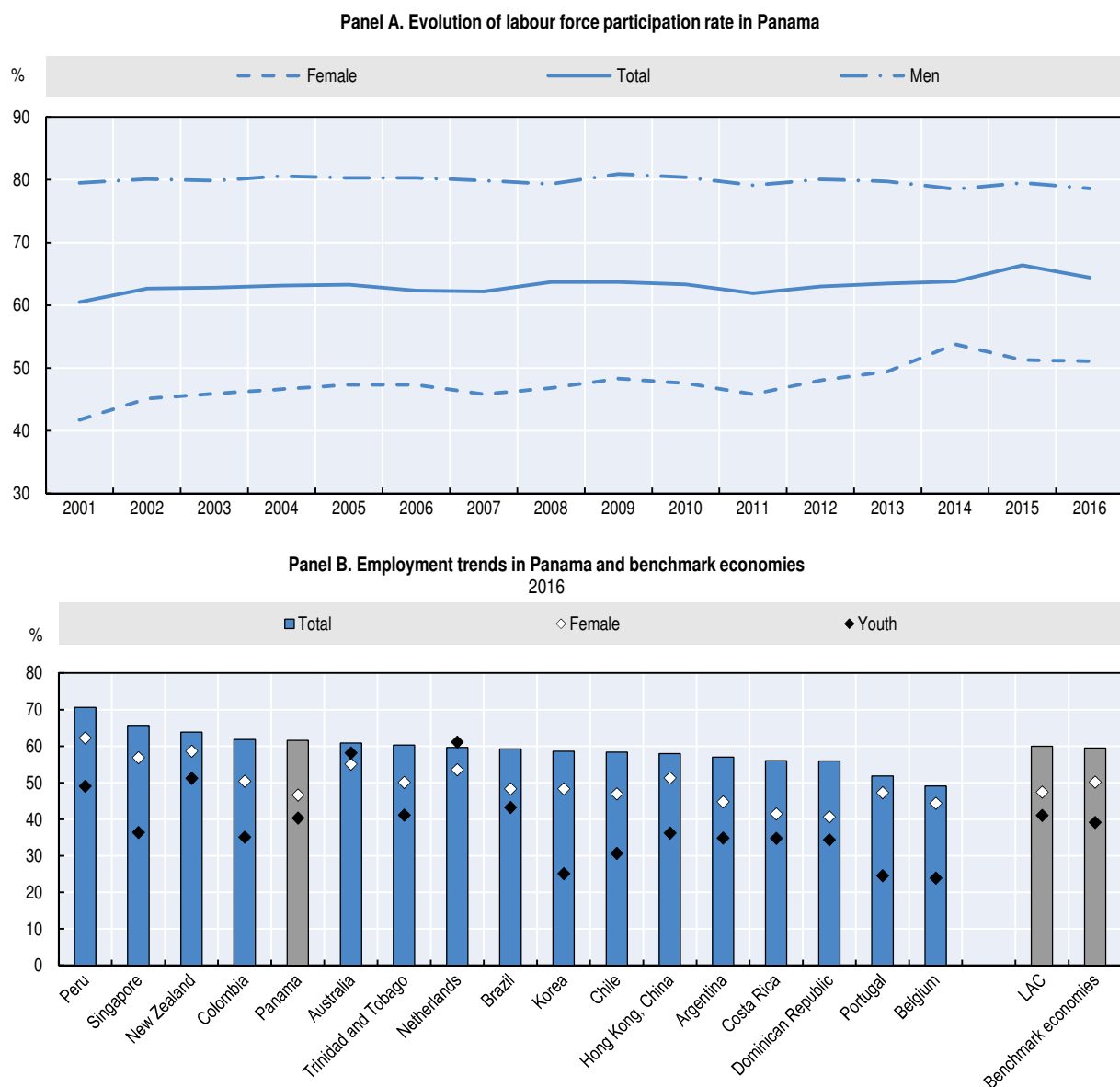
Source: INEC (2016) and ILO (2016).

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This rise in employment creation is also reflected in significantly lower unemployment. Panama's unemployment rate fell to 5.8% in 2015 from 12.1% in 2005. Likewise, the length of unemployment fell drastically to two months in 2013 from almost 15 months in 1991 (Figure 3.15).

The improvement in labour market outcomes has especially benefitted women and youth, yet inequalities persist (Figure 3.15). In terms of unemployment, women benefitted the most, with their unemployment falling to 6.7% in 2015 from 15% in 2005 (ECLAC/ILO, 2016). Still, a 3% gap between women and men has remained consistently high over the last decade. Similarly, unemployment levels by age group have decreased since 2007 although youth unemployment (for 15-24 year-olds) remains quite high at close to 11%. Panama's youth unemployment rates in 2014 (9.5% for 15-29 years-olds) are comparable to the average in the LAC region (10.3%) (OECD/CAF/ECLAC, 2016).

Figure 3.15. **Unemployment rate in Panama**

Panel A. Evolution of unemployment by gender and age group

Panel B. Duration of unemployment

Source: CEDLAS and the World Bank (2016), *SEDLAC* (*Socio-economic Database for Latin America and the Caribbean*) (database), *http://sedlac. econo.unlp.edu.ar/eng/*.

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The perception of job insecurity is low in Panama. The percentage of workers who report being very concerned that they will be left without work in the next 12 months is among the smallest in the region and has been declining over time (Figure 3.16). The fear of job loss in Panama fell 8 percentage points since 2004. Only 12% of Panamanian workers in 2015 feared they could be left without work. This reflects the country's relatively low job-loss rate and high job-finding rates. In other Latin American countries the share of workers reporting subjective job insecurity in 2015 was 28% in Mexico, 27% in Venezuela, 25% in Colombia, and 20% in Ecuador, Honduras, and Nicaragua – all levels considerably higher than in Panama.

Figure 3.16. **Subjective job insecurity**

Panel A. Trend in fear of job loss in Panama   Panel B. Fear of job loss in selected Latin American countries, 2015
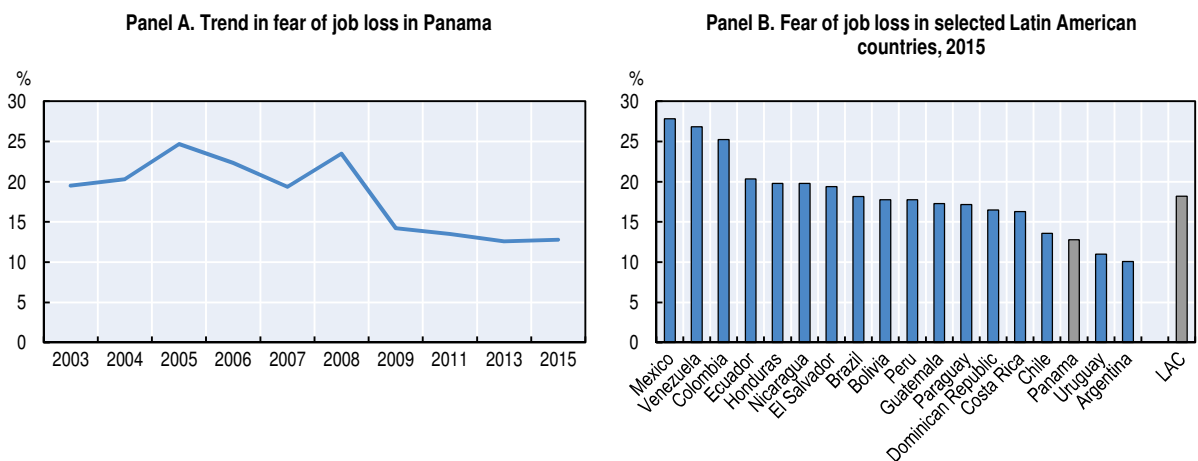
Note: Data for "fear of job loss" show the percentage of people responding very concerned to the question: "How concerned would you say you are that you will be left unemployed".

Source: Latinobarometro (2015), *www.latinobarometro.org*.

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Jobs are concentrated in a few sectors

Employment creation reflected the macroeconomic conditions between 2005 and 2015, strengthening the concentration in a few sectors. The employment shares by sector changed relatively little during that period, with most employment concentrated in the services sector (63% in 2015, and 66% in 2006). The agriculture and mining sector share of employment remained stable (from 19% to 16% variation in the 2006-15 period), as did the manufacturing sector (which had a constant share of around 18%). While agriculture and mining labour productivity was stagnant, labour productivity in the service sector increased considerably in particular owing to the "within effect" (see Chapter 2 for the macroeconomic conditions and growth across economic sectors). The employment elasticity of growth is higher for services (39%) than for the other sectors (agriculture and mining 29%; manufacture 26%). As such, further relaying on the growing service sector has the potential of continuing the expansion of employment.

More than half of workers in Panama are employed in commerce and logistics (19%), agriculture (14%), construction (10%) and transport and storage (8%). The biggest job-creating sector was commerce and trade, with more than 65 000 new jobs created (19% of all new jobs created). The construction sector, which created 14% of the new jobs from 2007 through 2015, and the financial service sectors are the fastest-growing in terms of employment, followed by health and social services, hotels and restaurants (Figure 3.17).

Figure 3.17. **Employment by economic sectors in Panama**

Panel A. Trends in employment by sectors in Panama
(2006 = 100)

Panel B. Share of jobs by sector
2015
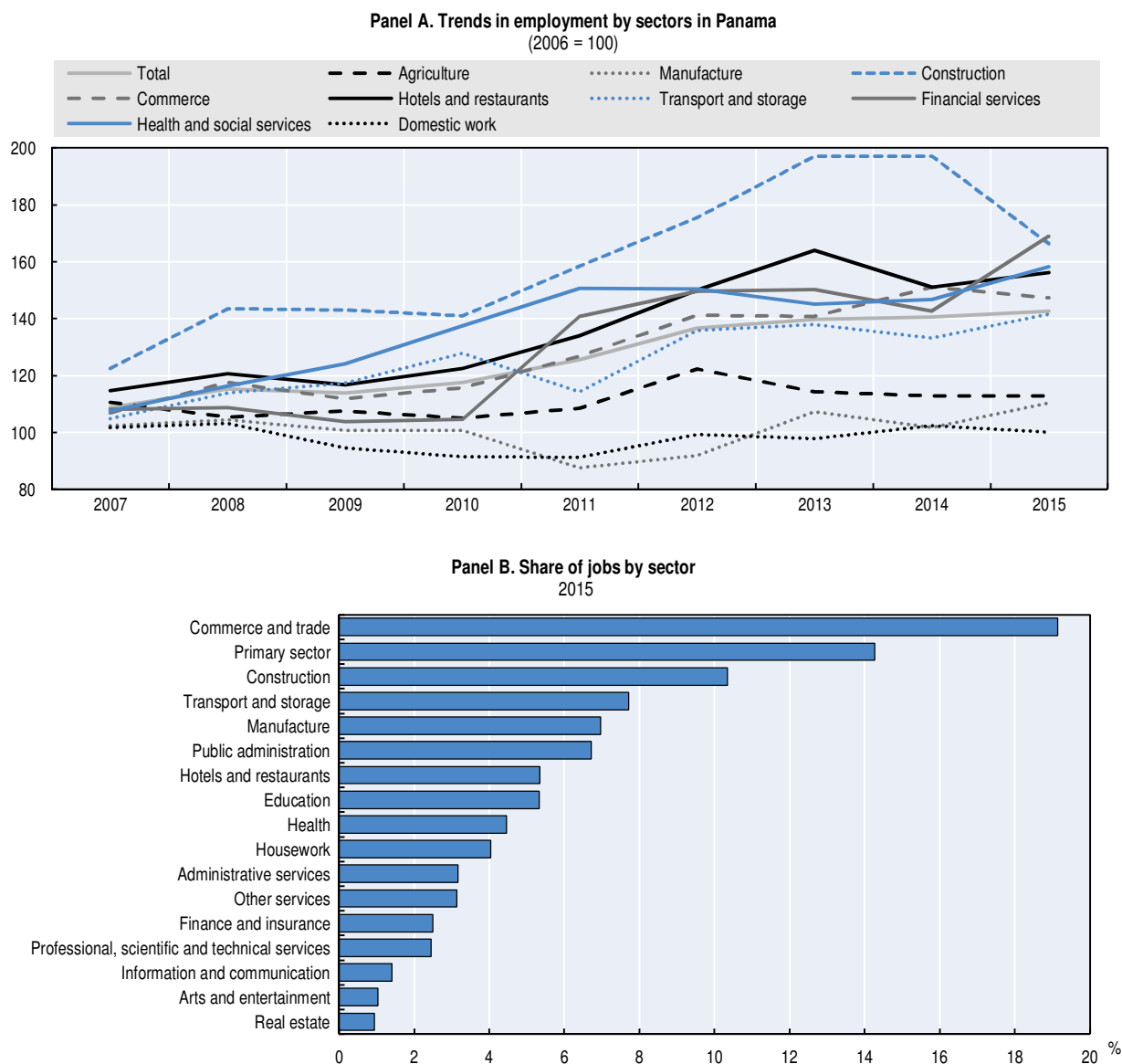
Source: INEC (2016).

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The occupation structure is shifting towards higher-skilled workers

The composition of the labour force in Panama has changed significantly towards more skilled workers from 2004 to 2015 (Figure 3.18, Panel A). The proportion of the labour force with a low education level (i.e. less than eight years of education) decreased to close to 30% in 2014 from 50% in 1990. Consequently, the gap with the proportion of highly educated workers has narrowed. In 2014, more than 25% of the labour force has attained a high education level, equivalent to more than 13 years of education, against nearly 15% in 1990. In 2016, close to 30% of workers were non-qualified or plant and machine operators, assemblers or drivers; 23% of workers were managers or professionals (Figure 3.18, Panel B). During 2005-16, the biggest proportional growth was in skilled workers (Figure 3.18, Panel C).

Figure 3.18. **The occupation structure in Panama**

Panel A. Composition of labour force
Percentage by level of education, age 15-64

— Low   - - - Medium   -·-·- High

Panel B. Employment shares
Percentage, 2016

Panel C. Change in employment shares
Percentage points, 2005-16

Non-qualified
Machine operators, assemblers and drivers
Skilled manufacturing, construction and mining
Skilled agricultural, forestry and fishery
Service, sales and trades
Office employees
Technicians
Professionals
Managers

Panel D. Average monthly earnings
by level of education, balboas, 2013

Note: The three skills level groups are formed according to years of formal education: low = 0 to 8 years, medium = 9 to 13 years, and high = more than 13 years.

Source: Panel A: INEC (2016); Panel B: CEDLAS and the World Bank (2016), *SEDLAC database, http://sedlac.econo.unlp.edu.ar/eng/*; Panel C: INEC (2013).

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The shift in the skills composition in Panama is noteworthy when considering the wage premia by education level, which privileges those with more advanced levels of education (Figure 3.18, Panel D). People with low qualifications face poor labour market prospects. Workers with complete tertiary education earn nearly twice as those with secondary education.

Ongoing shifts in the occupation structure of the labour force signal an increasing demand for individuals with a higher education degree. The demand for managers, professionals and technicians has increased over the past decade, with a reduction in the share of agriculture workers. However, the median salary of managers, professionals and technicians increased at a slower pace than that of lower-skilled jobs, meaning the salary gap remains wide.

A scarcity of technicians, engineers and skilled-trade workers is a recurrent complaint of employers. Nearly 46% of Panamanian firms report difficulties finding the necessary skills to operate (ManPower Group, 2016). As do other countries in the region, Panama registers a wide gap between the available pool of skills and those skills that its economy and society require (OECD/CAF/ECLAC, 2014). The size of the foreign workforce remains significant, owing to skills shortages across most economic sectors. This suggests scope for a stronger investment in education to increase the number of secondary graduates, as well as a larger role of technical and vocational education and training (TVET) at all levels; fewer students pursue TVET than in other countries of the region (UNESCO, 2016).

Labour earnings are low and very unequal

Inequality in Panama is closely linked to labour market inequalities, especially wage inequality. A large share of the working-age population encounters labour-market difficulties. Barriers are related to insufficient work-related skills, lack of quality jobs and territorial disparities. Improving job quality, reducing informality and increasing employment levels – especially for women and youth – remain key challenges in Panama.

Labour earnings are low and unequal in Panama (Figure 3.19). In recent years, Panama has enjoyed relatively good labour market outcomes, with a low unemployment rate, high employment creation and higher participation of women in the labour market. Still, income inequality is still large compared to other Latin American countries, benchmark economies and OECD countries. An uneven distribution of skills and productivity is related to this inequality. The high inequality is also associated with the large share of informal employment and the current inclusion gaps, particularly for the young, women and indigenous people, which need to be addressed.

Informality enhances income inequality

Informality is one of the main obstacles to making the labour market more inclusive. The informal sector in Panama is smaller than in most Latin American countries, but it is large by OECD standards. Informal work, by definition, leaves workers without the right to a pension, health insurance and the general entitlements of the formal sectors (this report uses this definition). As in other Latin American countries, informality has declined in Panama, in the past decade. In 2016 informal employment accounted for 40% of total workers and comprised those with fewer skills and in lower-paying jobs, thus contributing to inequality (INEC, 2016). The Comarcas and Darién are the regions with the highest incidence of informal work. While nearly 90% of workers in the primary sector are informal, 10% of workers are informal in selected services such as financial, electricity and water services (Figure 3.20).

Figure 3.19. **Earnings in Panama compared to benchmark economies**
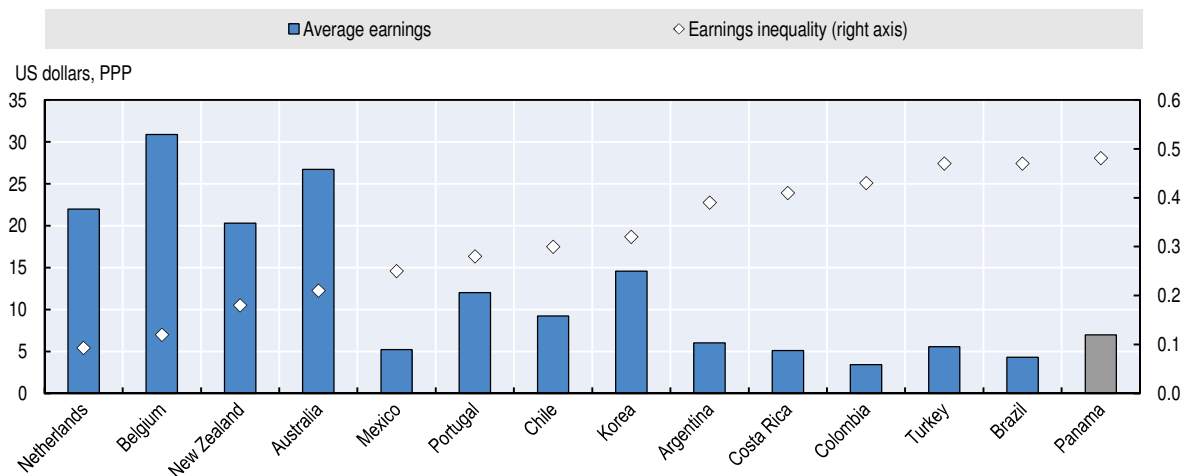
Note: Calculations are based on net hourly earnings and concern 2010 values, except for Brazil (2009), Chile (2009), China (2009) and India (2011). Earnings inequality is measured as the Atkinson inequality index with a high level of inequality aversion. The index ranges from 0 (when earnings are equally distributed) to 1 (when all earnings are concentrated in the hands of a single person).

Source: OECD Earnings Distribution Database; OECD (2015), *OECD Employment Outlook 2015, http://dx.doi.org/10.1787/empl_outlook-2015-en*; and CEDLAS and the World Bank (2016), *SEDLAC Database, http://sedlac.econo.unlp.edu.ar/eng/.*

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Informality in Panama especially affects youth and less-educated workers: 65% of the working young population work in the informal sector. Likewise, 73% of the working population with only complete primary education are employed in unregistered jobs, compared to only 3% of those who attained a tertiary education degree. Unlike other LAC countries, an equal share of women and men hold informal jobs (Figure 3.21, Panel A).

Informality within the formal sector is particularly significant in Panama. Over 15% of informal workers are employed by a formal firm, and represent 11% of formal firm workers (Figure 3.20, Panel A). The authorities exercise little control over the working conditions of salaried workers. In 2016, the Ministry of Labour levied only 674 fines for violations of labour conditions. Enforcement mechanisms through inspection and penalties are insufficient for firms to formalise their workers. Likewise, 75% of domestic workers are informally employed despite a special law to encourage domestic work formalisation.

Panama's tax wedge, a measure of the difference between the labour costs and an employee's take-home pay, is similar to that of the rest of Latin American economies but differs considerably from that of OECD countries. The tax wedge on average wage earnings in Panama is 22.9% of total labour costs. This is 1.2 percentage points higher than the average in Latin American and Caribbean countries (21.7%) but lower than the OECD average of 35.9% (Figure 3.22). The tax wedge includes compulsory social security contributions (SSCs), which for employees are 9.9% and for employers 13%. No personal income tax (PIT) is paid on an average wage. While these figures are similar to those for the region – employees pay 7.7% as SSC, employers pay 13.6% SSC, and PIT is 0.3% of labour costs – they contrast with the significant income taxes paid by average wage workers in OECD economies where employee SSCs are 8.3%, employer SSCs are 14.3%, and PIT is 13.3% of labour costs (OECD/CIAT/IDB, 2016). On average, the higher the tax wedge, the more costly labour becomes.

Figure 3.20. **Labour informality is decreasing but still high**

Panel A. Labour informality

Panel B. Labour informality in selected Latin American countries

Panel C. Labour informality by region

Panel D. Labour informality by economic sector
2015
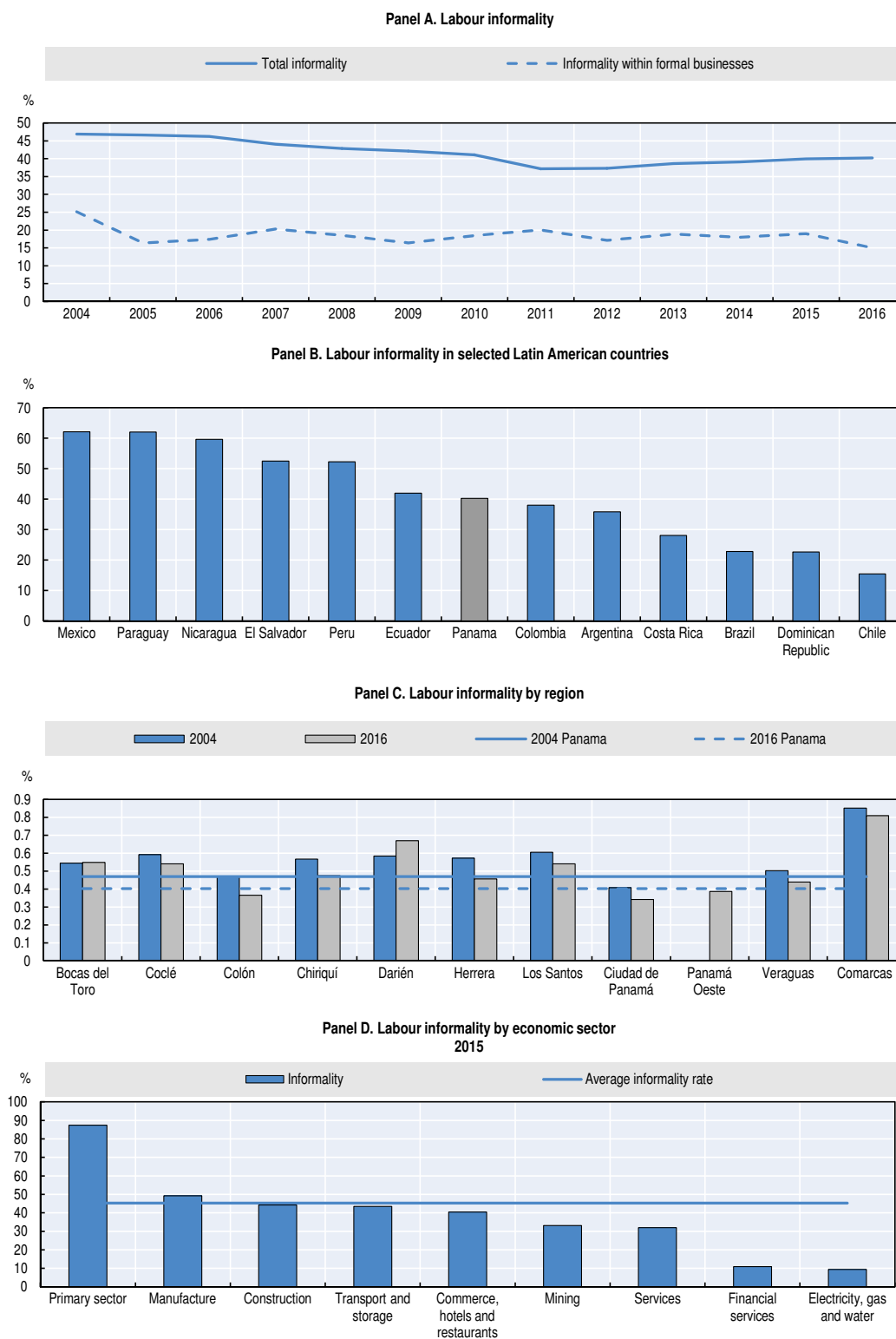
Note: Data for Argentina and Panama are from 2016, and from 2014 for all other countries. Legal definition of informality: informality is defined as workers without the right to a pension, health insurance, social protection, work contracts and the general entitlements of the formal sectors.

Source: CEDLAS and the World Bank (2016), *SEDLAC (Socio-economic Database for Latin America and the Caribbean), http://sedlac.econo.unlp.edu.ar/eng/* and INEC (2016).

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Figure 3.21. **Labour informality and gender, education, skills and earnings**

Panel A. Labour informality rates

Panel B. Mean earnings of workers
Hourly wage in main activity in nominal balboas
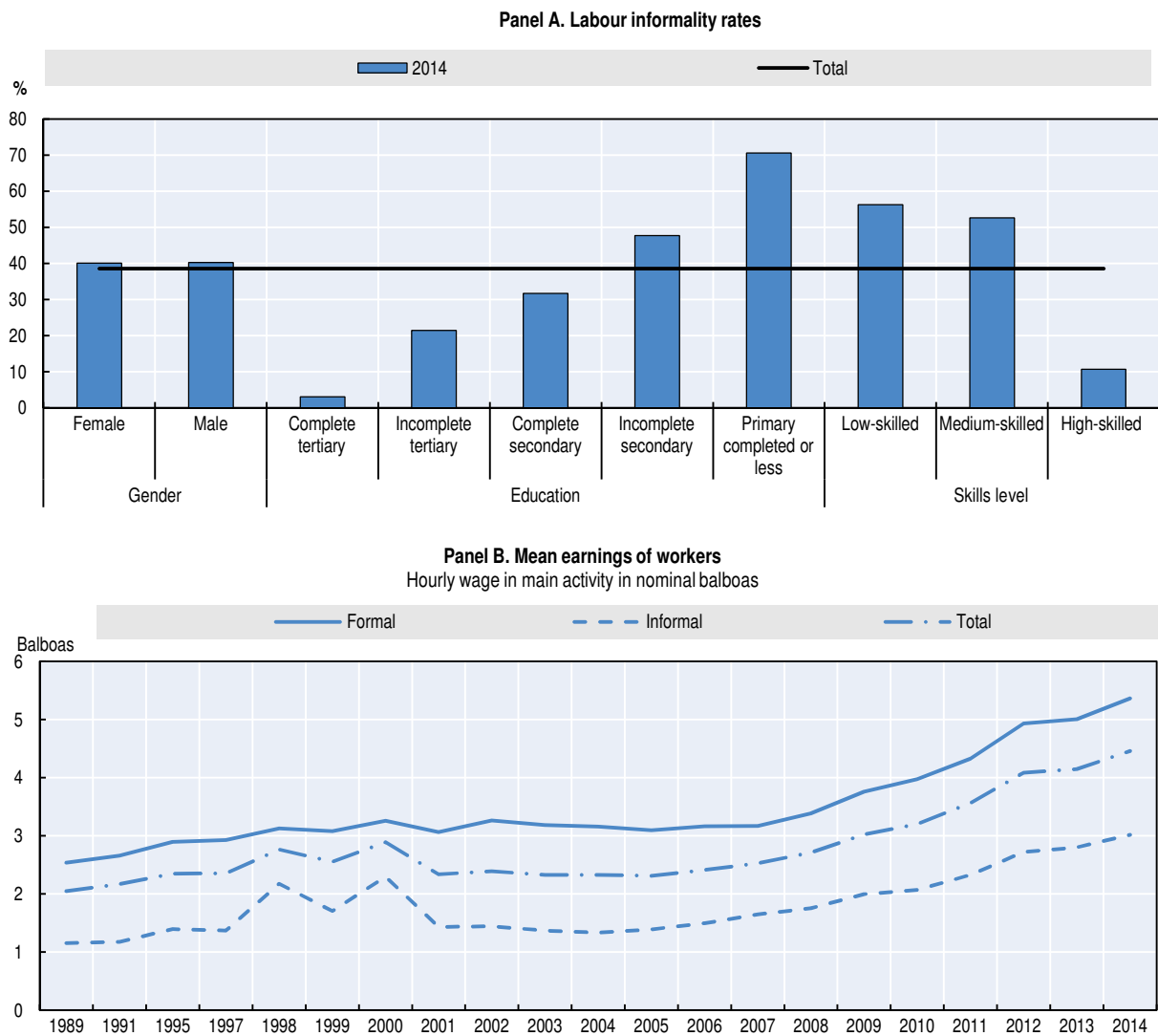
Note: Productive definition of informality: A worker is considered informal if (s)he is a salaried worker in a small firm, a non-professional self-employed, or a zero-income worker. A firm is considered small if it employs fewer than five workers. The three skills level groups are formed according to years of formal education: low = 0 to 8 years, medium = 9 to 13 years, and high = more than 13 years.

Source: CEDLAS and the World Bank (2016), *SEDLAC (Socio-economic Database for Latin America and the Caribbean)*, *http://sedlac.econo.unlp.edu.ar/eng/*.

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Formalisation costs from labour taxes do not explain informality. Higher informality rates among wage earners do not relate to higher formalisation costs in Panama. This is a distinctive feature that differentiates Panama from the rest of the region (Figure 3.23). Theoretical formalisation costs are defined as the proportion of workers' income that grants them access to health care and pension savings. The interaction of average income levels and the existence of a legally mandated lower earning threshold to participate in these social security programmes increase their price in most countries in Latin America. However, the existing earnings threshold in Panama is so low relative to reported income that the formalisation cost for individuals is proportional (23% of the worker's income) throughout the income distribution. Therefore other factors influence an individual's or employer's choice between formality and informality. These include job security; labour regulations

(i.e. monetary and non-monetary registration costs, firing costs, vacations); the valuation a person places on the programme or services; expectations of receiving future benefits; and a component of myopic behaviour by the individual or employer. The role of institutions in performing inspections and setting up enforcement mechanisms may also perhaps explain informality levels in Panama. Therefore, tackling informality will require a comprehensive strategy, including a combination of development policies at the regional level, better incentives to be formal, and stronger enforcement that go beyond the formalisation costs.

Figure 3.22. **Income tax plus employee and employer social security contributions, 2013**

As percentage of labour costs
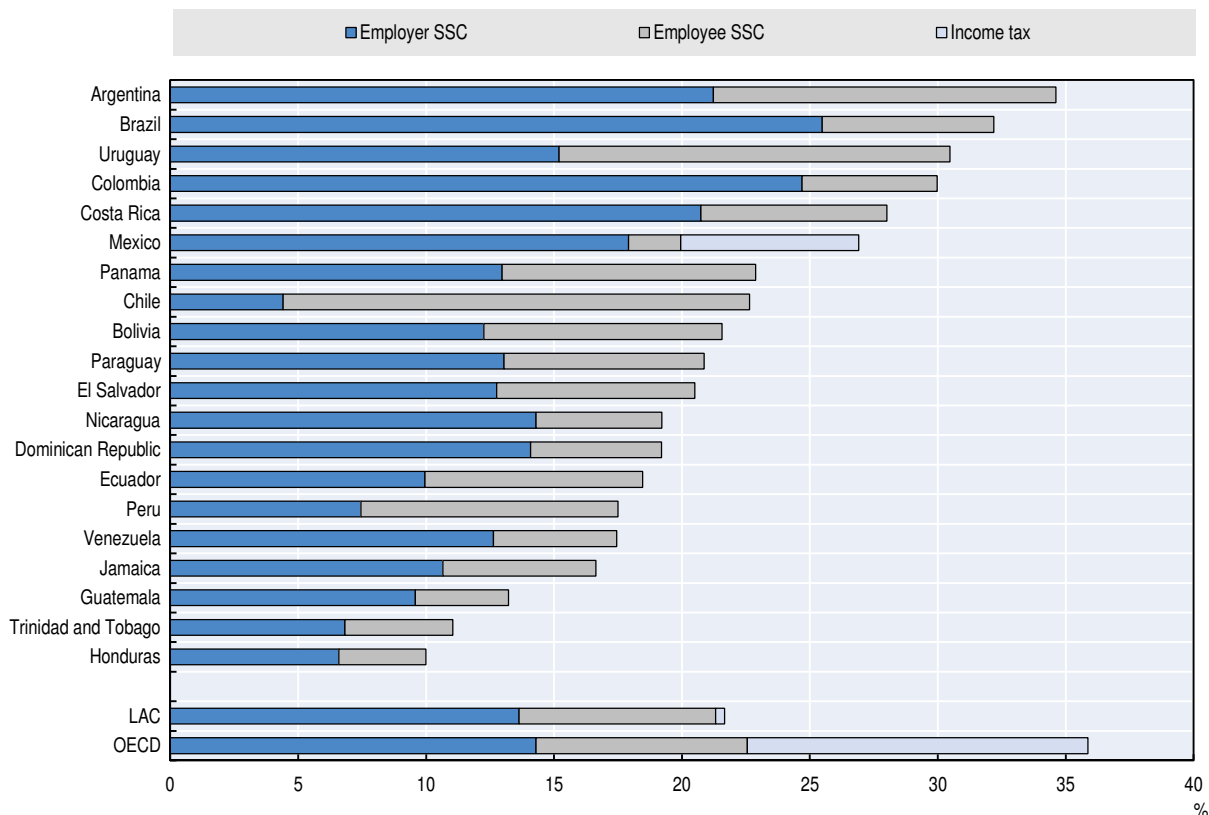
Source: OECD/CIAT/IDB (2016), *Taxing Wages in Latin America and the Caribbean, http://dx.doi.org/10.1787/9789264262607-en.*

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Employment Protection Legislation (EPL) in Panama is flexible for permanent contracts, but restrictive for short-term contracts which could explain the recourse to informal work. The OECD indicators of employment protection legislation measure the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work agency contracts. They measure regulation on a range from 0 (least restrictive) to 6 (most restrictive). The OECD EPL Indicator places Panama (1.73), on par with other LAC countries, but below the protection offered by most OECD countries (the OECD average is 2.3 points) and benchmark economies (2.1 points). On the other hand, Panama is among the four countries with the most stringent regulation on temporary work with a score of 4.29 points. The country is only surpassed by Venezuela (5.21 points), Turkey (4.96 points) and Uruguay (4.54 points), and well above the ranks of other LAC countries (2.5 points), benchmark economies (2.3 points) and OECD countries (2 points).

Evidence is not conclusive regarding the link between EPL in general and informality (Kucera and Roncolato, 2008). Studies that find a positive link between EPL and informality find a weaker relationship for Latin American countries than for other regions (Lehman and Muravyev, 2012). On the other hand, evidence suggests that very restrictive employment protection rules are associated with dual labour markets and high informality (Schwab, 2016), as firms seek flexibility outside of formal rules. It is important to note that employment protection refers to only one dimension of the complex set of factors that influence labour market flexibility.

Figure 3.23. **Informality and formalisation costs in Panama versus Latin America and the Caribbean**

Percentage of a worker's income by decile
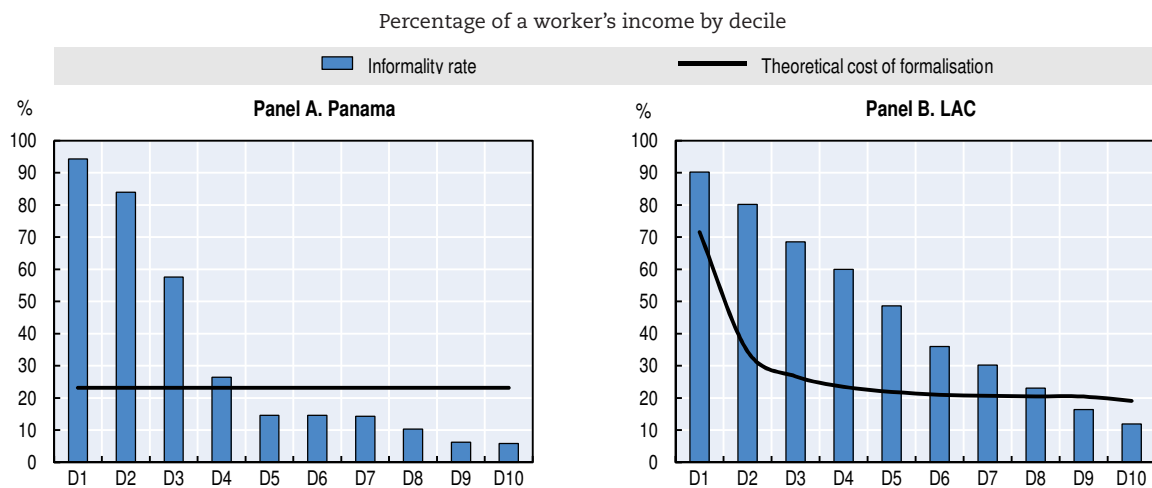
Note: LAC is the arithmetic mean of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay and Venezuela.
Source: OECD/CIAT/IDB (2016), *Taxing Wages in Latin America and the Caribbean*, *http://dx.doi.org/10.1787/9789264262607-en*.

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Vulnerable youth face severe challenges

Most youth leaving school enter inactivity or informal low-quality jobs (60%). The most disadvantaged youth suffer most from such precariousness. Poor employment opportunities result in lower well-being, and affect young women, the poor and the vulnerable more deeply. Starting with an informal job can leave permanent scars on workers' careers. Youth employment policy should assist young workers to get on a good career path early in their working lives. The incidence of informality is much larger for youth from poor and vulnerable households than for those belonging to the middle class. Nearly 35% of young Panamanians from extremely poor households are employed in an informal job, compared to 25% in the LAC region for this group (OECD/CAF/ECLAC, 2016). Lack of good employment opportunities is a significant factor hindering the inclusion of youth in society.

One out of five young Panamanians is not in education, employment or training (NEET). The NEET rate of young women in Panama was close to 30% in 2014, similar to the LAC average but considerably higher than the NEET rate for men of 11% (Figure 3.24, Panel A). This contrasts to the OECD average, where the gap between women and men is less than 5 percentage points (Figure 3.24, Panel B). The NEET phenomenon is strongly linked to socio-economic background: 76% of NEET women and 75% of NEET men come from poor or vulnerable households. However, the NEET category should not hide the fact that NEET women doing forms of domestic work, in particular, are productive and contribute to the

total economy: 84% of NEET women in Panama are engaged in unpaid domestic work or caregiving, compared to 10% of NEET men.

Figure 3.24. **Youth activities in Panama versus Latin America**

Panel A. Activity status of youth by gender in Panama
Percentage of youth aged 15-29, 2014

Panel B. NEET rates in Latin American countries
2014
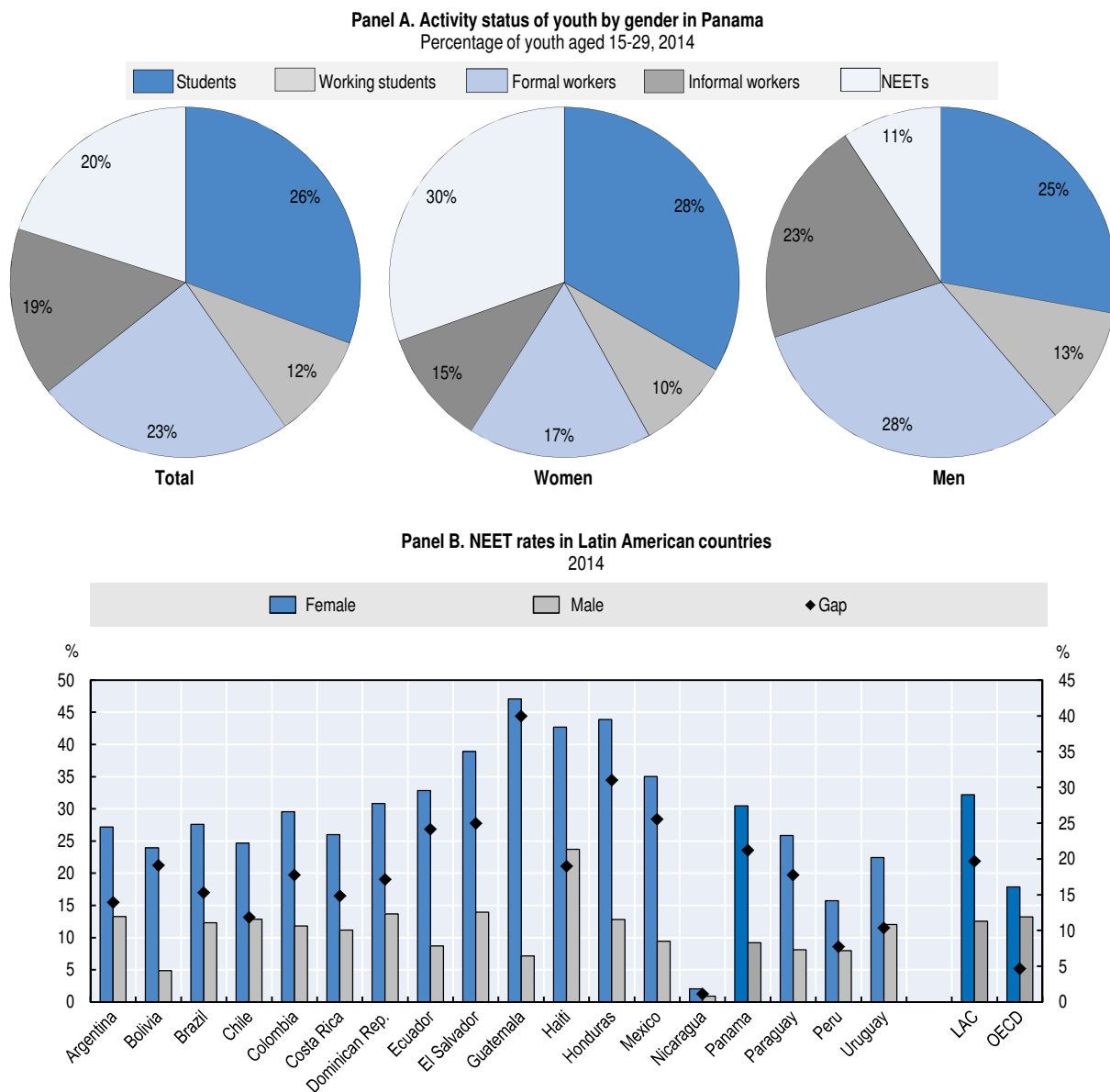
Note: LAC is the weighted average of 17 countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay. NEETs are youth not in employment, education or training.

Source: OECD/CAF/ECLAC (2016).

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The challenges that young Panamanians face on their path to work are particularly severe among those from disadvantaged socio-economic backgrounds. Their transition from school to work helps explain the poor labour market outcomes experienced by young people in Panama. Youth from these disadvantaged households leave school earlier than their peers

in better-off households and when employed mainly work in informal jobs (Figure 3.25). At age 15, almost seven out of ten young people living in poor households are in school. At age 24, however, almost five out of ten youth in this group are NEET, three out of ten work in the informal sector, only two work in the formal sector, and less than one is either a working student or a student. In vulnerable households, 55% of young people aged 29 are working in the informal sector or NEET. In contrast, in consolidated middle-class households around 90% of youth are in school at age 15 and more than 73% of youth are working at age 29, 80% of them in the formal sector (Figure 3.25).

Figure 3.25. **Youth from disadvantaged socio-economic backgrounds face severe challenges**
Percentage of youth aged 15-29
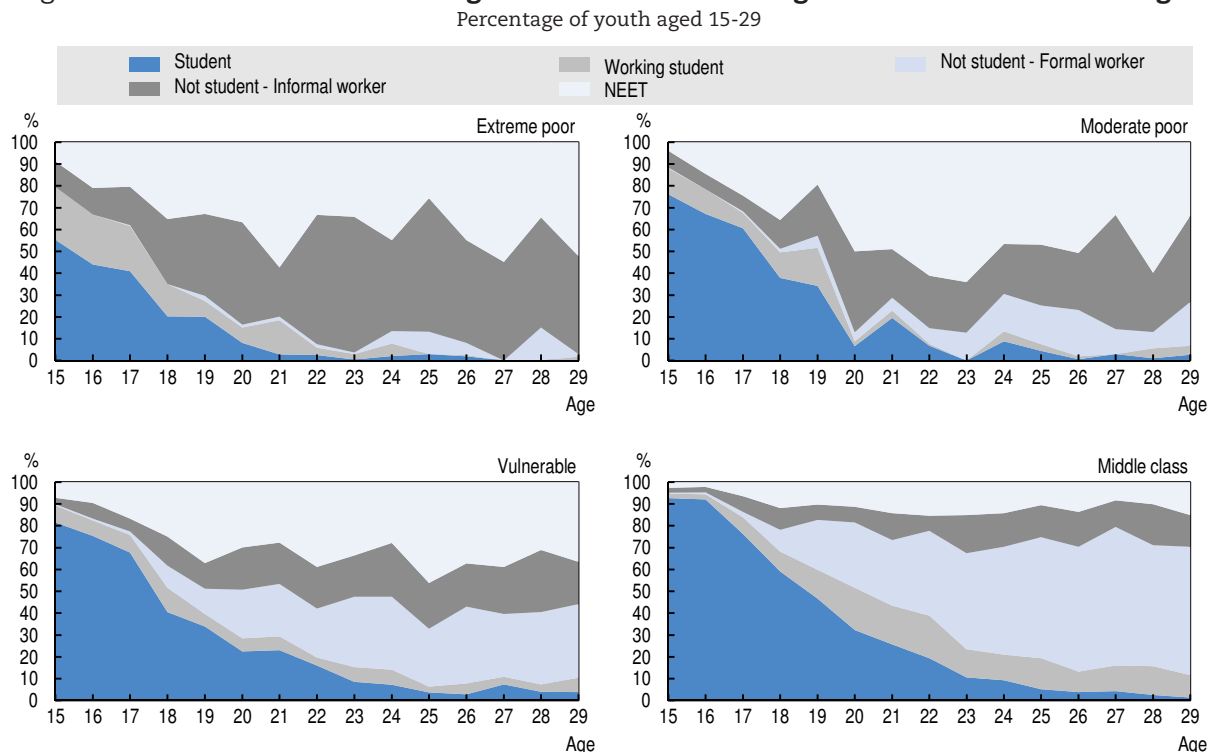
Note: Socio-economic classes are defined using the World Bank classification. "Extreme poor" = youth belonging to households with a daily per capita income lower than USD 2.5. "Moderate poor" = youth belonging to households with a daily per capita income of USD 2.5 to USD 4. "Vulnerable" = individuals with a daily per capita income of USD 4 to USD 10. "Middle class" = youth from households with a daily per capita income higher than USD 10. Poverty lines and incomes are expressed in 2005 USD PPP per day.
Source: OECD/CAF/ECLAC (2016).

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Women's participation in the workforce is low

Participation rates for Panamanian women are slightly lower than levels in OECD economies, but the gap with men is relatively large. Increasing the participation of women in the labour market should have a significant positive impact on productivity, economic growth and income equality in Panama (OECD, 2012). The changes in female employment in Latin America over the past decades contributed to the observed fall in income poverty and inequality (Gasparini and Marchionni, 2015). Panama has made progress in providing more opportunities for women to have both more and better jobs. Still, the gender employment gap remains above that of OECD economies, and women have lower access to managerial jobs then men (Figure 3.26).

Figure 3.26. **Women's participation in employment**

Panel A. Female labour force participation in Panama

Panel B. Labour force participation gender gap in Panama and benchmark economies
2016

Panel C. Share of women by type of job in Panama
2015

Source: ILO (2016) and INEC (2016).

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Recent evidence shows the entry of women into the labour market has slowed down in the years (Figure 3.26, Panel A). Among the most affected are the most vulnerable women, i.e. those with low education, living in rural areas or Comarcas, with children or married to low-earning spouses (Gasparini and Marchionni, 2015). This trend suggests the emergence of a dual scenario. On the one hand, skilled higher-income women living in large cities have labour participation levels similar to those of OECD countries; and, on the other, low-skilled vulnerable women living in rural areas or Comarcas with poorer services have substantially lower levels, leading to increasing inequality and poverty cycles (Gasparini and Marchionni, 2015; OECD/CAF/ECLAC, 2016). Employment initiatives are needed for groups that have fewer attractive job prospects and are more predisposed to leave, given the significant slowdown of labour participation among vulnerable women.

Spending on overall active labour market policies is low, but is high for training

Labour markets can become more inclusive and resilient when active labour market policies (ALMPs) are scaled up to satisfy the needs of all workers including youth, women, indigenous populations, the vulnerable and the middle class. ALPMs such as training, public employment services and incentives for job creation and entrepreneurship, and that involve people in full-time activities, increase the employability of job seekers and contribute to keeping workers productive in a cost-effective manner (OECD, 2015). Many vulnerable workers, such as informal workers, and job seekers fall out of these categories.

Spending on ALMPs is low in Panama, although spending on training is relatively high. In contrast to other countries in the region, Panama performs well in offering training programmes, and a high share of skills spending (0.17% of gross domestic product [GDP]) is estimated to be concentrated in this area. OECD countries, in comparison, spend nearly 0.15% of GDP in training (Figure 3.27). Additionally, the proportion of formal firm workers offered formal public or privately financed training (68%) is relatively high for the region (62%), and higher than other parts of the world (53%) (World Bank, 2010). However, current training programmes lack a proper evaluation mechanism and do have a real monitoring framework. No impact evaluations have been implemented to assess the efficiency of training expenditure, and therefore evidence of their efficiency is lacking.

Panama has recently developed a number of training and lifelong learning programmes for youth, particularly in less advantaged socio-economic groups and women. The *Pro Joven* (Pro Youth) programme, created in 2015, promotes employability of youth through internships in enterprises. The beneficiaries are youth in the last year of technical and vocational programmes. Participating enterprises receive a government subsidy for hiring interns and are required to hire at least 50% of those young workers once their internship contracts end. The programme started as a pilot with 1 000 beneficiaries and is now being scaled up. Additionally, the Instituto Nacional de Formación Profesional y Capacitación para el Desarrollo Humano (INADEH), the public entity in charge of technical and vocational training, is developing a comprehensive training programme designed to create the skills that the productive sector needs, in order to increase the pool of prospective candidates for this programme. INADEH, which is one of the largest agencies of its kind in the region, offers short technical courses that combine classroom teaching with workplace learning to more than 70 000 students each year (see section below on education and skills). The *Nuevas Oportunidades de Empleo para Jóvenes* (New Employment Opportunities) programme also offers job training and placement services to low-income youth in Ciudad de Panamá. Likewise, the Autoridad De La Micro, Pequeña Y Mediana Empresa (AMPYME), the public

entity in charge of promoting small and medium enterprise development, has also introduced a series of programmes to promote business training, with the goal of increasing formalisation among young entrepreneurs. The programmes *Desarrollo Financiero y Empresarial (Financial and Business Development)* and *Fondo Emprende* aim to increase opportunities for entrepreneurship and promote creation of new companies.

Figure 3.27. **Although spending on training is high, overall LMP spending is low**

Panel A. Public expenditure in labour market programmes
Percentage of GDP, 2014

Panel B. Public expenditure in training programmes
Percentage of GDP, 2014
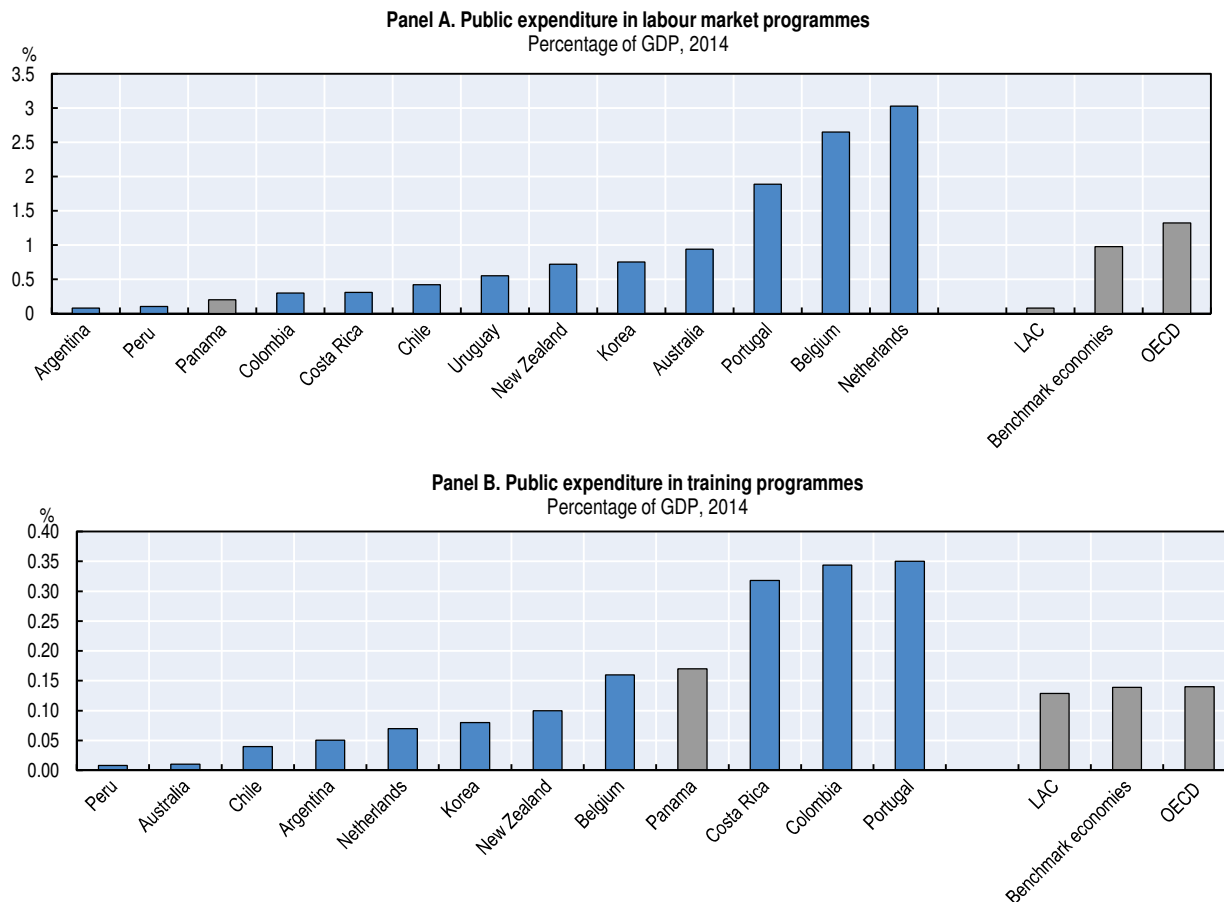
Note: Panel A: Includes active, intermediary and passive policies. Data for Costa Rica and Guatemala are for 2012; Nicaragua, for 2013; Argentina, Australia, Belgium, Brazil, Chile, Honduras, Korea, Netherlands, New Zealand, Panama, Portugal and OECD average for 2014. The LAC average includes Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Granada, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru and Uruguay. Panel B: Data for Argentina, Australia, Belgium, Brazil, Chile, Korea, Netherlands, New Zealand, Panama, Portugal and OECD average are from 2014; Costa Rica, Guatemala, Nicaragua and Peru is from 2013, Dominican Rep, Honduras and Mexico is from 2012, Ecuador is from 2011, and Colombia is from 2010. The LAC average includes Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama and Peru.
Source: OECD (2016c) and World Bank (2016a), *ASPIRE: The Atlas of Social Protection Indicators of Resilience and Equity* (database), *http://datatopics.worldbank.org/aspire/*.

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To improve the effectiveness of these programmes and increase spending on ALMPs, and especially training, is a challenge. Multiple programmes and a lack of appropriate data currently reduce the scope for systematic evaluations and limit the capacity for improving spending efficiency (OECD/CAF/ECLAC, 2016). Encouraging private firms to provide better and more frequent on-the-job training, as well as training prospective employees, could contribute to improving the skills of the labour force at a low cost.

Strengthening education and skills

Access to education in Panama has gradually expanded over the past decades for all levels of education. Panamanians are becoming more educated, with many more people reaching higher levels of education than in the past. Likewise, the average number of years of education reached 10.5 in 2014, up from 9.6 in 2004. Between 1980 and 2014, the share of the population having completed secondary education has increased to 52% from 20% (Figure 3.28, Panel A). The corresponding increase in the share of the population completing tertiary education to 15%, from 5%, is remarkable. Still, pre-primary, secondary and tertiary education coverage is below that of benchmark economies and OECD countries. The increasing levels of incomplete secondary and incomplete tertiary education also indicate that completion rates overall in Panama are still low.

There are great territorial disparities in terms of educational attainment. In some provinces and the Comarcas, more than 90% of the population have only completed primary education or less. Conversely, more than 55% of the population in Ciudad de Panamá have completed secondary education, while less than 10% have done so in the Comarcas (Figure 3.28, Panel B).

Figure 3.28. **Educational attainment has improved with time**

Panel A. Population composition by maximum level of education achieved
Percentage aged 25 and over

Panel B. Population composition by maximum level of education achieved by region
Percentage aged 25 and over
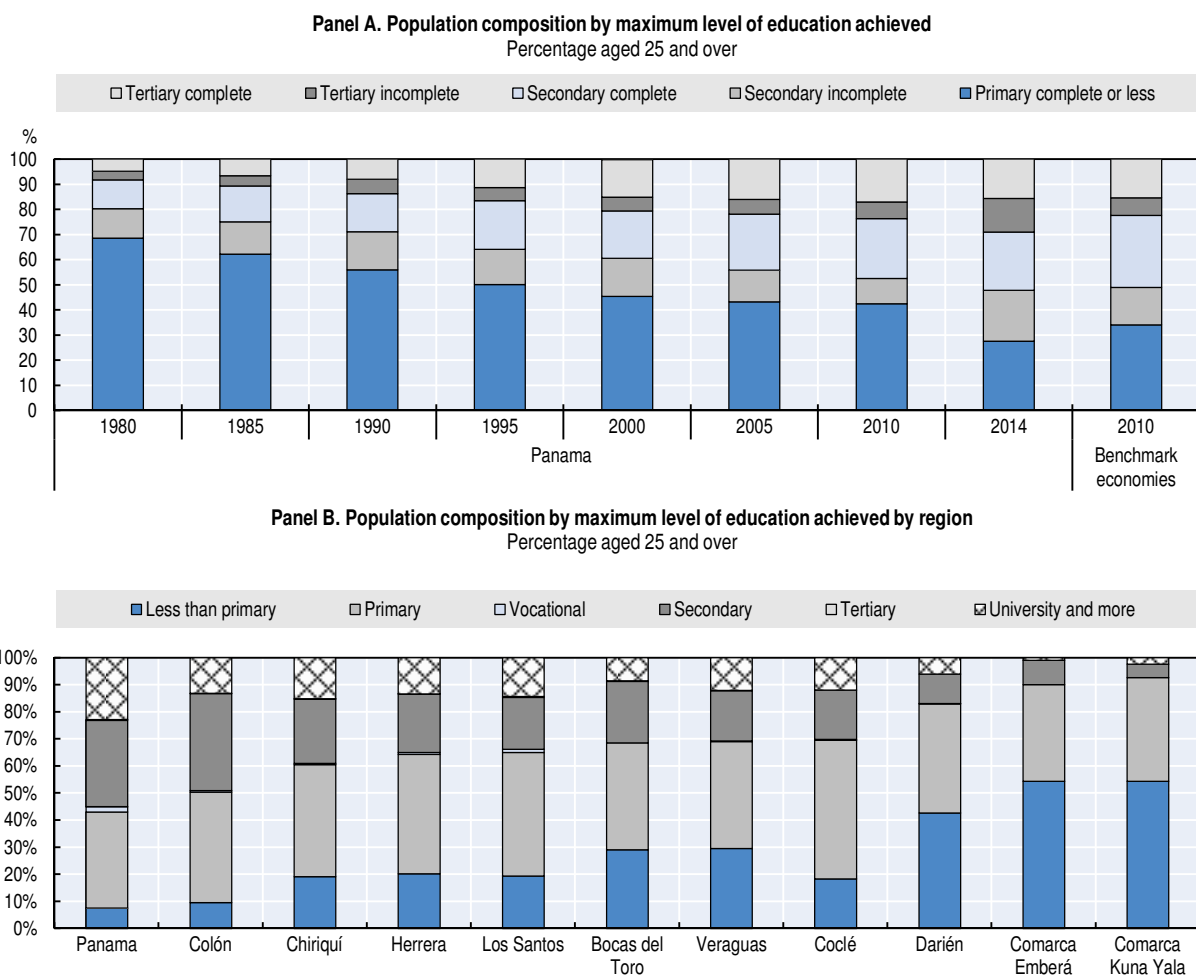
Source: Barro and Lee (2013); OECD and World Bank tabulations of SEDLAC (CEDLAS and the World Bank); and INEC (2013).

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Panama's education system is based on the Organic Law 47 of 1946 on Education, which covers a first level of general basic education (from pre-primary, primary and lower secondary), a second level of lower and higher secondary education and a tertiary level. The Ministry of Education is in charge of establishing, organising and executing all activities related to education activities. The management of the education sector has been increasingly decentralised since 1995, transferring decision making, co-ordination and control to regions and schools. The regional education directorates (i.e. *Direcciones regionales de educación*) are in charge of implementing, supervising and co-ordinating the actions at the regional level.

Enrolment rates are still low

Despite improvements in the past decade to increase coverage in education, enrolment rates remain below OECD and benchmark economies across all education levels (Figure 3.29, Panel A). Similar to Latin American economies, Panama exhibits low tertiary education enrolment rates (40% of gross enrolment rate), while in the OECD this ratio is higher than 70%. Furthermore, considerable efforts should be achieved at earlier stages of education, in particular at secondary levels when compared to both benchmark and OECD economies (Figure 3.29, Panel A).

Figure 3.29. **Enrolment rates are low and enhance inequalities**

Panel A. Enrolment rates by level of education
2014

Panel B. Enrolment rates by quintiles
2014
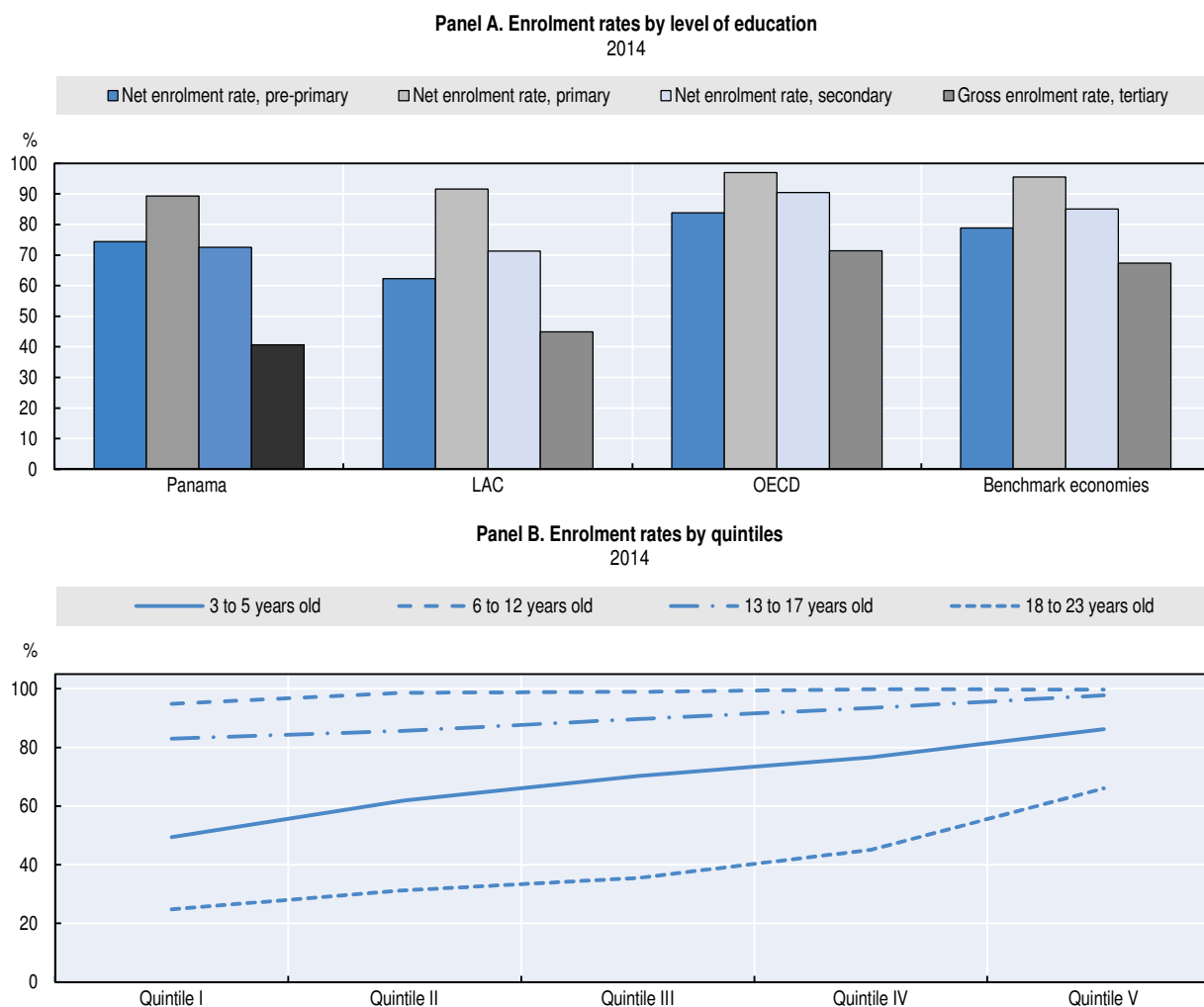
Note: Gross enrolment rates in tertiary education from Peru are from 2010.
Source: UNESCO (2016) and CEDLAS and the World Bank (2016).

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Enrolment is higher among students living in cities and in richer families than those who live in rural areas or are from poor families for all levels of education (Figure 3.29, Panel B; Figure 3.30). As in many other aspects of Panama's development, finding solutions to territorial differences is key to constructing a more equitable education system.

Figure 3.30. **Education access is unequal across regions (percentage)**
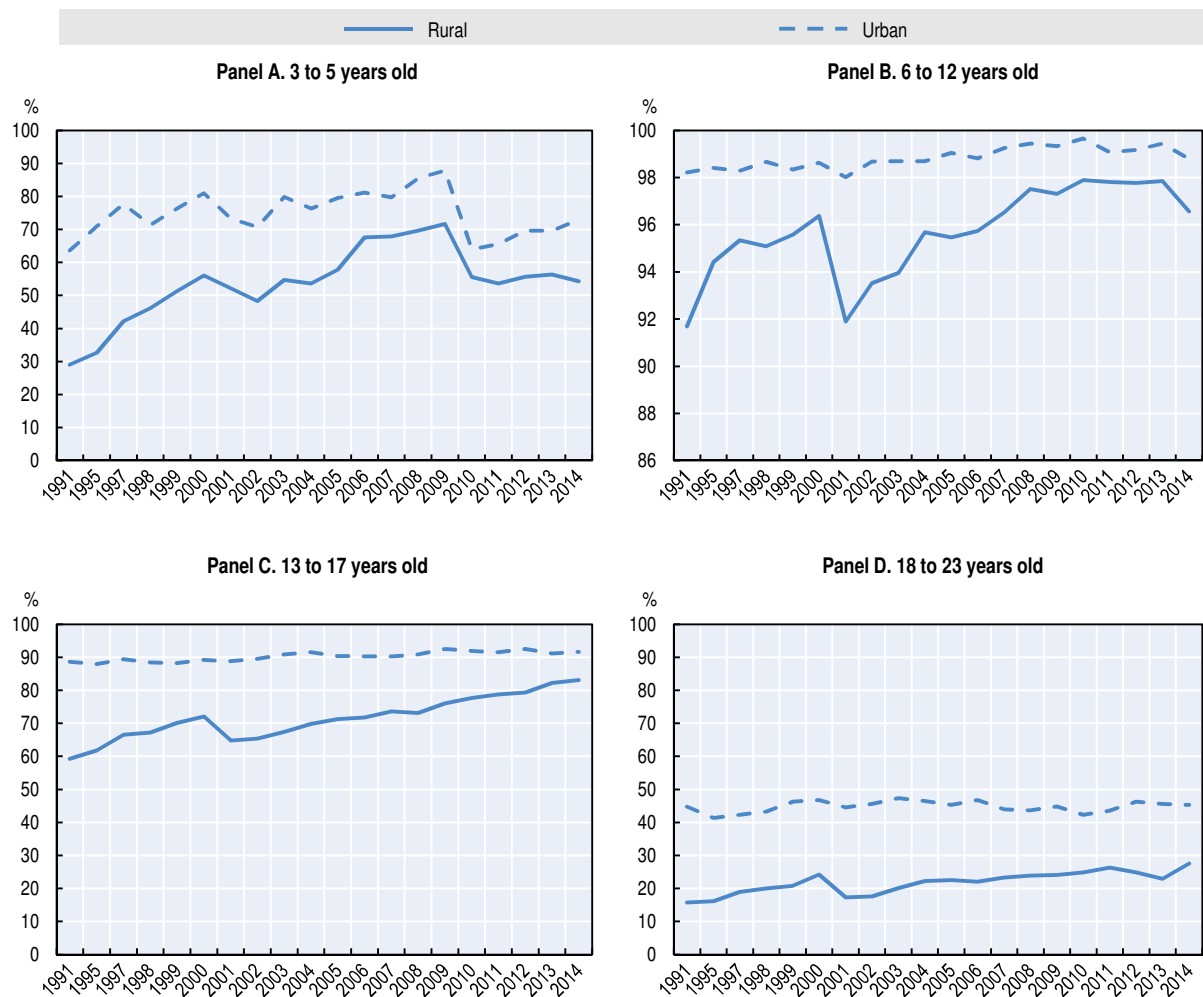
Note: Rural areas include Comarcas.
Source: CEDLAS and the World Bank (2016).

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Pre-primary education enrolment is low preventing advancement towards equal education opportunities for all children in Panama, in particular for the poorest households. Less than half of the children in the poorest households are enrolled in pre-primary while 86% of their peers in the richest households are enrolled (Figure 3.29, Panel B). Moreover, 96% of the Panamanian children from households in the highest quintile of the income distribution attend secondary school, while only 56% of those from the lowest quintile do so (OECD/CAF/ECLAC, 2014).

Given the disparities in the education system, pre-primary education becomes a key equity building block. This is particularly relevant, as pre-primary education has a long-term impact on student performance: secondary-school performance improves by the equivalent of almost a full school year among those who had pre-primary education (OECD/CAF/ECLAC, 2014). Students from poor households benefit the most since starting education "early" allows them to "catch up", at least partly, with their peers.

Primary education coverage has expanded, but there is still work to be done at the *Comarcas*. One of the achievements of the last decade has been the expansion of primary education and improving primary completion. By 2014, the share of youth with a primary school degree reached 96% of the population (CEDLAS and the World Bank, 2016), with similar distribution among male and female. Across socio-economic groups, the difference in the completion shares in primary education between the first income quintile (88%) and the fifth quintile (99%) has been reduced in recent years, attesting to the increasing equity of access to primary education. Between rural and urban areas, if there is still a difference in completion rates (90% vs 98%), the gap has also lessened since 2008 (from 10.9% to nearly 8.0%), but remains substantial (Figure 3.30). Behind this gap, the provision of basic education at the *Comarca* level remains a challenge, and keeping students within the education system in the *Comarcas* is a key issue for equity. The difference in years of schooling between *Comarcas* (4.2 years in 2010) and the national average (10.5 years) is revealing (UNICEF, 2010). The difference in repetition rates among the *Comarcas* (14.3%) and the national average (5.5%), with the subsequent increase in dropping out, reflects the challenges that Panamanian authorities face to reduce regional disparities in completion at primary level.

Students leave the education system too early

Few students graduate from secondary education, preventing strong skill acquisition. Dropping out of school before completing secondary education truncates students' path towards higher education, exacerbates inequalities and narrows the skill base of the labour force. Although enrolment rates have improved, many young Panamanians find themselves out of the school system before completing a degree. This is shown by the country's high secondary drop-out rates and the low completion rates in tertiary education (Figure 3.31). More than 180 000 young Panamanians (aged 15 to 29), or 20% of the youth population of the country, have not completed secondary education and are not enrolled in school (OECD/CAF/ECLAC, 2016).

Lack of secondary education infrastructure challenges further education advances. To counter the high drop-out levels in secondary education, particularly in disadvantaged households, Panama's government has sponsored support programmes for enrolled students. However, programmes for disadvantaged students have not been enough to improve the low completion rates in secondary schooling. Some evidence suggests that insufficient infrastructure to both lower- and upper-secondary schools impairs young Panamanians' path towards 12 years of education (while only lower-secondary education is compulsory, the government is committed to providing free and quality education to upper-secondary level). The current infrastructure plan has more than doubled the number of classrooms for secondary education since 2004, but still they are half that of primary education.

Figure 3.31. **Enrolment rate by single year of age**
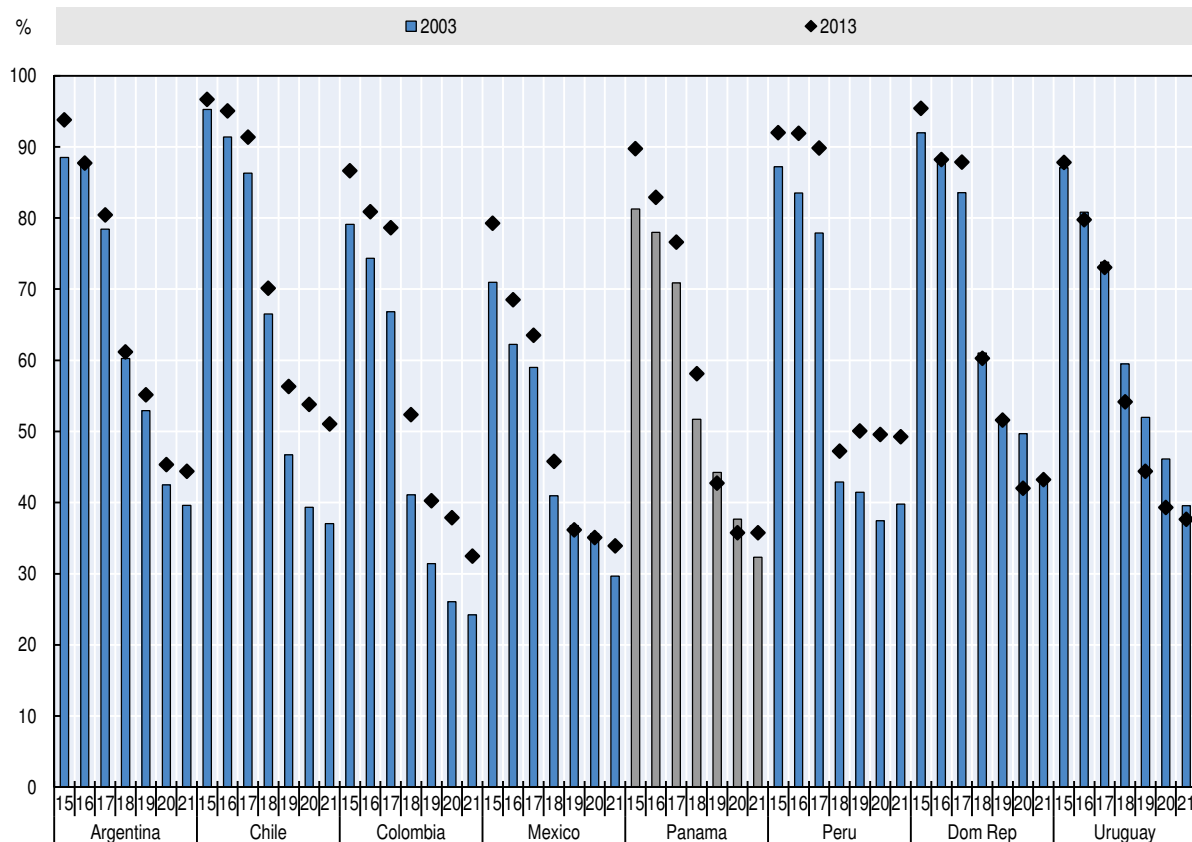
Source: Berniell et al. (2016).

The education system has made progress in reaching disadvantaged children, but could be improved. Panama has invested human and financial resources to address some of the inequalities in access, completion and performance by socio-economic background. The *Beca Universal* programme, established in 2010, is one of the main initiatives in this area. The programme provides financial support to all students registered at primary and secondary levels, both in public and private education centres (provided they are certified by the Ministry of Education), according to their achievements. Students in private schools can benefit from the grant if the yearly total of the tuition fee and monthly payments does not exceed a threshold (1 000 balboas until 2017 and 2 000 balboas from 2018). Since its inception, the programme's scale has increased significantly: from an initial coverage of 70% of students in the poorest income quintile to 100% of children in the same quintile covered in 2014 (World Bank, 2016b). Although no impact evaluation has been undertaken, the programme has aimed at addressing high-school drop-out in public schools, particularly in poor areas.

Few tertiary education graduates confront Panama's capacity to innovate. Higher education in Panama includes five major universities which account for nearly 90 000 students whereas private education institutions include an extra 50 000 students. Enrolment rates have been on the rise, reflecting increasing demand for skilled labour in the country. Private institutions have played a role in channelling part of this demand, as the whole system is unprepared for providing tertiary education for the population that potentially could have access estimated at 360 000 (ICEF, 2016).

The National Council for University Evaluation and Accreditation (CONEAUPA) undertook in 2010 a new evaluation process for meeting quality standards and emphasising skills training and curriculum unification. These efforts, together with the government's expanded support to INADEH, the national vocational training institute, have resulted in an increasing enrolment of students in a wider number of areas. Some fields, however, remain under-enrolled, including engineering, logistics and health sciences. This uneven distribution also highlights the challenges Panama is facing to create a critical mass for innovation and development.

Panama needs to develop its non-university tertiary education. Very few institutions offer tertiary technical education degrees. As a result less than 10% of tertiary education graduates, only 2 000 students a year, are instructed in technical careers which are in high demand in the country. The government of Panama is building the *Instituto Técnico Superior del Este.* (ITSE) that will address this problem for students living in Ciudad de Panamá, but further action needs to be taken at national level.

Learning outcomes are poor

Panama faces great challenges to improve learning outcomes in both primary and secondary schooling, which currently impede students from advancing to higher stages of education. The quality of Panama's education system remains poor at all levels, as evidenced by the available national and international assessments (see Box 3.3. for Panama's participation in the OECD'S Programme for International Student Assessment [PISA] 2018). The increase in access has not been accompanied by parallel improvements in quality. As a result, more than 90% of sixth-grade students perform in the lowest two levels of UNESCO's Third Regional Comparative and Explanatory Study (TERCE) mathematics proficiency test and more than 75% do so in the reading test. TERCE scale ranks students across four proficiency levels. Likewise, 15-year old Panamanians perform poorly in international evaluations, including PISA 2009 (the latest PISA test in which Panama has participated), where proficiency in reading, mathematics and science are, as in the case of most Latin American countries, lower than OECD member countries.[4]

Box 3.3. **Panama in the Programme for International Student Assessment (PISA)**

Panama has rejoined PISA for the 2018 cycle after successfully taking part in PISA 2009. PISA is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. In 2015 over half a million students, representing 28 million 15-year-olds in 72 countries and economies, took the internationally agreed two-hour test. Students were assessed in science, mathematics, reading, collaborative problem solving and financial literacy.

In addition, Panama will be also be taking part in the out-of-school component of the OECD's PISA for Development project (PISA-D). PISA-D will enable Panama to assess the out-of-school 15-year-olds to complement the information PISA gives about the in-school population, and build capacity for managing and using the results of large-scale student learning assessment to support policy dialogue and decision making. The field trial of both studies is being implemented during 2018 and the results will be available at the end of 2019.

The overall quality of the education system is low, particularly at secondary level. Panamanian students, on average, performed 122 points lower than the OECD average in reading in 2009, and only one out of three students performed above the first level of

proficiency (Figure 3.32). More than 70% of young Panamanians enrolled in high school do not acquire basic-level proficiency in reading and mathematics, according to PISA results (OECD, 2010a). Additionally, less than 1% of Panamanian students perform among the highest levels of proficiency in mathematics, reading or science (OECD, 2010b). This constitutes an obstacle to further development of more specific skills and, at the same time, the small portion of top performers may hamper innovation and entrepreneurship. This presents a major challenge for countries that are transitioning into knowledge-based economies where citizens need to innovate, adapt and leverage advanced human capital.

Figure 3.32. **Performance in PISA 2009 reading test**
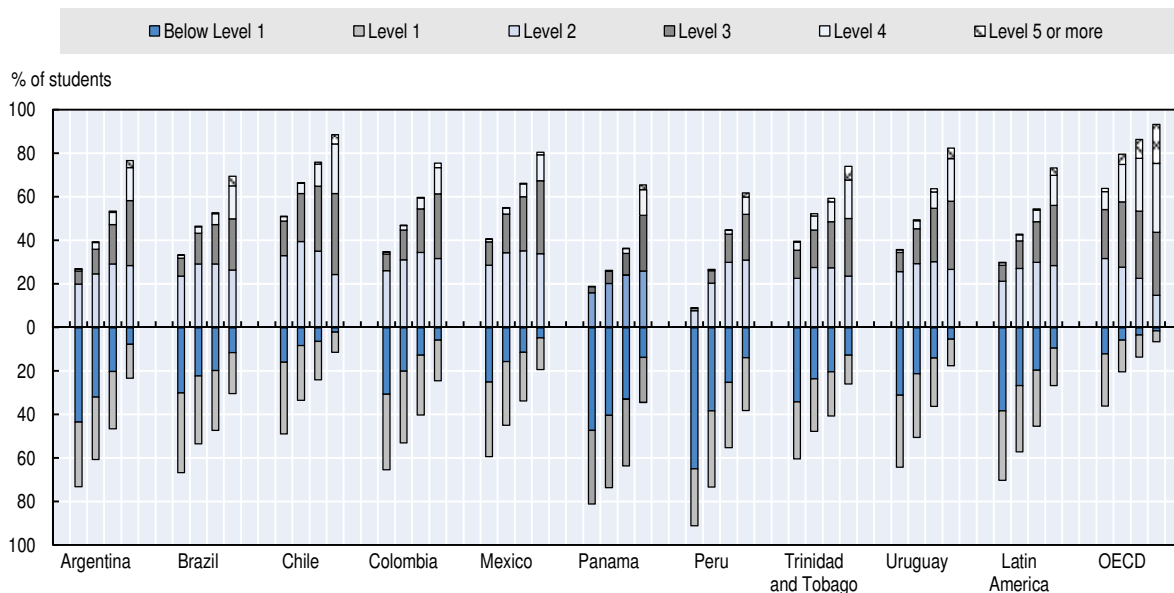
Note: The distribution by performance levels in Latin America and OECD refers to the simple mean of attainment level weighted at the national level for participating countries in PISA 2009.
Source: Based on data from PISA 2009.

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Student performance is strongly linked to socio-economic background

Low performance in Panama is associated with students' socio-economic background, their school history and the education practices within the household. UNESCO TERCE test results in primary education show that about 50% of Panamanian students reaching third grade do not have the skills to read and understand a text (UNESCO, 2015a). Between 30% and 70% of students in third to sixth grade do not perform well in tests in mathematics, science and Spanish. This is worrisome, as these basic abilities undermine children's capacity to learn other subjects in the future. Time for study in Panama is relatively high in comparison with other countries in the region. While 69% of Latin American parents surveyed said their children spend time studying daily, in Panama 82% of households reported daily studying activities (UNESCO, 2015b). Other procedures, related to teacher preparation, schoolroom practices and material conditions in schools, also seem to be important determinants of educational outcomes in Panama (UNESCO, 2015a).

Ensuring that a large base of the population acquires core literacy and numeracy skills is fundamental for the diffusion of knowledge and innovation that sustains economic growth (Hanushek and Woessmann, 2007). An increase of one standard deviation in cognitive skills

(measured using PISA-type exams) is associated with approximately a 2% increase in annual growth of per capita GDP (Hanushek and Woessmann, 2012). The inability of individuals from poor socio-economic backgrounds to access quality education and develop skills to participate in productive activities hinders growth and perpetuates income inequality (Causa and Johansson, 2010).

The socio-economic background of students and the school has a significant influence on educational outcomes in Panama. In OECD countries, socio-economic background explains less than 14% of the total variation in students' PISA results; in Panama it explains a higher proportion (18%) of the variation. The percentage of variance of reading performance in Panama that is explained by various aspects of family background ranks fourth among participating countries in the 2009 PISA round. Moreover, the distribution of educational outcomes among groups is also uneven. Indeed, the gap in performance between urban and rural schools in Panama is significantly large (more than 80 points), which is equivalent to almost two years of education (OECD, 2010b).

Like the large differences in performance among different groups, the distribution of educational resources appears to be linked to the socio-economic background of students. Generally, educational resources need to be allocated for the purpose of reducing inequalities, by targeting students from poorer socio-economic backgrounds. Some of the best-performing OECD countries in the PISA tests such as Finland, Germany and Korea tend to distribute educational resources more equitably. This is not the case in Panama. The correlation between the school mean socio-economic background and the index of educational resources (including the share of certified teachers, books, instructional material and laboratories) in Panama (0.68 in 2009) is considerably higher than in OECD economies (0.13 in 2009). Improving the distribution of educational resources is an important challenge for improving both performance and equity in Panama's educational systems.

Teacher training is key to boosting students' performance

Teachers are an essential resource to improve Panama's education quality. Studies show that teachers' knowledge of the subject they teach and the quality of the instruction time are important determinants of student performance, even stronger than teachers' level of education, experience, qualifications, work status or salaries (Avendaño et al., 2016; Hanushek, Piopiunik and Wiederhold, 2014; Metzler and Woessmann, 2012; Hanushek and Rivkin, 2006; Palardy and Rumberger, 2008; Allison-Jones and Hirt, 2004). Panama has made a significant effort to strengthen training, management and professional development of teachers and principals. In terms of assessment, teachers are evaluated each school year, including inspectors' evaluations, principals' evaluation and self-evaluations for training purposes.

Teacher recruitment has improved in Panama in recent years. At primary and secondary level, the Ministry of Education regulates the teacher hiring process. At tertiary level, universities in Panama have discretionary power to decide on recruitment, career structure, compensation and leadership of the teaching body. Introducing a solid recruiting process for teachers is an essential component for attracting talent to the profession and improving educational outcomes.

Panama has to make the teaching profession more attractive by proposing higher compensation. As in other countries in the region such as Brazil, Nicaragua and Peru, average teacher salaries tend to be lower, after controlling for dedication time, than for other professions (Bruns and Luque, 2014; Mizala and Nopo, 2012). Teachers' wage evolution in Panama is relatively flat compared to other fields.

Technical education is underdeveloped

Technical and vocational education and training (TVET) in Panama remains underutilised. TVET in Panama has a double role, serving on the one hand to upgrade the skills of workers, and on the other promoting equity by providing dropouts and poorly educated workers with better employability prospects. Vocationally oriented upper-secondary training often leads to better employment prospects than academically oriented training for students who do not pursue further studies (Cedefop, 2014). Still, 14% of secondary students in Panama are enrolled in TVET programmes (Figure 3.33), which is similar to the LAC regional average (15%) but lower than in OECD economies (26%) (OECD/CAF/ECLAC, 2016). Panama offers a wide variety of training programmes through the national vocational training institute, INADEH. This institute is in charge of executing the strategy and programmes on training, learning-at-work programmes and business training for both public and private sectors. It has full autonomy in terms of financial resources, and its spending on training programmes is above the average (0.17% of GDP in 2014 compared to 0.12% and 0.15% of GDP for LAC and OECD, respectively). However, quality is heterogeneous: quality courses that are highly respected and generate positive returns for students and employers coexist with low quality ones. Although TVET represents an important source of innovation and experimentation in the design of technical education that benefits the sector as a whole, there are too few mid- and high-level technical and professional programmes to drive a change in quality.

Figure 3.33. **Enrolment in technical vocational education and training (percentage of secondary students)**
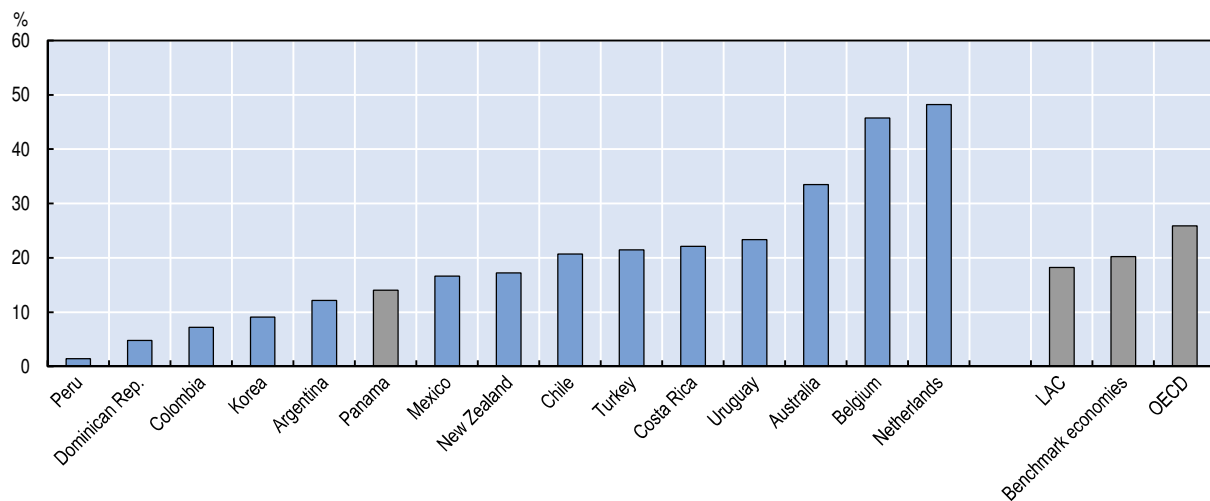
Source: UNESCO (2016), *Institute for Statistics, http://www.uis.unesco.org/Pages/default.aspx.*

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Matching qualifications to labour market needs

Education in Panama is disassociated from the skills demanded by the labour market. The current mismatch, between the provision of tertiary programmes and the current demand for skills driven by infrastructure projects, highlights the need for improving access to and quality of post-secondary education. The Ministry of Labour has recently worked on anticipating skills demands, but these have not been matched. In 2016, 36% of formal firms in Panama reported not being able to find the workforce with the skills they need (ManPower Group, 2016) (Figure 3.34). Both the secondary and the tertiary education

systems are heavily biased towards social sciences and humanities, producing few science, technology, engineering and mathematics (STEM) graduates. For example, while the Ministry of Labour has identified a lack of human capital with technical expertise in logistics, tourism and construction, 65% of tertiary education students are enrolled in humanities, health or business degrees. Current skills mismatches could be aggravated in a context where technological change, globalisation and trade are responsible for job destruction and new types of job creation. The capacity of countries to improve the skills of their populations and adjust to these changes will partially determine labour markets' outcomes, economic growth, productivity and competitiveness (OECD/CAF/ECLAC, 2015). Likewise, Panama has several restrictions to the free flow of migrant labour that affect skills-based development and economic diversification in the country (Hausmann, Espinoza and Santos, 2016).

Figure 3.34. **Formal firms cannot find the skills they need**

Panel A. Percentage of firms identifying difficulty in filling jobs
2016

Panel B. Percentage of formal firms identifying difficulty in filling jobs by sector
2010
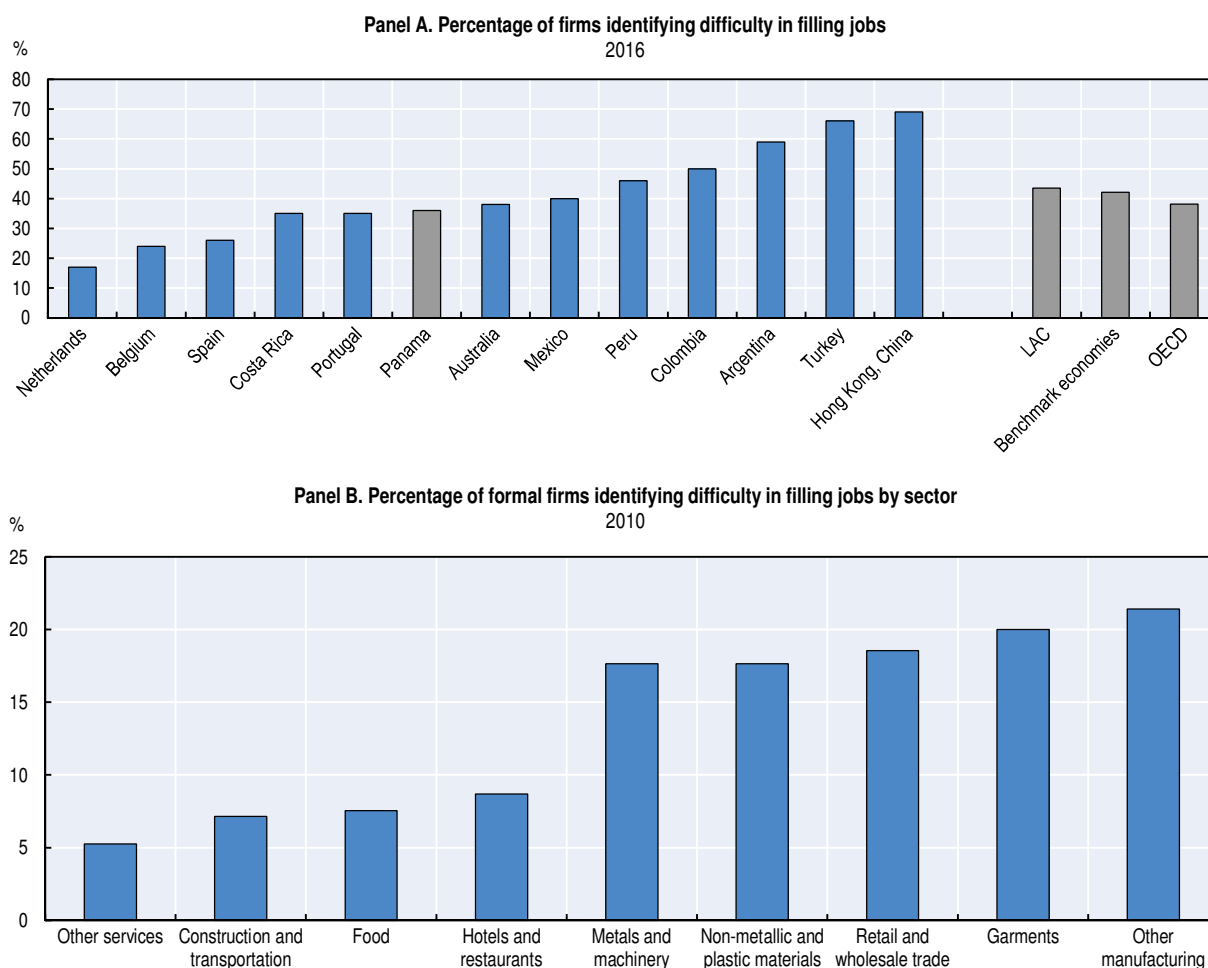
Notes: OECD average includes Australia, Austria, Belgium, Canada, Czech Republic, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States; LAC average includes Argentina, Brazil, Colombia, Costa Rica, Guatemala, Mexico, Panama and Peru.

Source: ManPower Group (2016) and World Bank (2010).

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In Panama training programmes play an important role in providing basic technical skills to low-skilled workers, and especially to high-school dropouts. Although the government's vocational training institute, INADEH, covers more than 70 000 students per year, its capacity is limited given the large number of low-skilled high school dropouts in Panama.

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 labour market needs (OECD, 2014). The existing student bias towards the humanities might lead to career paths with low demand. A lack of information about labour market prospects might be one reason behind these decisions, which could be addressed by better career guidance. Providing reliable and free information on line about employment options in the country, wage levels in different industries, and labour market status by degree, university could help young students better understand the relative value of different qualifications in the labour market and encourage students to enrol in those careers and institutions that offer the best employment and earnings prospects. This would also create greater competition among higher education institutions, raising overall quality standards.

There is little information available on the skills that firms demand and supply in the population other than by education. Although there is a consensus that Panama should provide more and better-prepared talent to the labour market, assessment is needed to determine the real needs. Firms report an inadequately educated workforce as the third biggest constraint for business development (19% of the total), after corruption and practices of the informal sector (World Bank, 2010). Estimates of the competencies among production workers suggest that only 35% of them are skilled. However, little information is available at the sector and geographical level to better understand the skills needs. Some information is available for specific sectors. In the logistics sector, there is a need for 35 000 technicians, 28 000 new skilled workers in construction and 4 000 workers in services (Centro Nacional de Competitividad, 2014). A more detailed information system is required to better understand the dynamics of skills demand and supply.

Public spending on education is low

Overall investment in education is low, especially compared to countries with similar income per capita. Government expenditure on education in Panama was 3.6% of GDP in 2015, below the regional average (Figure 3.35). Although spending has increased in absolute terms during the last decade it decreased as a yearly percentage of GDP.

The distribution of expenditure among the three levels of education also contrasts with the OECD trend. Whereas Panama had a similar expenditure per student as share of GDP per capita in primary (6.2%) and secondary (9.2%) education, tertiary education – mainly university – expenditure per student is much higher (18.8%). On the other hand, OECD countries allocate a similar expenditure per student across the three education levels (between 21% and 24% as share of GDP per capita) (Figure 3.36). The distribution of education spending in Panama has changed slightly in recent years, moving towards more similar shares allocated to pre-primary, primary, secondary and tertiary levels; yet, the significant need for Panama to improve access to and quality of secondary education, as well as the low levels of tertiary enrolment, suggests that this allocation could be reconsidered.

Figure 3.35. **Investment in education lags behind regional and OECD levels**

Education spending as percentage of GDP
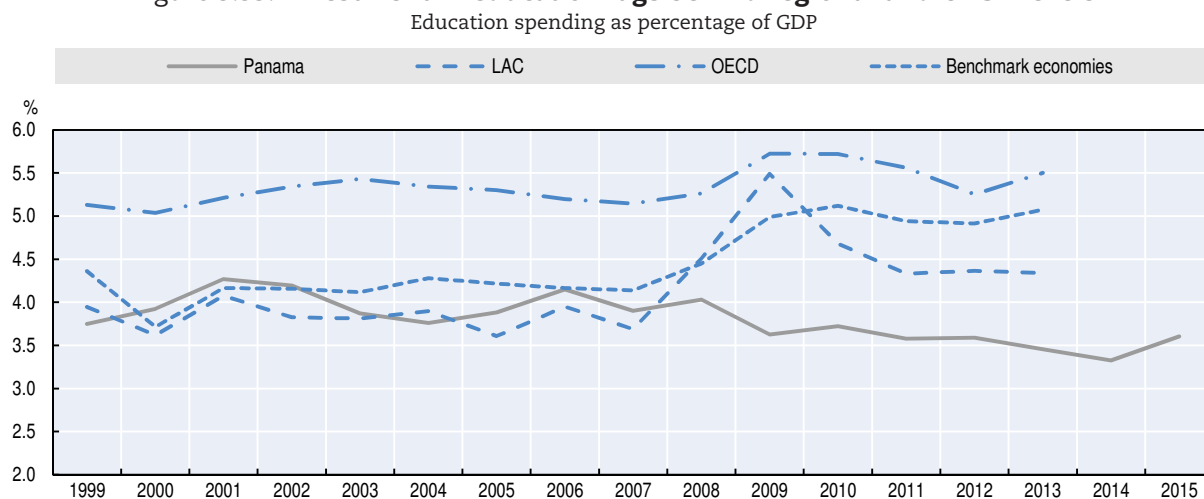
Source: OECD calculations based on INEC (2016) and UNESCO (2016), UNESCO Institute for Statistics database, *http://www.uis.unesco.org/Pages/default.aspx.*

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Figure 3.36. **Education spending in Panama**

Spending per student as a percentage of GDP per capita, 2013
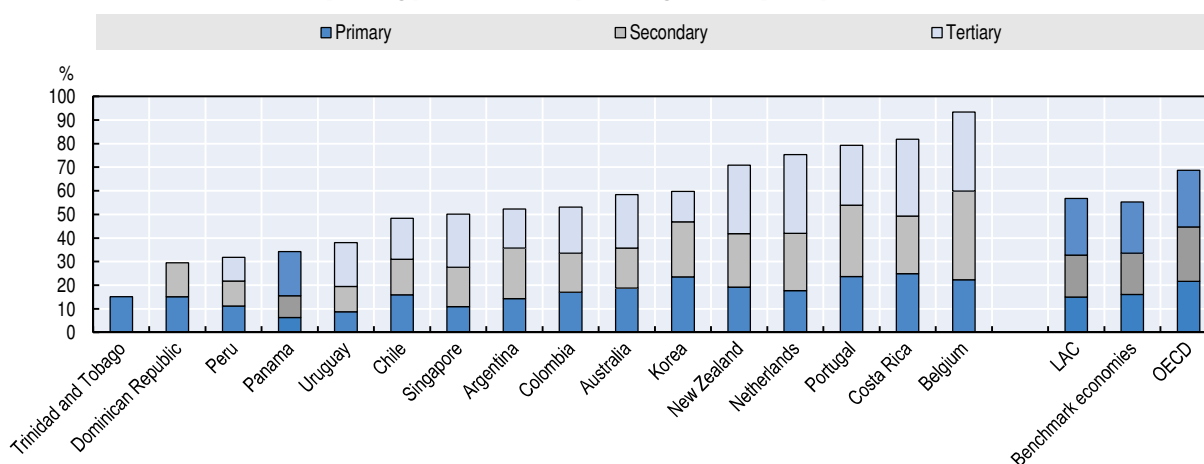
Source: OECD calculations based on UNESCO (2016), UNESCO Institute for Statistics database, *http://www.uis.unesco.org/Pages/default.aspx.*

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Conclusions

Panama has made great social and economic progress in the past decade. Absolute poverty levels have fallen dramatically but income inequality remains high. The gaps between different socio-economic groups and between territories are still large, and too many Panamanians are at risk of falling back into poverty if they are not protected adequately. In this context, redistribution, education and skills as well as formal jobs are key drivers to improve the well-being of all. The analysis presented in this chapter shows old and new challenges that are holding the country back on its path towards sustainable and inclusive development.

Access to public infrastructure and services differs substantially across regions, contributing to large discrepancies in the well-being of the population that are a constraint for inclusive development. A great divergence has been observed between urban and rural areas in various dimensions such as income, education and skills, housing, sanitation and health as well as between those areas with high concentrations of indigenous populations and the rest of the country. However, spatial planning is not only a challenge for rural or indigenous areas. The constant and high rate of population growth created slums in urban areas but also more generally challenged the extension of public services.

The efforts to expand pre-primary and secondary education access have not been as successful as those to expand primary education. Large gaps remain when compared to LAC and OECD standards, in particular for those of lower socio-economic backgrounds. The poor quality, relevance and completion of education are also persistent constraints for development as are the low levels of financial resources devoted to pre-primary, primary and secondary education. Public investment in education in Panama is well below the OECD average, has been declining as a share of GDP, and in particular has been insufficiently directed to primary and secondary education.

Key policy objectives arise to improve quality of education for all Panamanians. Reducing overall inequalities by investing more in infrastructure and teacher training across territories should be a priority. Panama also needs to improve the quality of teachers. It is important to design a real policy in terms of teacher hiring, career structure, compensation and incentives for mobility. The alignment of Panama's education and skills system seems to be out of synchronisation with the current demands of the economy and the rapid changes brought by technology in some sectors, including services. The lack of qualified workers in certain sectors, including those related to infrastructure development and specialised services, is a major bottleneck for Panama's productive strategy.

Panama stands out as an economy with a low unemployment rate but high informality. Informal work accounts for a large share of employment, job quality is poor and there are large inequalities in the workforce, especially in terms of earnings. Higher informality rates among wage earners do not correlate with higher formalisation costs in Panama. This is a distinctive feature that differentiates Panama from the rest of the region, and one that makes poor controls and enforcement much more relevant. Strong policies are needed to increase formalisation and improve working conditions, in particular for disadvantaged youth. To reduce informality, a combination of policies should be adopted such as programmes facilitating companies' and workers' registration in the formal sector; stricter and more frequent workplace controls; higher fines for those companies that do not register workers; and better quality training programmes in mid- and high-level trade; and technical, professional and management skills to improve labour productivity.

Notes

1. The education dimension contributes to 23.9% of the total MPI percentage, employment follows with 20.9%, environment, neighbourhood and sanitation 20.7%, housing, basic services and internet access 19.8% and, finally, health with 14.7%.

2. The growth-inequality decomposition introduced by Datt and Ravallion (1992) quantifies the relative contributions of economic growth and redistribution to changes in poverty. With this methodology, the change in a poverty measure (e.g. headcount index, poverty gap, or poverty gap squared) is decomposed into three components: growth, redistribution and the residual.

3. Panamá Oeste is the newest province in Panama. It was created from the five districts of Panamá Province west of the Panama Canal on 1 January 2014.

4. Panama's participation in PISA tests is only comparable for the year 2009. The country is currently part of the PISA for Development Programme. First results for the country should be available in 2018.

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Chapter 4

Financing for Panama's development agenda

This chapter outlines the financing flows available for Panama over recent years to support development activities by the public and private sectors. The focus throughout is on the resources that are or could be available for development activities, rather than how those financing flows have been used. The chapter examines public finances and the scope to increase the resources available for the public sector, focusing on the potential to improve the performance of Panama's tax system. The chapter also assesses the sustainability of public debt and potential liabilities. It then examines the availability of resources that could support development activity by private sector firms, through foreign direct investment and financing from the domestic financial system. Finally, it notes the evolving role of remittance flows to support consumption possibilities in Panama.

Sufficient flows of finance are needed to enable both the public and private sectors to drive national development. This chapter assesses the availability of financing flows that could support investments and other activities by both the public and private sectors. Financing for development activities can come from a number of different sources, both domestic and from abroad. Given their nature, public and private sources of financing flows can have a significant degree of substitutability. For example, credit from the banking sector for the domestic private sector can also be absorbed by the public sector, and foreign direct investment (FDI) can be used to fund investments in public infrastructure. This chapter describes the financing flows for development activities that have been available to Panama in recent years, comparing these flows with the benchmark economies. It highlights areas where flows may be expanded or more effectively mobilised, in support of expanded development activities. The chapter also analyses the sustainability of different dimensions, including Panama's public debt and its banking system.

Development financing flows are those that are likely to be sustained into the longer term. The largest developmental impacts come from financing flows that are linked with real transactions and that are likely to be maintained for a number of years. These include the development or purchase of physical capital stock or those that are associated with ongoing and recurrent activities such as remittances or through all forms of taxation. These exclude financing flows that tend to be volatile in the short term, such as portfolio flows or investments in existing equities.

Cross-country work seeks to highlight which flows and policies can contribute most to supporting financing for development. In support of implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), the Addis Ababa Action Agenda on Financing for Development describes the importance of a range of domestic and external sources of financing flows to enable development activities by both the public and private sectors (UNGA, 2015). Other international organisations have also sought to identify the policies that can improve their availability for emerging economies (World Bank, 2015). Some flows are especially important to enable development activities (see Box 4.1). A policy agenda can assess how these flows and their effects can be maximised, for example by improving tax administration or by strengthening the linkages between FDI and domestic firms.

This chapter first presents an overview of Panama's financial flows available for development. Second, it focuses on public resources, and in particular it highlights public revenues and their structure in Panama compared to benchmark economies as well as the sustainability of the public debt. Third, it analyses private financing and shows that the private sector has become reliant on FDI, as the extended banking system has less scope to provide additional financing. It also shows the evolution of remittances in Panama. Finally, the conclusion presents the chapter's main messages.

Box 4.1. **Patterns of financing flows for development activities**

Effective national development plans seek to mobilise the full range of resources available so the public and private sectors can invest in and transform the structure of the economy and the well-being of the population. Development plans need estimates of the overall financial resources that the country can mobilise to realise its ambitions, and how the country can make the most of these resources. Such an assessment informs the prioritisation of the development agenda, and is necessary to ensure that the development programme is sustainable.

It also focuses on potential resources: what resources could be available to support development investments and operations, rather than what and how resources are applied in practice. Similarly, each flow is defined in terms of the size of the flow, rather than the stock of resources already provided.

Financing for development supports the investment and operations of both private and public actors. The distinction between public and private flows can be somewhat artificial, given that countries are increasingly blending the two. For example, countries may be using private FDI to fund public infrastructure projects through the structure of public-private partnerships. The overall assessment must account for such blending. The following eight points describe broader trends in resources that are also illustrated in Figure 4.1.

Resources for public sector development activities

Countries' financing for development is generally dominated by their public sector's revenue mobilisation capacities. Across most countries, including the benchmark economies, the public sector controls the most significant volumes of finance that can be allocated towards development activities. The proportion of fiscal revenues to gross domestic product (GDP) remains low in emerging economies compared to OECD economies. However, fiscal revenues remain large compared to private flows, highlighting the need to increase private flows for development.

1. The mobilisation of domestic resources through taxes and non-tax revenues. The effectiveness, efficiency and equity of the tax system are essential to successful domestic resource mobilisation that balances sustainable growth and equality. Most of each country's development financing flows are mobilised through the national budget. While taxes and social security contributions in Latin American and Caribbean (LAC) countries were 22.8% of GDP in 2015, in OECD countries, they remained at 34.3% of GDP (OECD/ECLAC/CIAT/IDB, 2017). The scale of development financial flows is determined by the revenues that a country is able to raise from its own resources, such as tax and non-tax revenues (fees, royalties, rents and dividends paid by entities owned by the state).

   In the context of financing for development, 'fiscal space' is defined as taxes and non-tax revenues minus expenditures that are already earmarked and cannot be reallocated for more developmental activities. These expenditures are usually short- to medium-term, and are non-discretionary expenditures that are usually limited to payroll and interest expenditures, given that debt contracts and public sector employment contracts cannot be adjusted in the short term. In addition, many countries, especially those with larger public sectors, may have other components of expenditure that may not be readily reallocated, such as transfers or other social payments, or they may fund developmental services that the private sector may provide elsewhere. However, as the horizon lengthens, all of the budget is effectively discretionary and can be reallocated. This concept of nationally mobilised revenues less non-discretionary expenditure is labelled "fiscal space".

2. Improving the efficiency and effectiveness of spending should expand the budgetary resources available for development. This may include reallocating spending to support national development objectives (by cutting poorly targeted or distortionary subsidies, for example) or to increase expenditure efficiency by improving public procurement and public finance management systems.

3. Deficit financing through public debt. The financing of the public sector is linked to debt sustainability assessments. A prudent approach may be to maintain a sustainable level of public debt linked to the factors that can be used to service that debt (e.g. GDP, government revenues or exports).

Box 4.1. **Patterns of financing flows for development activities** *(cont.)*

4. Official development assistance (ODA), defined broadly to account for all forms of concessional flows. This can be used for certain development investments over which the recipient government exerts only a degree of influence. Across the benchmark economies, ODA flows are a trivial source of financing for development by the public sector. The limited role of ODA financing is evident even when using a relatively broad definition that includes the value of the concessionality of concessional lending. This metric does not record the quality or efficiency with which those financing flows are used. The modest volumes of ODA are likely to have significant benefits for development, given the associated processes intended to ensure that they are allocated to high-impact development activities.

Financing the contribution of private sector investments and operations to national development

5. Domestic private sector investments, which are generally financed through equity and the domestic banking system. These investments by businesses, especially small and medium-sized enterprises (SMEs), may be using credit borrowed by households, so it is important to include credit to all of the private sector. Domestic credit flows make divergent contributions to financing lending, largely linked to the state of the domestic banking system. Institutional, regulatory and other factors can lead financial systems to provide significantly more – or less – private sector credit.

The contribution of the change in stock market capitalisation varies significantly across countries, and is unlikely to reflect contributions to the financing available for the private sector. Changes in stock market capitalisation also reflect changes in the value of the companies that are listed.

6. Foreign direct investment (FDI) can encourage investments in new, innovative or more efficient production modes. In the process FDI can also raise the productivity of domestic actors, depending on the business and regulatory environments. These flows do not include portfolio or offshore bank credits, given that the latter flows tend to be short-term and subject to rapid reversals. Higher income countries are more likely to observe negative net FDI inflows, while lower income countries observe positive net FDI inflows. The negative net inflows of FDI may reflect the maturity of earlier direct investments — for example, as the owners of the investments repatriate the dividends generated by investments. They also reflect a lack of new investment opportunities. In contrast, emerging markets may offer greater scope for new investment opportunities and additional investments in existing activities.

7. Migrants' remittances contribute mainly to domestic consumption and household investment. A key factor for these transfers is their transaction costs. A number of benchmark economies experience negative net remittances, reflecting the importance of immigrants in these countries' labour markets and the salaries that these immigrants repatriate to their native countries. With the exception of the poorest of the benchmark economies, even where net remittances are positive, their size is modest.

8. Philanthropy and international partnerships usually work for the provision of global public goods and strive to address cross-cutting development issues. The values of these flows are likely to be less important for emerging economies, and may be subsumed within ODA.

Sources: Based on UNGA (2015) and authors' analysis of data in World Bank (2017), IMF (2017a), IMF (2016a), IMF (2016b), IMF (2016c), IMF (2016d), IMF (2017b) and World Bank (2016a).

Panama's financial flows rank mid-range compared to benchmark economies and below OECD economies

There is still space to increase the available resources for development in Panama. Financing flows available for development rank mid-range among the comparison countries but remain below OECD benchmark countries (Figure 4.1). On the public side, the available fiscal space (public revenues less committed expenditures) is a little lower than the average across the benchmark countries and well below OECD benchmark economies. The public sector no longer receives net concessional inflows of ODA. For the private sector, net FDI

inflows generate a larger flow of financing than in many other benchmark economies (see Chapter 2 for an analysis on the components of the FDI). On the other hand, remittance flows supporting the private sector have shifted to negative. Both the public and private sectors make modest use of debt financing. For the public sector this reflects efforts to maintain debt sustainability; for the private sector this may reflect the extended nature of the banking system.

Figure 4.1. **Panama's overall financing flows available for development**
Percentage GDP, 2013-15 average
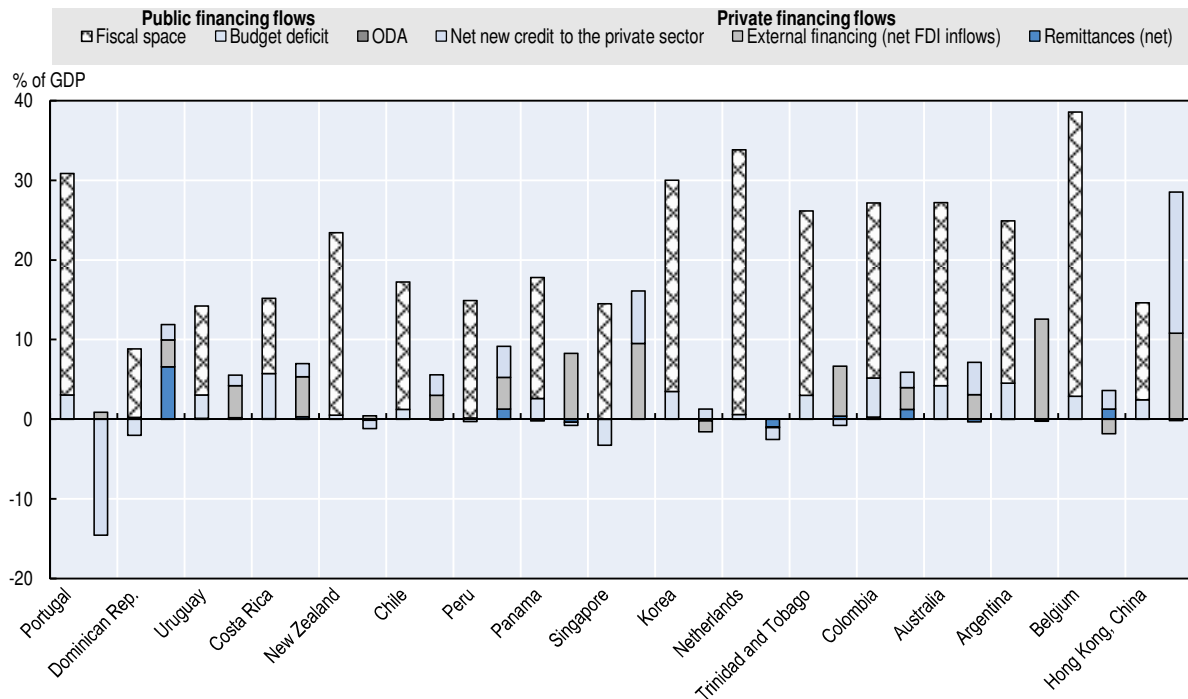
Note: Fiscal space is defined as the public revenues mobilised by public authorities, excluding grants, less non-discretionary expenditure (see Box 4.1). Non-discretionary expenditure is the sum of interest payments and compensation of employees. Budget deficit refers to the general government fiscal deficit. Total public financing flows is the sum of fiscal space plus budget deficit and ODA. Net new credit to the private sector refers to the average of the 2013-14 and 2012-13 annual changes in the domestic lending to private sector (% GDP).
Sources: Authors' calculations from IMF (2017b), IMF (2017c), IMF (2016b), IMF (2016c), OECD/ECLAC/CIAT/IDB (2017), OECD (2016), World Bank (2017) and World Bank (2016a).

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Development patterns are driven in part by the structure and amount of financing available for development, which influence the scope and distribution of public development activities and the form of the private sector's development. For the private sector, Panama's financing trends generate an economic structure characterised by larger private sector investments in some specific sectors. Foreign investments tend to operate in wholesale and retail services, transport and warehousing, as well as in the financial sector. They also operate in the same areas where domestic SMEs may be expected to operate and there is less scope for smaller private entrepreneurs to emerge (see Chapter 2). On the public side, a focus on large physical investments, mainly infrastructure, has been observed in past years (Chapter 2). However, limited resources available to finance public services limit access to such services for significant shares of the population, creating inequalities and exclusion within the well-being gains (see Chapters 1, 2 and 3).

The structure of Panama's development financing flows is sustainable but under certain circumstances some risks could materialise. Although Panama's public debt remains stable in the short term, non-compliance with the Social and Fiscal Responsibility Law or a strong negative shock to growth could jeopardise the stability of Panama's public debt in the medium or long term (MEF, 2017a). At the same time, credit from the domestic financial sector to the private sector is already more extensive than is typical given Panama's level of economic development. The institutional arrangements and in particular the non-existence of a lender of last resort create greater than usual need for the banking sector to maintain liquidity and avoid becoming over-extended (see Chapter 5). Maintaining these flows will require a rebalancing from financing the public sector through deficits to financing through taxes and other revenues. Ensuring that the credit provided by the banking sector supports SMEs even as total credit becomes less readily available may also accelerate development progress.

Public financing flows are broadly consistent with Panama's level of economic development

Overall public financing for development is near expected levels. The largest share of public financing for development comes from fiscal space, reflecting a public revenue base and limited non-discretionary expenditures (see Box 4.1 for the definition of fiscal space employed). Total public revenues of the non-financial public sector, at 20.4% of GDP in 2015 (IMF, 2017a), are lower than would be expected given Panama's level of GDP per capita (at 26.7% of GDP).[1] The comparative weakness of tax revenues is partly offset by relatively strong social security contributions and other non-tax revenues. Debt financing makes a modest and stable contribution. Similarly, ODA inflows are minimal (Figure 4.2). The fiscal framework appears sustainable, although if sustained current trends could create risks around the future sustainability of public debt.

Figure 4.2. **Panama's financing flows for the public sector available for development**
Percentage GDP, 2013-15 average

Note: The label "Total" refers to overall level of available public financing for development. Non-discretionary expenditure is the sum of interest payments and compensation of employees. The fiscal surplus entails that they are not financing for development in the short term, while supporting the sustainability of public finances and can fund future development activities.

Sources: IMF (2017b), IMF (2016a), IMF (2016b), IMF (2016c), OECD/ECLAC/CIAT/IDB (2017), OECD (2016), World Bank (2017), World Bank (2016a).
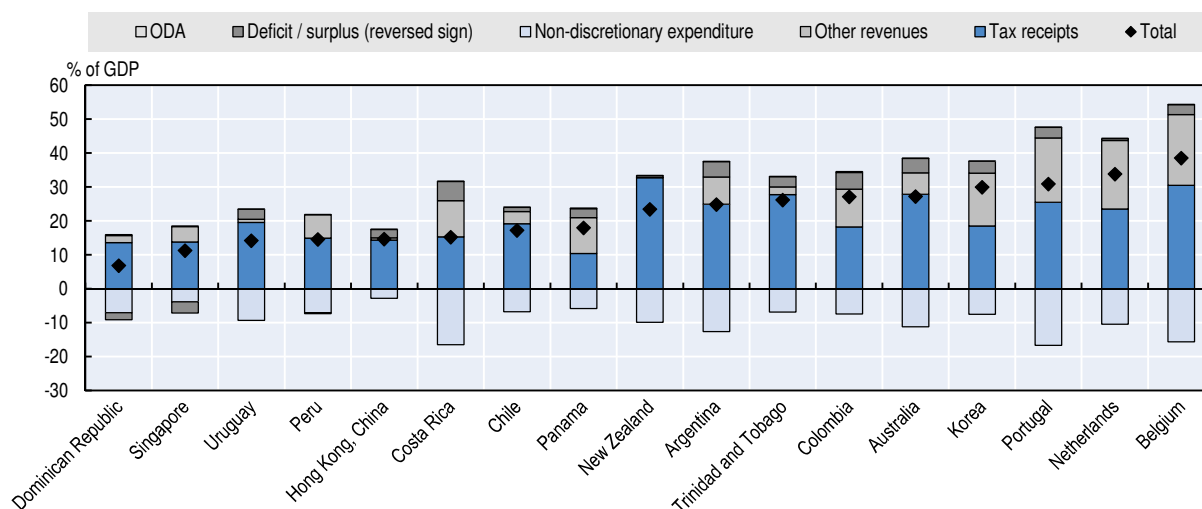
StatLink http://dx.doi.org/10.1787/888933551542

The Panama Canal bolsters public non-tax revenues. In recent years, the total contribution of the Panama Canal Authority (ACP) amounted to an average 2% of GDP, or about half of non-tax revenues (excluding social security contributions). Revenues from the Canal are assumed to be slightly higher than 2.5% of GDP on average for the period 2017-21 in the fiscal framework. The ACP's independent board decides on its contribution to the budget after making provisions for future maintenance and investments. Revenues from the ACP consist of fees per tonnage of transit and dividends to the government, and so largely depend on trends in global trade. However, the Canal expansion increases its potential to generate revenues (see Chapter 2).

Tax revenues are low and below potential, while compliance appears to be costly

Total tax revenue and social security contributions, 16.2% of GDP, are low compared to both OECD (34.3%) and Latin American (22.8%) economies (OECD/ECLAC/CIAT/IDB, 2017). Panama's tax revenues, without social security contributions, are the lowest among the benchmark economies relative to the size of the economy, at 10.4% of GDP (Figure 4.3). Panama's level of tax revenue is below estimates of a so-called "tax tipping point", which is associated with faster GDP growth, although this does not account for the importance of non-tax revenues such as the ACP. Cross-country and historical analysis finds that as tax receipts (excluding social security contributions and not accounting for the importance of non-tax revenues) surpass about 12.8% of GDP, GDP growth accelerates by about 0.75 percentage points per year on average over the subsequent decade (Gaspar, Jaramillo and Wingender, 2016).

Figure 4.3. **Panama's overall public revenues**

Percentage GDP, 2015
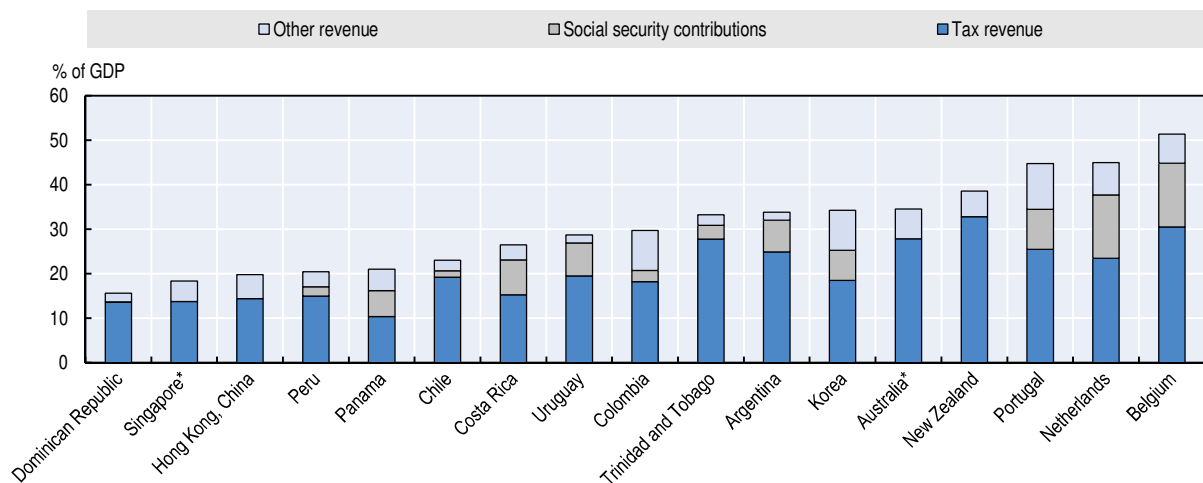
Note: * 2014 data. Public revenues are the sum of tax revenues, social security contributions and non-tax revenues. Public revenues are obtained from IMF data. Tax revenues are extracted from OECD revenue statistics, except for Hong Kong, China. Non-tax revenues are the difference between public revenues and tax revenues including social security contributions.

Sources: OECD calculations from IMF (2017b), OECD/ECLAC/CIAT/IDB (2017), OECD (2016), and World Bank (2017).

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Total tax revenues have barely increased since 1990 relative to GDP, rising from 15.9% of GDP in 1990 to 16.2% of GDP in 2015 (including social security contributions). This rise was mainly driven by direct taxation (social security contributions and income, profits and capital taxes). At the same time, overall consumption tax revenues decreased by more than 1.0% of GDP. This was the net result of the decrease in trade taxes and the increase in VAT revenues.

Panama's tax mobilisation appears to be low when assessed by various composite and cross-country measures of tax effort. For example, Panama mobilised around 9% of GDP less in tax revenues than might have been expected in 2012, according to a vulnerability-adjusted tax effort index (Yohou and Goujon, 2017). This tax effort approach compares actual tax receipts with expected revenues given a country's income levels; the importance of industry and agriculture for its economic structure; its human assets; the importance of natural resources for the economy and for revenues; and the exposure of the economy to exogenous shocks. While tax effort has improved compared with the early 2000s, it continues to contrast with the benchmark economies (Figure 4.4).

Figure 4.4. **Panama's tax mobilisation compared to selected benchmark countries**
Difference between actual and potential tax receipts, percentage GDP
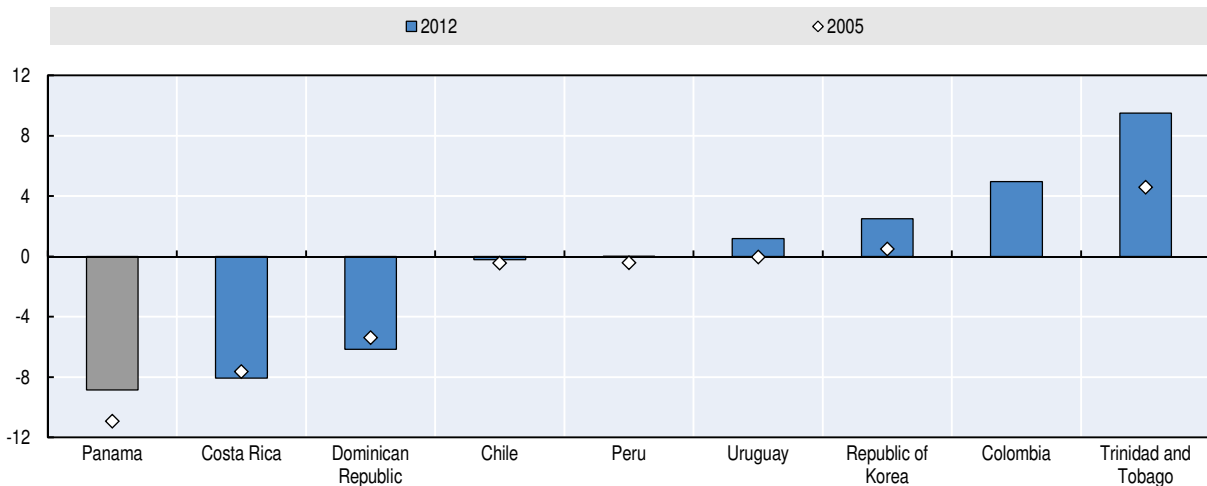
Panama's tax revenue collection, including social security contributions, is moderately tilted towards indirect taxation (on consumption) rather than direct taxes. In 2015, social security contributions represented 36% of total tax receipts; indirect taxes represent 30%; and taxes on income, profits and capital gains represented 26%. The relative importance of social security contributions in Panama stands out across countries in Latin America and the Caribbean (LAC), where social security contributions amount to 16% of total tax revenues. The relatively large share of indirect taxes was similar to that of OECD countries (32%) but well below the LAC region average (49% of total tax revenues) (see also Chapter 3 on Panama's tax wedge compared to OECD and Latin American economies). In contrast, OECD economies have a larger dependency on taxes on income, profits and capital than does Panama, which contributes to their much more redistributive tax systems (OECD/ECLAC/CIAT/IDB, 2017). (See also Chapter 3.) Excluding social security contributions, Panama's taxation levels as a percentage of GDP remain well below LAC and OECD averages (Figure 4.5). In particular, the largest difference compared to OECD economies is observed with respect to personal income tax receipts, which were 6.9 percentage points lower in 2015. Panama's tax wedge, the difference between labour costs and an average worker's take-home pay, is equivalent to 22.9% of labour costs (see Chapter 3). The tax wedge comprises personal income tax and mandatory social security contributions paid by the employee and employer. Panama's total tax wedge is higher than the LAC average (21.7%) but lower than the OECD average (35.9%).

Panama's high personal income tax thresholds explain the tax wedge difference with OECD economies. Panama's personal income tax is not levied at the level of an average wage in Panama, and only individuals in the 9th and 10th decile are liable for the personal income tax (OECD/CIAT/IDB, 2016).

Figure 4.5. **Panama's tax revenue structure compared to benchmark countries**

Percentage GDP, 2015
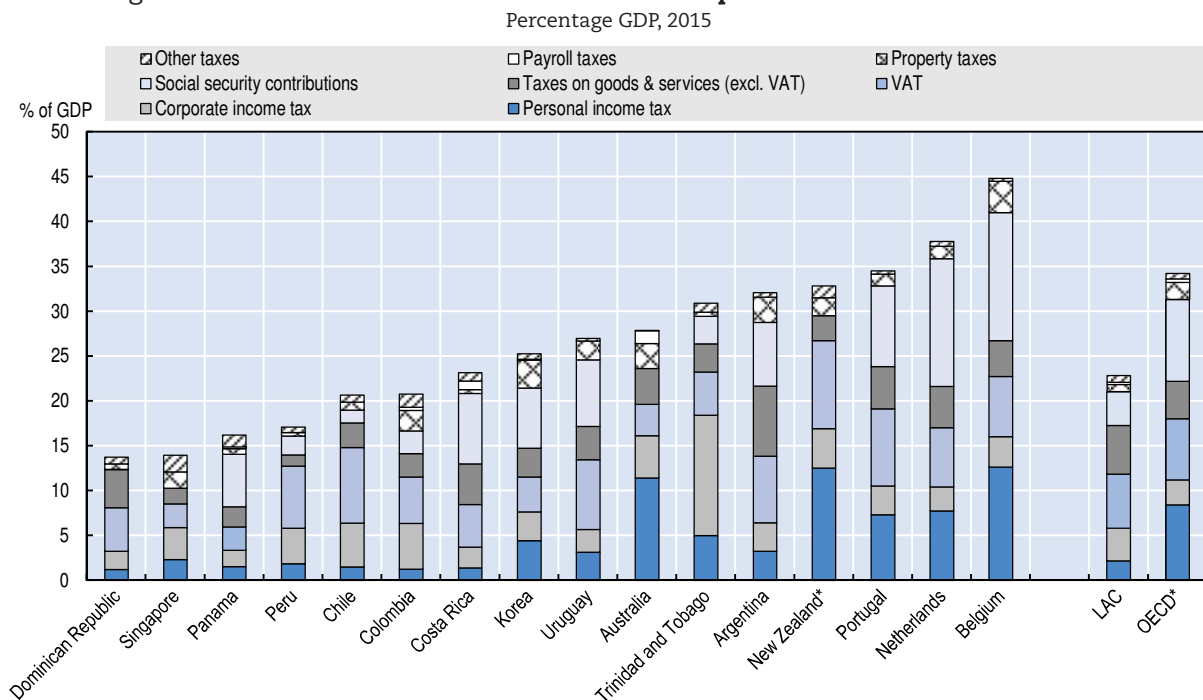
Note: *2014 data. As in OECD/ECLAC/CIAT/IDB (2017), taxes refer to compulsory unrequited payments to general government. Taxes are unrequited in the sense that benefits provided by government to taxpayers are not normally in proportion to their payments. Compulsory social security contributions paid to general government, are treated here as tax revenues. Revenues from the Canal or royalties are not included.

Source: OECD/ECLAC/CIAT/IDB (2017) and OECD (2016).

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In order to increase tax revenue collection in 2016, the government took measures to increase value added tax (VAT) collection. A mechanism to partially withhold the VAT of the 160 largest companies was implemented in February 2016. This was intended to help the revenue authority's collection of VAT. The additional collection was estimated at USD 100-200 million (0.2-0.4% of GDP). The revenue authority also set up a call centre to notify taxpayers of pending obligations and speed up collection, and launched a new tax filing system (eTax 2.0).

Increasing the VAT rate will improve public sector financing for development. The VAT rate of 7% in Panama is one of the lowest in the region (average of 15%) and among benchmark economies (unweighted average of 14.8%). VAT revenues, only 2.75% of GDP, are well below OECD and LAC countries, at 6.5% and 6.2% of GDP respectively, in 2015 (Figure 4.6, Panel A). The VAT revenue ratio (VRR), the difference between the VAT revenue collected and the potential VAT that could be raised if a standard VAT rate was applied to the entire potential base, shows that Panama collects only 67% of the potential VAT revenue.[2] This is relatively high compared to LAC economies, but indicates that improvements in compliance and tackling of informality are still feasible.

Figure 4.6. **VAT rates and revenues in Panama compared to selected countries**

Panel A. VAT rates and receipts, 2014

Panel B. VAT revenue ratio: Share of potential VAT that is collected, 2014
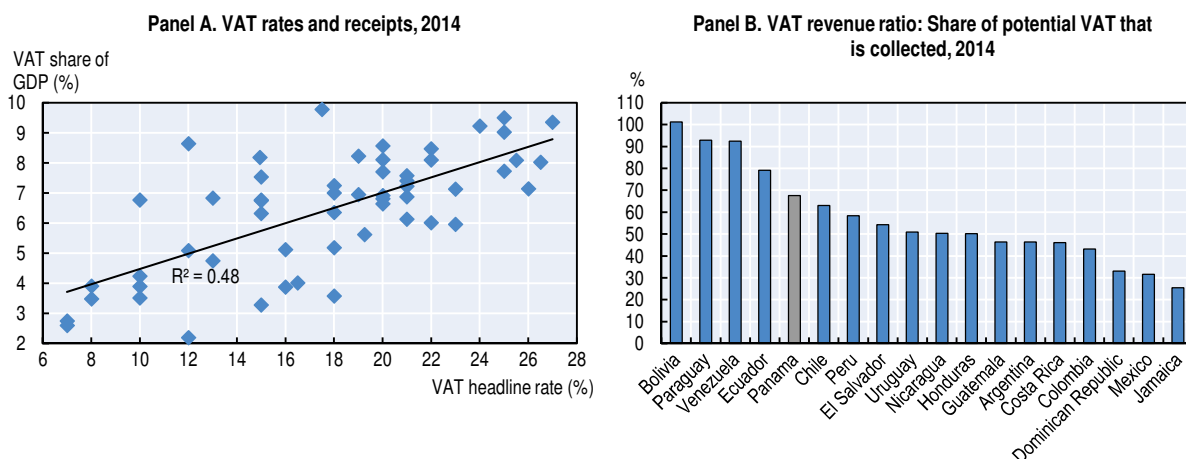
Sources: Panel A presents authors' calculations from OECD/ECLAC/CIAT/IDB (2017), OECD (2016) and Panel C 2014. Panel B presents authors' calculations from OECD/ECLAC/CIAT/IDB (2017) and OECD (2016).

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Relatively high compliance costs may also supress tax payments and the formalisation of the economy. Complying with Panama's tax regime is relatively resource-intensive and costly, even if it has improved somewhat since the late 2000s (Figure 4.7). A large number of payments must be made, which takes significant time. Compared to the benchmark economies, Panama has the highest number of tax payments for a representative business (52 per year, compared with an average of 13.6 among the benchmark economies) and these take the most time to complete (417 hours, compared with 213 hours on average in the benchmark economies). High compliance costs create disincentives to engage with the tax system, pushing activity into informality without generating additional revenues for the public sector (World Bank, 2016b). Making the tax system easier to comply with can support formalisation and activity (Monteiro and Assunção, 2012), while also raising tax morale and public revenues and without imposing higher tax rates on payers.

To broaden the tax base efforts were made to reduce tax exemptions although the ongoing scale of exemptions is not clear. There is no official estimate of the value of tax expenditures, and estimates vary widely. The International Monetary Fund (IMF) estimates that in the decade after 2001 tax expenditures declined to 4% from 15% of tax revenues (IMF, 2013). To assess the importance of the issue and the sectors which are most affected by the exemptions, a complete, systematic and orderly inventory is needed of all legal and regulatory provisions considered as tax expenditures; also needed is an estimate of their significance, using and updating an appropriate methodology such as that found in Gómez-Sabaini (2009). Related issues regarding Panama's participation and involvement in international taxation information exchanges and transparency are discussed in Chapter 5.

Overall, reducing compliance burdens can contribute to increasing tax effort and public financing space. The tax system could be simplified, for example by reducing the number of payments or streamlining administrative processes. Simplifying compliance may increase collections by reducing the scope for non-compliance and by encouraging greater declarations. Lower compliance costs may also contribute to reducing the importance of the informal sector (see Chapters 2 and 3).

Figure 4.7. **Complying with Panama's tax system is relatively costly**
Distance to the frontier* of the best-performing economy in terms of ease of compliance with the tax regime
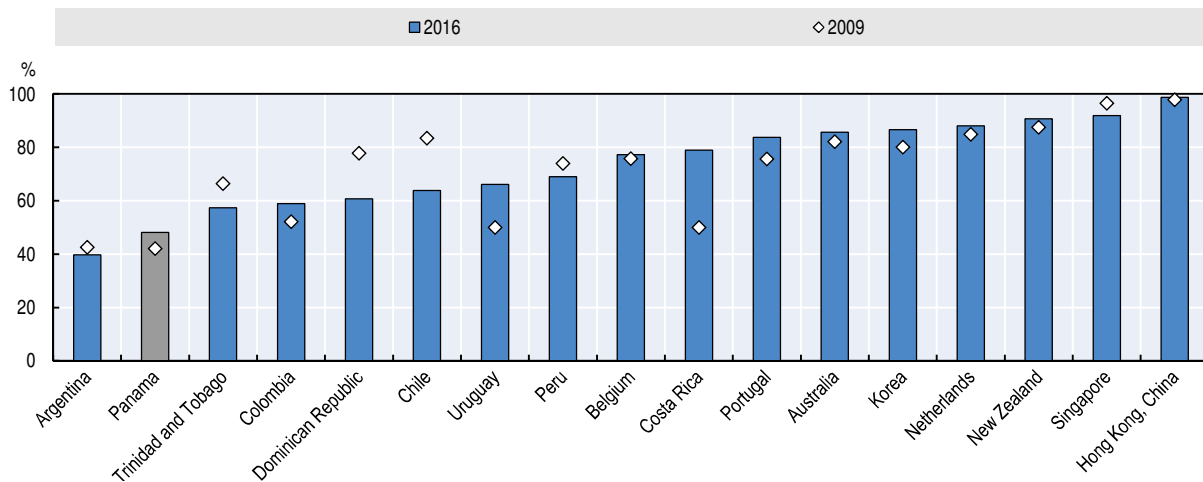
Note: *The frontier of the best-performing economies is represented as a score of 100. The distance to the frontier represents the performance of the economy relative to the top performers. Unlike rankings, changes in this value will only influenced by shifts in the performance of the best performing economies.

Source: World Bank (2016b).

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Limited non-discretionary public expenditures and mixed spending efficiency suggest that reallocating spending can improve developmental outcomes

Public expenditure allocations in Panama suggest moderate scope for resources to be reallocated towards development priorities. Of total expenditure of 18% of GDP, wages, salaries and interest expenditures in 2015 comprised one-third (6% of GDP) (IMF, 2017a), while the equivalent of 7.9% of GDP was allocated to spending on capital and goods and services. This share of GDP allocated to non-discretionary public expenditure is low relative to the other benchmark economies: only Singapore and Hong Kong, China, spent less on these items relative to GDP.

Panama's subsidies absorb a significant share of public expenditure and could be better targeted, although improvements have been undertaken. Subsidies total the equivalent of 2.5% of GDP. Half of these subsidies are directed to households, about one-third to social security and the rest (about 15%) to corporations (MEF, 2017b). Reallocating inefficient expenditure from these subsidies to development activities can improve development outcomes without threatening competitiveness or well-being, and while removing a significant market distortion. Considerable progress was made in 2016. For instance, electricity subsidies decreased to USD 32.4 million in 2016 from USD 320 million in 2014, thanks to the replacement of FACE – *Fondo de Compensación Energética* (the Electricity Compensation Fund) – by the FTO – *Fondo Tarifario de Occidente* (West Tariff Fund) – and the reduction in subsidies from the FET – *Fondo de Estabilización Tarifaria* – (Tariff Stabilisation Fund) with the aim of focusing on the most vulnerable sectors of the population.

Panama still subsidises consumption of petroleum products through subsidies to public transport and to gas used for home cooking. Subsidies to these products are generally regressive, and result in prices that do not reflect the environmental externalities associated

with their consumption, eroding incentives for energy-saving measures. International evidence suggests that subsidies to cooking fuel are also regressive, although less so than subsidies to petrol (Clements et al., 2013). The gas subsidy still commanded 67 million USD of untargeted spending in 2016. Because of the social significance of the gas subsidy, international experience suggests that reform of this scheme is more likely to be successful and feasible if it is accompanied by balancing social programmes. Indonesia introduced a targeted cash transfer (*Bantuan Langsun Tunai*) at the time of its hydrocarbon pricing reform, Brazil introduced a gas voucher (Auxílio Gas, later subsumed under the *Bolsa Familia* programme), while Turkey maintained support for cooking gas but phased it out after two years, following a general reform of petroleum product pricing.

Public debt remains sustainable but could be vulnerable to adverse shocks

Favourable macroeconomic conditions and a credible institutional framework have contributed to the reduction of gross public debt. The central government's gross public debt in 2015 of 39% of GDP represented a drop of more than 27 percentage points since 2004. Modest budget deficits since 2010 have supplemented Panama's financing available for development, averaging 3.4% of GDP. These positive debt dynamics can mainly be explained by high levels of economic growth and surpluses (or relatively small deficits) in the primary fiscal balance, as mandated by the 2008 Social and Fiscal Responsibility Law (SFRL) (revised in 2012) and the Panama Savings Fund Law.

Modest and broadly sustainable deficits expand the financing available for public development activities. Between 2007 and 2016, revenues for the general government sector have declined relative to GDP while expenditures have been more stable, leading to a continuing widening in the budget deficit (Figure 4.8, Panels A and B). Debt financing has been modest, as deficits have been constrained to levels seen to be sustainable by the fiscal framework outlined in the SFRL (see Chapter 5 for the institutional framework on public finance). Since the global financial crisis, budget deficits of the overall non-financial public sector from 2010-15 have averaged 2.3% of GDP (IMF, 2016a; 2015; 2014).[3] The improvements through the SFRL and the Panama Savings Fund law provide flexibility for policy to respond to cyclical or external shocks and to offset volatility in ACP receipts. Actual budget outcomes have created pressure for these rules to be made more flexible or looser.

Despite high economic performance since 2013, GDP growth rates have not returned to pre-2008 international financial crisis levels and public finances have slightly deteriorated. For 2015 and 2016, Panama's economy has grown below its potential rate of 6% (IMF, 2017b; ECLAC, 2016a), while primary deficits have widened to reach -2.1% in 2015. Since 2013, public revenues also have decreased by around 1.5 percentage points of GDP (reaching 13.9% of GDP in 2015), while current expenditures have remained constant (17.7% of GDP in 2015). As a result, gross public debt has increased to 39% of GDP in 2015 from 35% of GDP in 2013.[4]

Public debt dynamics should improve, according to the baseline scenario of the Panamanian authorities, who anticipate that net public debt should decline to less than 31% of GDP. The baseline scenario provided by Panamanian authorities supposes an improvement in public financing needs (almost no primary deficit in 2022) and an annual GDP growth close to 6.0% for the period 2017-22 (MEF, 2017a).

Figure 4.8. **Panama's budget position deteriorated as revenues declined**

Panel A. Public revenue and expenditure, Panama and average of LAC, percentage GDP

Panel B. Budget primary and overall balance, Panama and average of LAC, percentage GDP
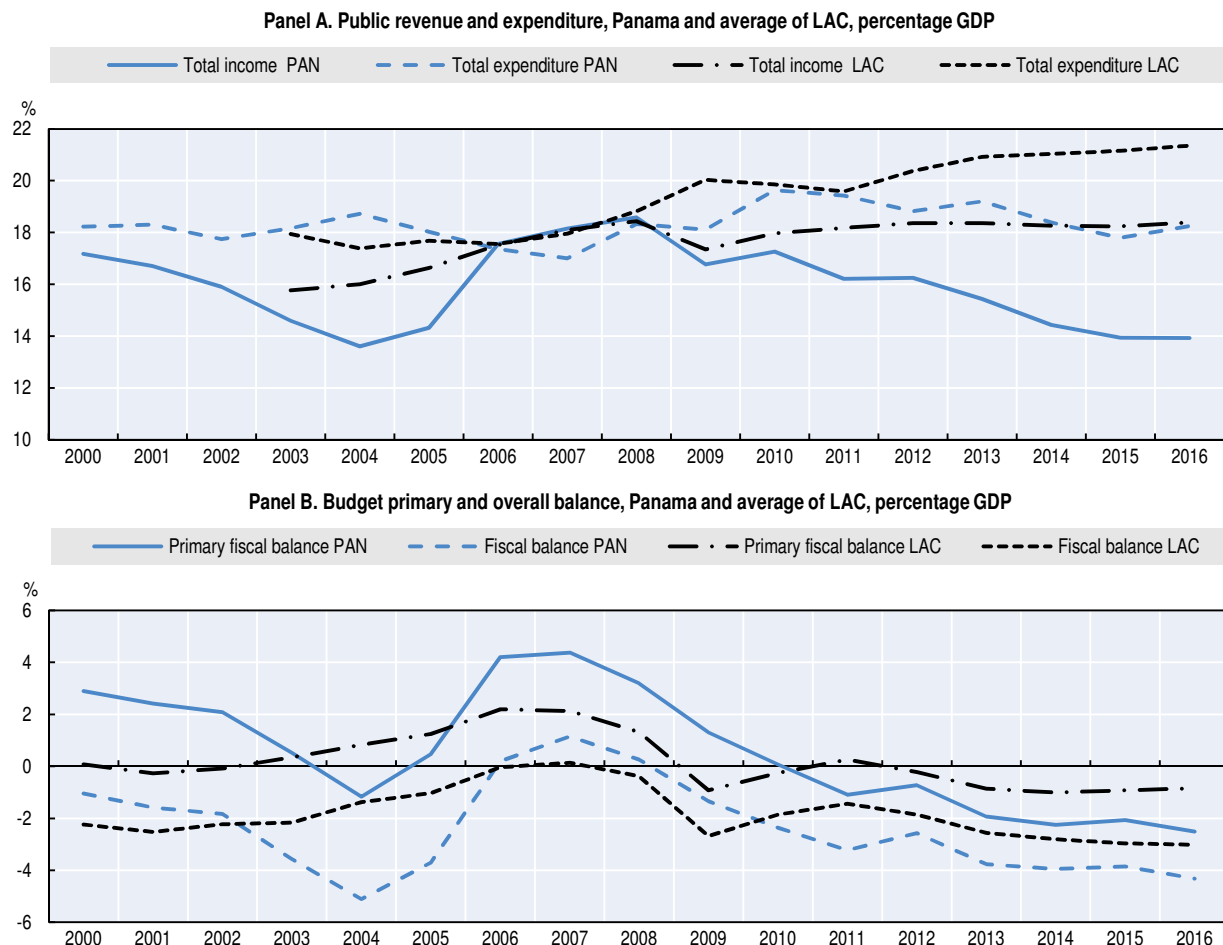
Note: Data refers to Central Government.
Source: ECLAC (2017) and ECLAC (2016c).

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Scenarios for public debt dynamics

The possible risks to the sustainability of Panama's debt dynamics can be assessed by applying various hypothetical scenarios to a standard framework (OECD/ECLAC/CAF, 2016). The public debt dynamics framework can be represented as:

$$\Delta d_t = -(sp)_t + (r - n)/(1 + n) \, d_{(t-1)} + (sf)_t \tag{1}$$

Where Δd_t represents the change of debt at time t, the primary balance is sp, d_{t-1} is the public debt over GDP in the previous year, r is the implicit real interest rate[5] (implicit cost of debt), n is the growth rate of GDP and sf is the variation of the exchange rate, which in the case of Panama, with a pegged currency, is zero ($sf = 0$).

The initial conditions reflect the settings at the end of 2015, and baseline projections are obtained from the Economic Commission for Latin America and the Caribbean (ECLAC) and the IMF. In 2015, the central government public debt was around 39% of GDP, with the implicit cost of debt around 4.7% of GDP, while the primary balance stood at -2.1% of GDP. The IMF and ECLAC estimated potential GDP growth at 6.0% (OECD/CAF/ECLAC, 2016; IMF, 2016a).

Current policy settings generate rising debt ratios. Maintaining the primary fiscal deficit near 2015 levels could generate rising public debt levels relative to GDP, even after accounting for relatively stronger economic growth and relatively low initial debt levels. Under current parameters – i.e. the primary balance remains at its average levels of 2011-15 and potential GDP growth at 6% – public debt could increase up to 50% of GDP in the next ten years (Figure 4.9). To avoid this, and in order to stabilise debt ratios, the primary deficit would need to be reduced by almost 1.1 percentage points, to -0.5% of GDP. To return the debt-to-GDP ratio to a downward trajectory, the primary balance would need to be smaller than this threshold of -0.5% of GDP, which has not been achieved since 2010.

Expenditure cuts may not be the most effective means of reducing the primary budget deficit. Reducing spending on direct public investment, for example, would lower potential GDP growth and fiscal revenues thus making the fiscal adjustment insufficient, leading to rising debt ratios. This is typically what is called "self-defeating austerity", where fiscal adjustments worsen macroeconomic conditions and increase the public debt burden.

Sustainable debt ratios require growth returning to 6% annual rates or a decrease in fiscal deficits. The scenarios presented above assume that Panama achieves on average GDP growth of 6%. If growth remains under 6%, as has been the case during 2015-16, debt levels could increase up to 52% of GDP or even close to 60% of GDP; if growth slows to the average of 2000-05, gross public debt dynamics increase at a stronger pace. Similarly, according to Panamanian authorities, under a risk scenario of GDP growth below two standard deviations of historical GDP growth, Panama's net public debt should increase by more than 15 percentage points between 2017 and 2022 (MEF, 2017a). In addition, the prospect of rising global interest rates would increase financing costs and the size of the reduction in the primary deficit needed to maintain stable debt loads. Under these risk scenarios, Panamanian authorities should envisage reforms that raise the effectiveness of public spending while strengthening revenues through comprehensive tax reforms, complemented by a strict compliance to the Social and Fiscal Responsibility Law and the Panama Savings Fund Law.

Figure 4.9. **Various scenarios highlight the risk of Panama's public debt rising relative to GDP**

Public debt, percentage GDP

Note: PB refers to primary fiscal balance and G refers to GDP growth.

Sources: OECD calculations based on OECD/CAF/ECLAC (2016); ECLAC *CEPALSTAT* database; and IMF (2016d).

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Financing for the private sector has become reliant on foreign direct investment

Overall, private financing for development equivalent to 7.5% of GDP was available over 2013-15, compared with 17.6% of GDP for the public sector (Figure 4.1 and Figure 4.10). These financing flows were generated by FDI offset by outflows of remittances and the minimal contribution of the domestic financial sector.

FDI inflows dominate the financing available for private sector activities, particularly into the service sectors. Net FDI inflows averaged close to 8.3% of GDP over 2013-16 (IMF, 2016a). The private sector financing came entirely from net FDI inflows, while other potential sources of private sector financing actually withdrew funds from the economy in net terms. Compared to benchmark economies, Panama exhibits relatively high private flows in the period 2013-15 (Figure 4.10).

Figure 4.10. **Panama's flows of financing available for development versus benchmark economies**

Private sector financing flows, percentage GDP, average 2013-15
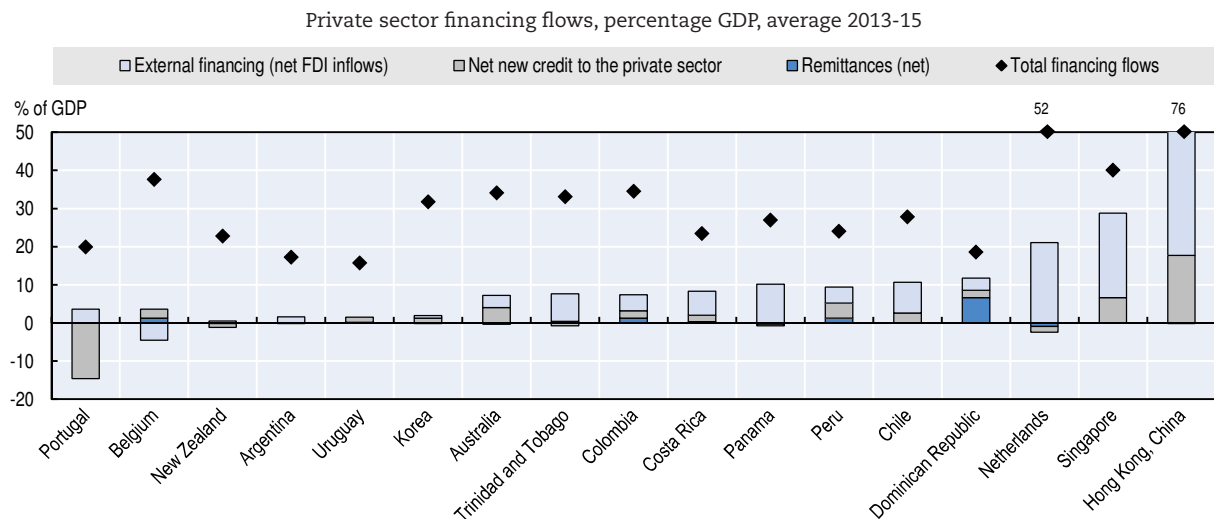
Sources: IMF (2017b), IMF (2017c), IMF (2016a), IMF (2016b), IMF (2016c), World Bank (2017) and World Bank (2016a).

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Foreign direct investment inflows finance a range of smaller-scale activities

Net FDI inflows have been significant over 2010-15, but the lack of new investments, rather than reinvested earnings, suggests that there are risks for external solvency. Net FDI inflows averaged close to 9% of GDP in this period. Like the main drivers of GDP growth, FDI has been mainly focused on commerce (retail and wholesale), transportation and financial services. In particular, transport and warehousing activities represented 25% of the FDI inflows received between 2010 and 2015 (see Chapter 2). While the sectors receiving FDI have been diversified, it has been mostly composed of reinvestment of profits from foreign investors rather than from new investments in Panama (Figure 4.11). A risk of this structure of direct investment inflows is that greater repatriation of profits could shift net direct investment inflows to negative, which would generate challenges for financing other development activities and for Panama's overall external accounts.

Figure 4.11. **Components of Panama's foreign direct investment inflows**
Percentage GDP, 2015
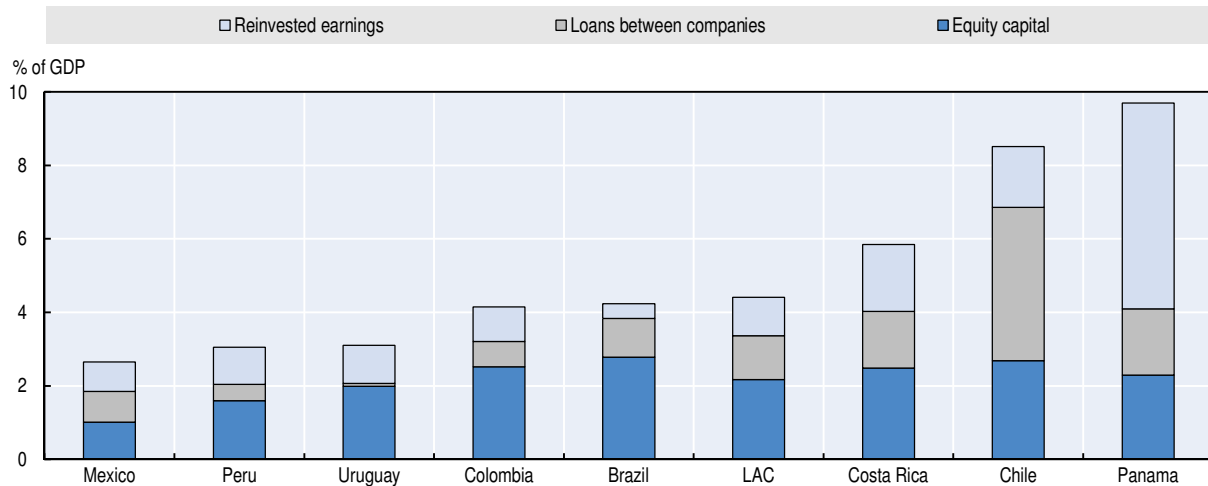
Sources: OECD calculations based on ECLAC (2016b) and GDP estimates in IMF (2016d).

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FDI inflows finance the large current account deficit. Panama's current account deficit of 6.5% of GDP in 2015 has improved with the decline in oil prices from a peak of 13.2% of GDP in 2011, similar to other Central American and Caribbean net energy importers (OECD/CAF/ECLAC, 2016). Most of the current account deficit is explained by the net exports deficit on goods rather than on services. In 2016, FDI net inflows at 9.2% of GDP largely financed current account deficit at -5.6% of GDP (IMF, 2017a). This finance through direct investment suggests that these deficits are more sustainable than would be the case if they were financed through shorter-term capital flows. Panama's current account deficit compares favourably with benchmark economies in the region, but contrasts with the surpluses recorded by small and trade-intensive countries (Figure 4.12).

Figure 4.12. **Panama's foreign direct investment inflows more than finance the current account deficit**
Percentage GDP, 2012-15
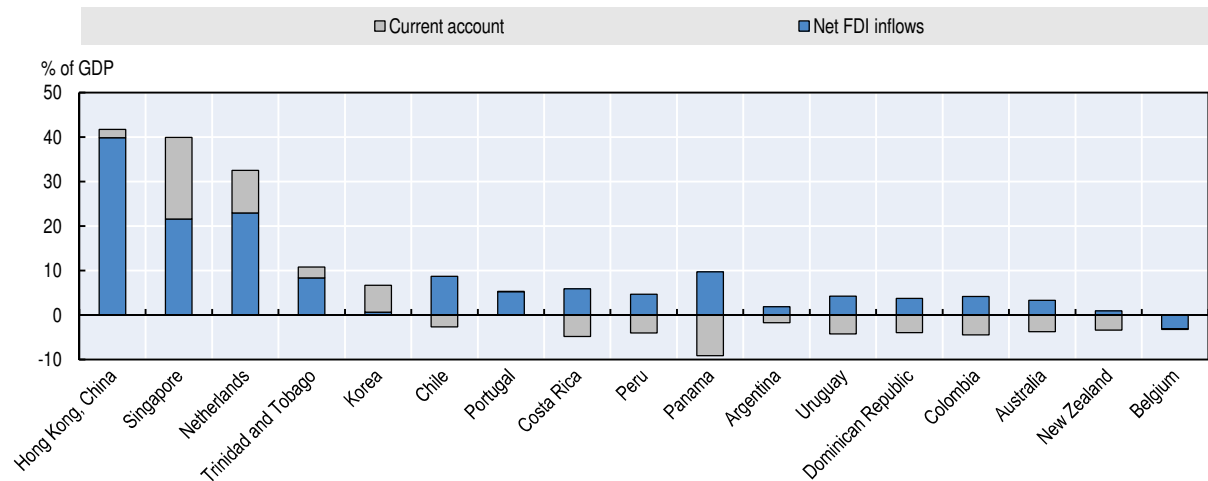
Source: FDI data from IMF International Financial Statistics and Balance of Payments databases; World Bank International Debt Statistics; and World Bank and OECD GDP estimates. Data on current account balances from IMF Balance of Payments Statistics Yearbook and data files, and World Bank and OECD GDP estimates. Trinidad and Tobago current account data are from IMF (2016c).

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Credit to the private sector is high according to its level of economic development

Outstanding credit to the private sector is well above expectations, which could suggest limited scope to expand credit. Panama's financial system has provided a large volume of credit to the domestic private sector; the total stock of outstanding credit was equivalent to 89% of GDP in 2014 (World Bank, 2016a) (Figure 4.13). This is about 6% of GDP more than would be expected given the cross-country relationship between GDP per capita and outstanding credit, and 34% of GDP more than would be expected given the deposit base. The amount of outstanding credit provided by a financial system to the private sector tends to be strongly correlated with income and the depth of banks' deposit bases. Across countries, even as the amount of credit relative to GDP declines towards levels that may be more typically expected, the nominal amount of credit may still rise if nominal GDP grows sufficiently strongly. Banking credit could play a smaller role in the economy, even if banks' activity continues to grow. This analysis does not assess the efficiency with which credit is transformed into projects 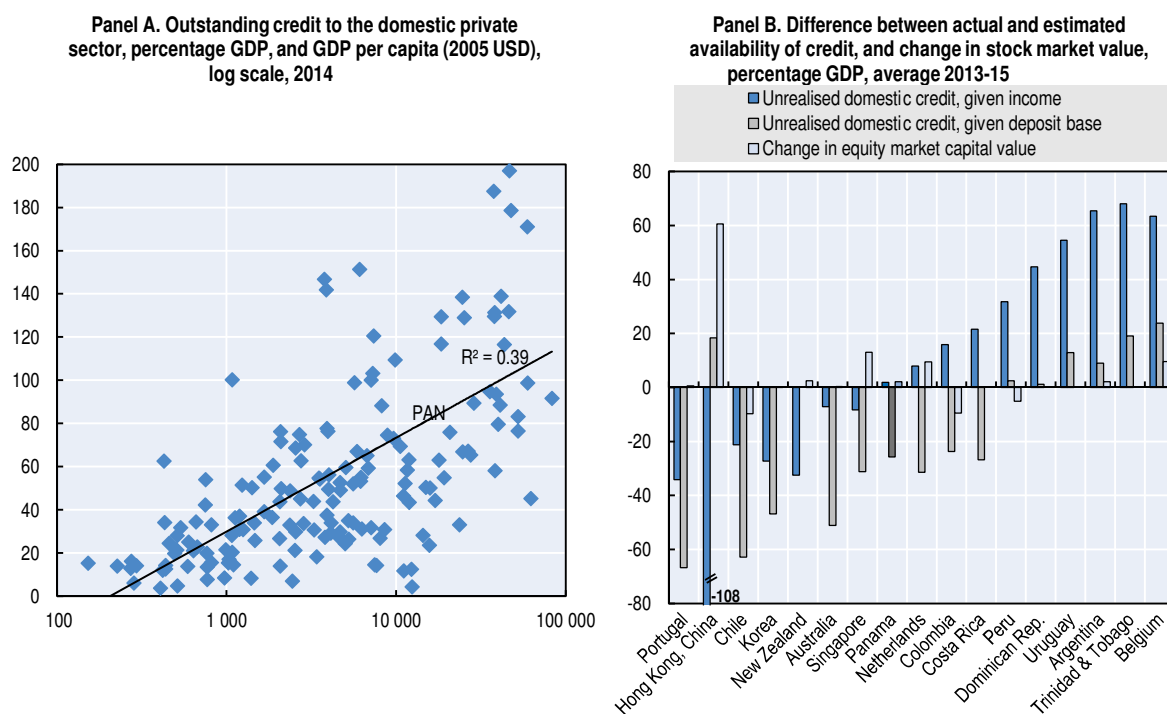that support national development priorities. Indeed, periods of rapid growth are often associated with deteriorating quality of banks' assets and declining additional activity generated by the investments.

Figure 4.13. **Credit to Panama's private sector is relatively high**

Panel A. Outstanding credit to the domestic private sector, percentage GDP, and GDP per capita (2005 USD), log scale, 2014

Panel B. Difference between actual and estimated availability of credit, and change in stock market value, percentage GDP, average 2013-15

Notes: Estimated availability of credit is based on bivariate correlation between the share of credit to the private sector from the domestic banking sector relative to GDP and the level of GDP per capita, and between the share of credit to the private sector from the domestic banking sector relative to the ratio of deposits in the domestic banking sector to GDP.

Sources: OECD calculations based on World Bank (2016a) and IMF (2016b).

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A limited share of credit is weighted towards households and the external sector. Mortgages and personal consumption lending absorbed 38% of total credit at the end of 2016, and lending to external entities represented an additional one-quarter of lending. One-quarter of outstanding credit was also allocated to the productive sectors (industry, agriculture, mining, services and trade) and 9.6% of credit was allocated for construction (Figure 4.14).

Figure 4.14. **Banking credit by economic sectors**

Outstanding bank credit by sector, December 2016, percentage
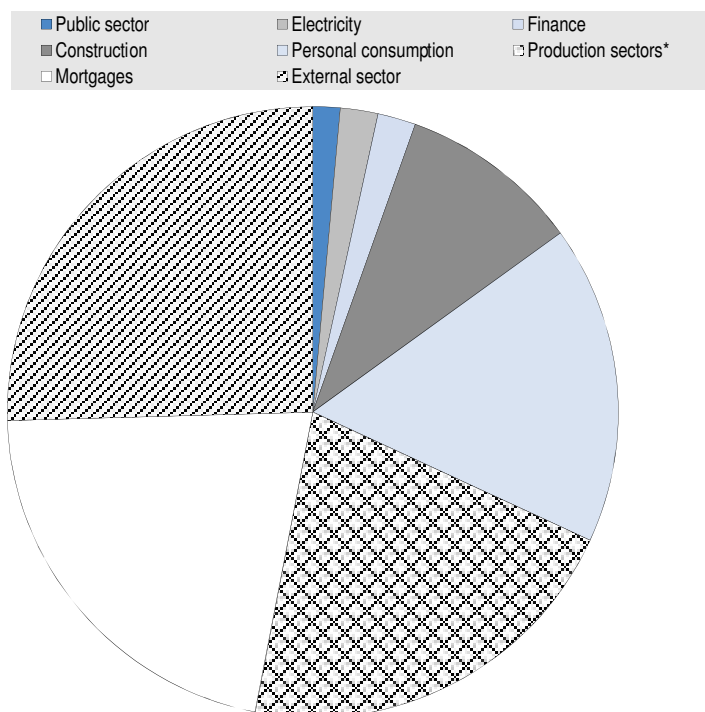
Note: *Production sectors' are the sum of agriculture, livestock, mining, wholesale and retail trade, services and manufacturing.

Source: INEC (2017).

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Panama's banking system stands out for its depth and relative robustness in the face of various crises. The system's assets amount to almost 200% of GDP. Financial depth, as measured by domestic credit-to-GDP, is comparable to levels in some advanced economies and much higher than the regional average. More than half of the banks operating in the country are foreign-owned. The sector is competitive and relies on external markets for funding and investment purposes. The system is well-capitalised and profitable. Less than 2% of loans are non-performing. However, there are pockets of greater weakness. Some banks have significant exposures in the Colón Free Trade Zone where economic activity has been declining in recent years and household debt is growing faster than the economy. To mitigate some credit quality risks concentrated in the Free Trade Zones, the Superintendence of Banks issued a decree requiring banks to make additional provisions against exposures to Colombia and Venezuela.

However during extreme crisis scenarios, liquidity has fallen short of needs. During the 2008-09 global financial crisis, with the global flight to safety, some Panamanian banks experienced external liquidity shortages. In response, the Superintendence of Banks enacted temporary changes in regulations to protect the domestic sector and established a daily bank-by-bank reporting system to monitor liquidity levels. In addition, the National Bank of Panama (BNP) established a collateralised line of credit for USD 400 million to replace some of the lost export financing and the government put together a liquidity facility funded with USD 1.1 billion (equivalent to about 5% of total deposits) for on-lending operations. The facility was funded by the Inter-American Development Bank (USD 500 million), the BNP

(USD 400 million) and the Andean Development Corporation (USD 210 million). However, a quick resumption of access to foreign markets limited the use of the facility and it was discontinued in 2010.

Missing public safety nets and underdeveloped interbank markets imply that Panamanian banks should hold large liquidity buffers on their balance sheets to cope with potential shocks, but actual holdings may be relatively low. At around 60% of deposits, twice the regulated level, liquidity appears high. The Superintendence of Banks has increased its surveillance and prudential requirements of the banking sector in recent years. In addition, it is currently working on enacting new regulations aimed to complete the alignment of prudential regulations with Basel III (IMF, 2017a). Furthermore it is challenging to compare liquidity levels across countries, because the definition and measurement of liquidity vary widely across jurisdictions, cross-country measures suggest that aggregate liquidity in Panama's banking system is low relative to other comparable countries. The Financial Soundness Indicators (FSIs) dataset, maintained by the IMF, is the most comprehensive publicly available multi-country source of liquidity ratios that are designed to follow a harmonised methodology. Since the IMF only sets the reporting standard and member countries submit their own data, there is still considerable uncertainty about the cross-country comparability of these measures. Nevertheless, the FSIs show that the aggregate ratios of liquid assets to total assets and liquid assets to short-term liabilities in Panama's banking sector are relatively low in international comparison. In fact, all countries with similar exchange rate regimes report higher liquidity as a share of total assets.

Financial stability reports are produced but do not analyse in-depth the underlying risks for the financial system, in contrast with most benchmark economies. Many countries use these reports to assess and respond to risks in the financial sector, towards mitigating these threats and their consequences for the real economy. This report is currently released annually and do not analyse specifically the financial and socio-economic conditions of key actors for the financial system, including households, the real estate market and firms. The inclusion of these analyses in the current reports would anticipate risks regarding the stability of the financial markets. Such a report is prepared semi-annually and published in Chile, Colombia, Peru and other countries in the region. Given the importance of the property sector to the economy and the assets of the financial sector, this assessment would be supported by the development housing price index.[6]

Credit stress tests found that the banking system would be able to withstand significant real and financial shocks. The resilience of Panamanian banks was assessed in terms of the risk of losing a substantial part of shorter-term foreign funding in response to two types of shocks: a very severe short-term shock and a significant long-lasting liquidity shock scenario. Short-term liquidity buffers across several layers of liquidity were evaluated by approximating the liquidity coverage ratio (LCR) defined in the Basel III accord. The analyses point to some vulnerabilities. First, about half of Panamanian banks would need to adjust their liquid asset portfolios to meet current LCR standards. Second, while most banks would be able to meet funding outflows in the stress test scenario, a number of banks would have to use all of their liquidity buffers, and a few would even face a final shortfall. Nonetheless, most banks displaying sizable liquidity shortfalls have robust solvency positions (Komaromi, Hadzi-Vaskov and Wezel, 2016). To co-ordinate regulatory actions and assure an effective supervision of the financial markets, key entities, including the Superintendence of Banks, the Superintendence of Securities, the Superintendence of Insurances and Re-Insurances and the Pensions authorities, meet regularly in the framework of the *Consejo de Coordinación*

Financiera. Given the particular characteristics of Panama's financial system (specifically the Panama's International Banking Centre and the non-existence of the Central Bank), any modification in the regulatory and institutional framework of the financial system must be adapted to this context.

Remittances reduce the amount of financing available to the economy

Remittances have become a net negative source of financing for development activities in Panama. Panama's remittances flows reflect its status as both a source of international migration and increasingly as a migration destination. Between 2013 and 2015, net remittances were an outflow of 0.4% of GDP. The approximately 160 000 immigrants in Panama repatriated USD 765 million each year, while the approximately 145 000 Panamanian emigrants repatriated USD 590 million. These funds were earned by a relatively skilled part of the Panamanian population: 36% of Panamanian emigrants to OECD countries were tertiary-educated in 2011, and wages represented a significant share (16%) of inward remittance flows in 2014 (World Bank 2016c).

Net remittances in Panama have been negative since 2008. Net remittances inflows were worth 1.6% of GDP in 1990, but outflows outpaced inflows over the following years (World Bank, 2016c; World Bank, 2017). More recently, the value of remittance outflows increased on average by 11.4% per year between 2010 and 2015. Inflows also grew over this period, but less rapidly, by 6.3% per year (Figure 4.15, Panel A). The size of remittances outflows reflects the economy's robust growth and ability to attract foreign workers. Immigration to Panama represented 4.7% of the population, similar to other Latin American benchmark countries such as Costa Rica (8.8% of the population), Dominican Republic (3.9% of the population) and Uruguay (2.1% of the population) (2015 observations; World Bank, 2017). However, Panama has several restrictions to the free flow of migrant labour that affect skills-base development and economic diversification in the country (Hausmann, Espinoza and Santos, 2016).

Figure 4.15. **Remittance flows and transfer costs in Panama**

Panel A. Personal remittance flows, constant 2015 USD, millions

Panel B. Average transfer costs, percentage of transaction value, 2013-15
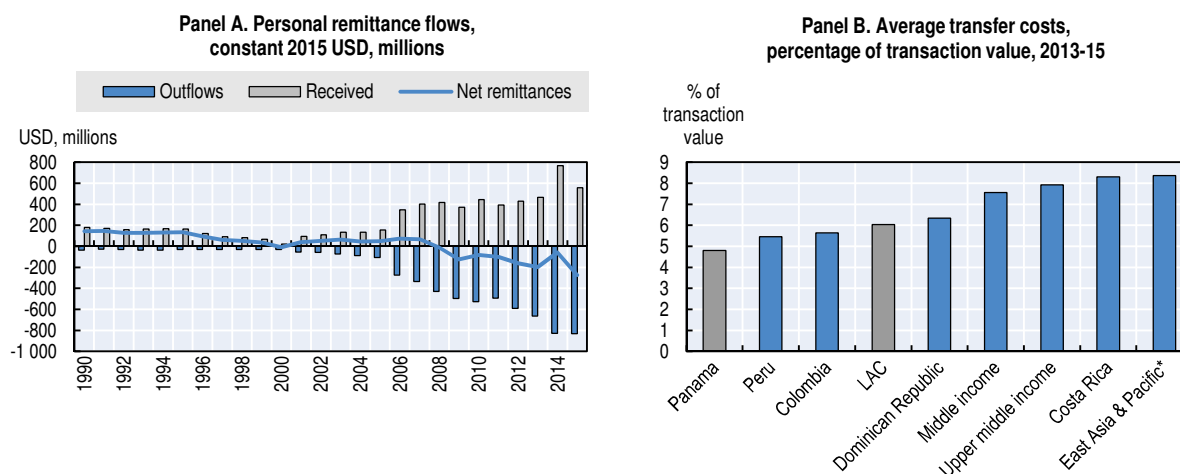
Note: LAC refers to Latin American and the Caribbean countries.

Source: OECD calculations based on World Bank (2017).

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Remittances flows to Panama are supported by relatively low transaction costs

The transaction cost of sending funds to Panama is lower than to other countries in the region, at 4.7% of the value of the funds transmitted in 2015 (World Bank, 2017), compared with 6.0% across lower- and middle-income countries in Latin American and Caribbean countries (Figure 4.15, Panel B).

Conclusions

In order to ensure inclusive development in Panama, sufficient financing flows must be made available. Development patterns are driven in part by the amount and structure of financing available for development. These in turn influence the scope and distribution of public development activities and the form of the private sector's development. Compared to benchmark economies, Panama has near expected levels of resources available for financing. But these volumes are modest compared to OECD economies, particularly for the public sector. For the private sector financing has become reliant on FDI, as the extended banking system operates beyond the limit of its scope to provide additional financing.

To increase available resources for development, both the private and the public sectors have a role to play. There is further space to increase available public resources via tax revenues. Panama's tax revenues are the lowest among the benchmark economies and are dependent on indirect taxation, which tends to be less redistributive. Further revenues from personal income taxes and VAT could help financing for development. Improvements in the compliance mechanisms and in reducing tax exemptions should contribute to a more effective, efficient and equitable taxation system.

The challenges regarding the available resources from the private sector relate more to possible sustainability risks. Net FDI inflows have been significant between 2010 and 2015, but the lack of new investments, rather than reinvested earnings, suggests that there are risks for external solvency. Similarly, outstanding credit to the private sector is well above expectations, suggesting limited scope to expand credit. Missing public safety nets and underdeveloped interbank markets imply that Panamanian banks should hold large liquidity buffers on their balance sheets to cope with potential shocks.

Notes

1. The estimates of expected revenues are based on a bivariate regression, between overall and tax revenues respectively as a share of GDP and GDP per capita PPP: Indicator i = $\beta 0 + \beta 1$ GDPpc I + μi. Average values 2011-2015 for all middle income countries included in the *World Development Indicators* (World Bank, 2017) are regressed. The expected value of the indicator is calculated by applying the estimated coefficient ($\beta 1$) to Panama's average GDP per capita at PPP over 2011-15.

2. The VAT Revenue Ratio (VRR) measures the difference between the VAT revenue actually collected and what would theoretically be raised if VAT was applied at the standard rate to the entire potential tax base in a "pure" VAT regime and all revenue was collected: VRR = VAT revenue / [(Final consumption expenditure – VAT revenue) x Standard rate].

3. These estimates are based on data from OECD/ECLAC/CIAT/IDB (2017) and the Comptroller General of the Republic of Panama (Contraloría General de la República).

4. The Social and Fiscal Responsibility Law establishes a budget deficit limit for the non-financial public sector of 1.0% of GDP and a debt-to-GDP ratio ceiling of 40% of GDP. Data presented in this section relate to the central government and to gross public debt.

5. Calculated as a ratio of interest debt payments over public debt from ECLAC data (*http://estadisticas. cepal.org)*.

6. Only a few studies have analysed the case of underlying risks linked to the real estate in Panama. See for instance Kavarnou and Nanda (2015).

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Chapter 5

Towards better institutions and sustainable development in Panama

To consolidate the high economic performance registered in the past decade and promote further inclusive development, better institutions and sustainable development are needed. This chapter first describes civic engagement and citizens' trust in institutions. Second, it presents key aspects of public governance including the framework to plan, prioritise and implement policies in Panama. Third, it studies factors linked to medium- and long-term financial governance. Fourth, it focuses on the implementation of international transparency and exchange of information standards. Fifth, this chapter analyses policies towards further entrepreneurship and competition and better public-private partnerships. Sixth, it highlights the environmental sustainability in Panama, and finally it presents the main conclusions.

To build confidence in institutions at both national and international levels, and to guarantee the sustainability of the economy, a series of public policies enhancing the regulatory and institutional frameworks are needed. These policies include different areas in the public administration and some of these policies have an impact on private involvement in the economy.

This chapter discusses six key dimensions needed to improve the institutions and enhance sustainable development in Panama. First, it presents citizens' perceptions regarding institutions and their civic engagement. It also presents recent efforts to increase transparency in Panama. Second, this chapter highlights the need to improve capacity of public institutions to better prioritise, implement and evaluate public policies. Third, it focuses on key areas affecting long-term financial sustainability, and in particular the fiscal and pension sustainability frameworks and the role of lender of last resort in case of deposits run. Fourth, this chapter presents the recent efforts achieved on international transparency and exchange of information standards and the Panamanian commitments to implement them. Fifth, it analyses the regulatory framework for entrepreneurship and private involvement in infrastructure. In particular it shows that while Panama ranks relatively well in some regulatory areas promoting entrepreneurship and competition, improvements in public-private partnerships are needed to enhance private involvement in Panama's agenda for development. Finally, it analyses the environmental sustainability in Panama to promote green growth.

Civic engagement and confidence in institutions

The relationship between a government and its citizens provides the foundation for effective and democratic governance. While the state bears the ultimate responsibility for the provision of public goods and the rule of law, engaged citizens can support these efforts and help to create the conditions that produce, recognise and reward good governance (Woolcock and Narayan, 2006). Civic and political engagements as well as people's perceptions of government effectiveness and integrity are therefore important aspects to consider when looking at the quality and legitimacy of governance in a country.

Developing the effectiveness and trustworthiness of the state can combine with efficient tax mobilisation to contribute to the effectiveness of state capacity and enable expanded provision of developmental goods and services, while minimising the compliance and enforcement costs for taxpayers (Kiser and Levi, 2015) (see Chapter 4 for a discussion of taxes).

Political participation is relatively high in Panama

Compared with its peers, political participation is relatively high in Panama. Political participation can take a number of forms and includes "all voluntary activities by individual citizens intended to influence either directly or indirectly political choices at various levels of the political system" (Kaase and Marsh, 1979). Participation in elections is the most powerful form of political engagement; while citizens cannot directly influence political decisions, voting serves as a key mechanism of political representation and accountability. Although

differences across countries in institutional features of the voting systems might affect cross-country comparisons, Panama stands in the upper half of benchmark economies regarding voter turnout (Figure 5.1, Panel A). With a 77% participation rate during the last presidential elections, electoral turnout in Panama is 15 percentage points above the OECD average and 10 points above the average of Latin American countries. A focus on countries with similar voting systems (i.e. voting is compulsory but without sanctions imposed), such as Costa Rica and Dominican Republic, shows that Panama exhibits a higher participation (Maldonado, 2015). Though the difference is less impressive, voter turnout at parliamentary elections in Panama is still about 7 points above OECD and Latin American averages, and remains higher than in Costa Rica and Dominican Republic.

While voting is the most popular and institutional means through which individuals "control" the appointment of government officials, there are certainly other ways that allow individuals to influence government officials, their political choices and the political system (Boarini and Díaz, 2015). Citizens can express their political voices by signing a petition, joining a political organisation or participating in a political rally or demonstration, among others. These activities are important instrumentally, as they can provide a corrective to public policy by revealing people's needs, maintain political vigilance among citizens, and improve the quality of a democracy (OECD, 2011). An important indicator of the propensity of people to engage in political activities other than voting is the share of the population that voiced their opinion to a public official. With almost 35% of Panamanians reporting having voiced their opinion to a public official, Panama ranks first in the group of benchmark economies (Figure 5.1, Panel B).

Figure 5.1. **Civic engagement in Panama in comparison to benchmark economies**

Panel A. Voter turnout

Panel B. Voice their opinion to a public official
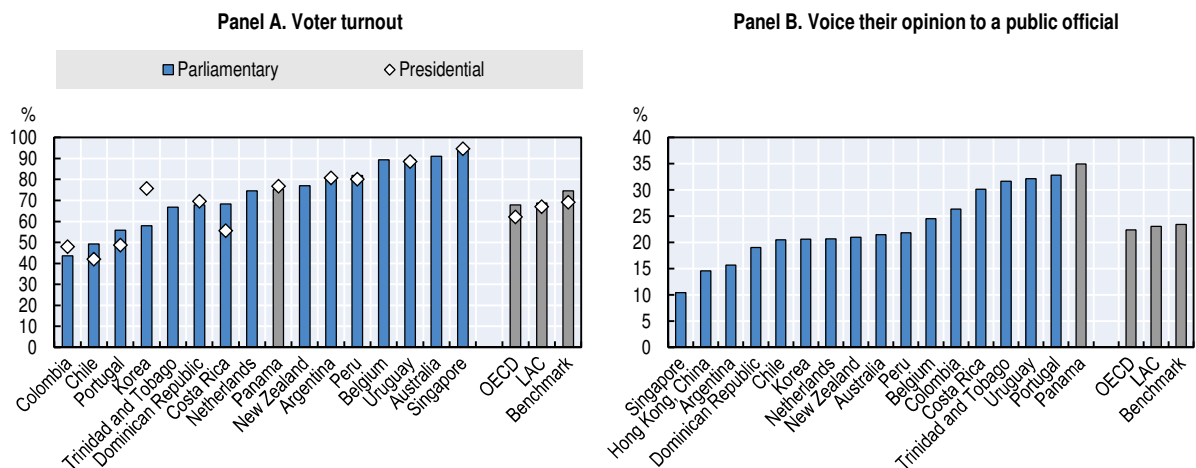
Note: LAC refers to the average of Latin American and the Caribbean countries. Panel A: For parliamentary elections, data refer to 2016 for Korea, Dominican Republic, Peru and Australia; 2015 for Portugal, Trinidad and Tobago, Argentina, Singapore, Colombia, Costa Rica, Panama, New Zealand, Belgium and Uruguay; 2013 for Chile and 2012 for Netherlands. For presidential elections, data refer to 2016 for Dominican Republic, Peru and Portugal; 2015 for Argentina; 2014 for Colombia, Costa Rica, Panama and Uruguay; 2013 for Chile; 2012 for Korea; and 2011 for Singapore. Panel B: Data for Trinidad and Tobago refer to 2013.
Source: Panel A: International Institute for Democracy and Electoral Assistance (IDEA). Panel B: Gallup (2016), *Gallup World Poll*.

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However, confidence in institutions remains low

High levels of voter turnout are usually associated with high levels of trust in institutions and satisfaction with the functioning of democracy (Grönlund and Setälä, 2007; Stockemer, LaMontagne and Scruggs, 2013). However, a different situation can be seen in Panama, where

the overall high level of political engagement persists despite low levels of confidence in governance institutions. Although trust in institutions or corruption are not variables that can be easily measured directly, these dimensions of governance are usually assessed through measures of perception among citizens or experts.

Perceived quality of government is remarkably low. Only 44% of respondents to Gallup World Poll (Gallup, 2016) believe in the honesty of elections and just 39% have confidence in national government (Figure 5.2, Panels A and B). Panama stands therefore slightly above what is usually observed in the region for both indicators, but behind what is reported on average in benchmark and OECD economies. These low levels are a long-standing phenomenon in Panama, with similar results observed in 2006 and 2016. This contrasts with trends seen in many benchmark economies where surveys of public confidence in the honesty of elections and in national government have shown sharp reductions over the same period.

Figure 5.2. **Confidence in governance institutions**

Panel A. Confidence in the honesty of elections

Panel B. Confidence in national government

■ 2015   ◇ 2006
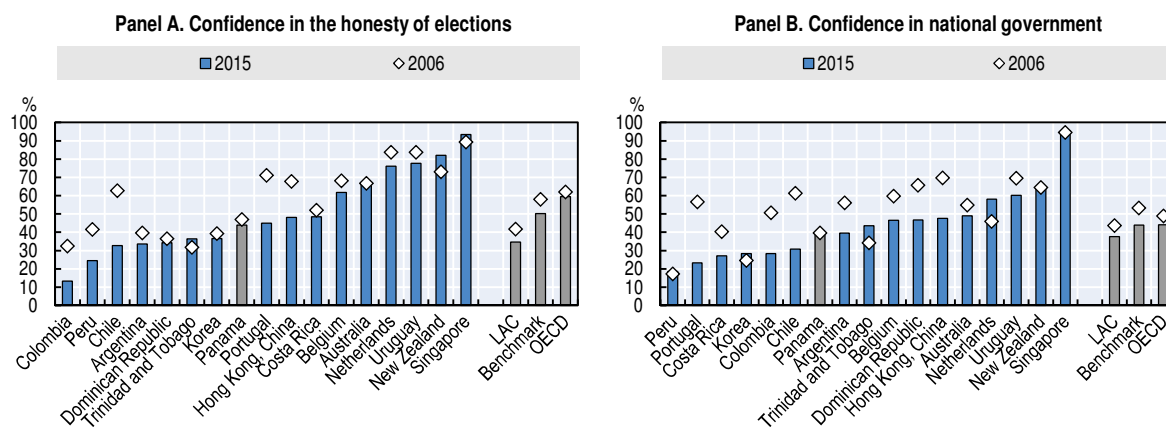
Note: Figures for 2006 refer to 2005 for Australia, Belgium and Netherlands.

Source: Gallup (2016), *Gallup World Poll*.

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An improvement in trust in government is a key condition to boost inclusive development in Panama. The global economic crisis undermined trust in governments in most OECD countries but also in many Latin American ones. As one of the few countries that seems to have been spared this diminishing trend, Panama is better positioned to take measures that can build trust and confidence. This is a key challenge as trust in government is a necessary condition for governments to successfully carry out public sector reforms that will enhance incentives for entrepreneurship (see section below), job creation (see Chapters 2 and 3) and well-being of individuals (see Chapter 1).

Preliminary evidence shows that trust in government is negatively correlated with perceived levels of corruption in government (OECD, 2015a). Misuse of public resources and inadequate behaviour by government representatives shape public opinion on the overall trustworthiness of government. Defined as a distorting factor affecting the quality, composition and productivity of physical capital and undermining the benefits of investment, corruption can also be perceived as a cost to entrepreneurs and to citizens in general. Indeed, by creating a negative business climate for the private sector, corruption can affect public investment policies and challenge private investment. More generally, institutions that are perceived as ineffective in achieving their goals, non-transparent in how they act

and unaccountable for their results undermine social cohesion, hamper collective action to achieve shared objectives, and reduce the well-being of individuals and communities.

Regarding corruption, Panama is in the bottom-performing third of the group of benchmark economies. Transparency International's Corruption Perceptions Index (CPI) (Transparency International, 2016), ranks countries based on how corrupt their public sector is perceived to be by business people and country analysts and on a scale of 0 (highly corrupt) to 100 (very clean). By this measure, Panama ranks just at the midline for countries where data are available (87 out of 176 countries or territories). With a score of 38, Panama stands slightly above its Latin American peers (with scores ranging from 31 for Dominican Republic to 37 for Colombia), with the exception of Costa Rica and Chile (20 and 28 points ahead, respectively). The rest of the benchmark economies all score significantly above Panama (Figure 5.3).

Figure 5.3. **Corruption Perceptions Index in Panama versus benchmark economies**
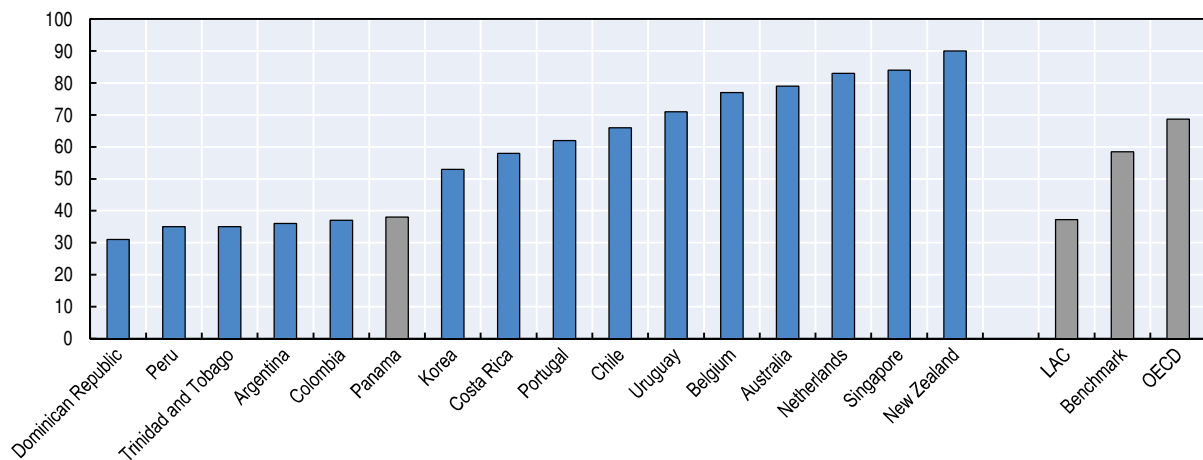
Note: The Corruption Perceptions Index aggregates data from a number of different sources that provide perceptions of business people and country experts of the level of corruption in the public sector. The 2016 Index is constructed from 13 data sources.
Source: Transparency International, 2016.

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The CPI is a measure based on expert perceptions, but measures of citizens' perceptions also show that corruption is perceived to be widespread in Panama. Almost 80% of Panamanians state that corruption is widespread in government (Gallup, 2016). This negative perception on corruption is considerably higher than in OECD, Latin American and benchmark economies on average (Figure 5.4). People's perceptions about government integrity and efficacy can also give a strong indication of the actual functioning of state institutions. Furthermore, as empirical work confirms, whatever the objective characteristics of a country's political and social system, subjective evaluations of corruption do themselves appear to influence investment decisions, growth and the political behaviour of citizens (Mauro, 1995).

In recent years, Panama has approved several policies to enhance public administration and reduce corruption. In particular, in 2013 Panama created the National Authority of Transparency and Access to Information (ANTAI) (*Autoridad Nacional de Transparencia y Acceso a la Información*) to promote transparency in public management and strengthen the prevention of corruption. In November 2016, 111 public entities including state-owned enterprises and municipalities were evaluated by ANTAI on the transparency of their websites. Although

36 public institutions fulfil the transparency requirements in their websites, still 60 public institutions only partially comply with these requirements and 15 institutions are not providing public information to citizens. Panama also ratified the Convention on Mutual Administrative Assistance in Tax Matters on March 2017 (see section below). However, despite progress, most of these reforms are rather recent. The path that Panama is following is promising and further efforts should be made in that direction.

Figure 5.4. **Is corruption widespread through the government? (percentage)**
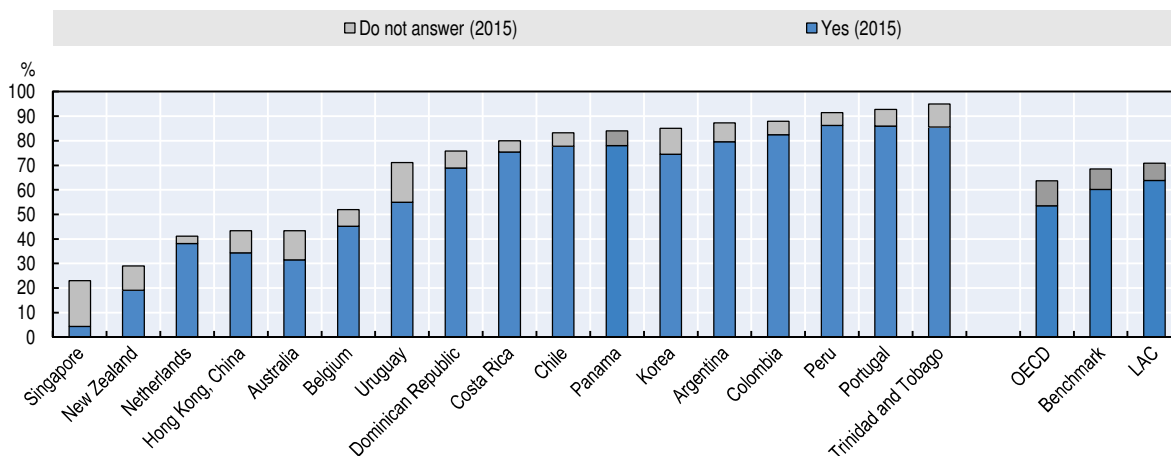
Note: The response scale for this question is binary and offers a yes or no option to the survey respondents.
Source: Gallup (2016), *Gallup World Poll*.

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Improving planning and implementation frameworks to boost inclusive development in Panama

Implementing policies that tackle barriers to greater productivity and inclusiveness requires a better institutional framework for the strategic development agenda. The role of the centre of government (CoG) can be strengthened by increasing leadership, co-ordination and long-term implementation of that agenda. The prioritisation and planning of policies need higher capacity and better matching with public investment and other implementation policies. To increase the capacity of sub-national authorities in the design and implementation of their provinces, there is a need to increase co-ordination with the national government and build capacity of these authorities.

Towards better co-ordination of public policies

In all countries, the CoG should play a key role in ensuring the quality, co-ordination and monitoring of public policies at the executive level. The CoG is the body or group of bodies that provides direct advice to the head of the government and ministers. More precisely, it supports quality decision making by the head of government, and provides cross-government policy co-ordination and monitoring of the government policy implementation. Apart from their traditional role of serving the executive from an administrative perspective, CoGs are now playing a more active role in policy development and co-ordination across OECD countries. The extended definition of the CoG does not only include the presidency or its equivalent, but also comprises key strategic partners such as the ministry of finance or the ministry of planning. Depending on a country's particular institutional makeup, several actors

can play an important role in CoG co-ordination. Additionally, central agencies responsible for coherent human resources policies, e-government policies and regulatory policies across different departments can also contribute to reinforcing cross-government co-ordination.[1]

Similar to other Latin American economies, Panama lags behind most of the benchmark economies in the co-ordination of public policies in particular. Despite efforts to increase dialogue among different institutions in recent years, the lack of collaboration and co-ordination among ministries and within the administration is an obstacle to effective policy making and implementation. On a scale of 0 (very little co-ordination) to 4 (strong co-ordination), perception of co-ordination and collaboration between ministries and with the administration in Panama scores 2 (CEPII, 2012) (Figure 5.5.). This is below OECD member countries and slightly below Latin American economies. This poor performance can be explained by a number of factors such as weak capacity in the prioritisation and implementation for policies involving several ministries.

Figure 5.5. **Perceptions of co-ordination among public institutions, 2012**
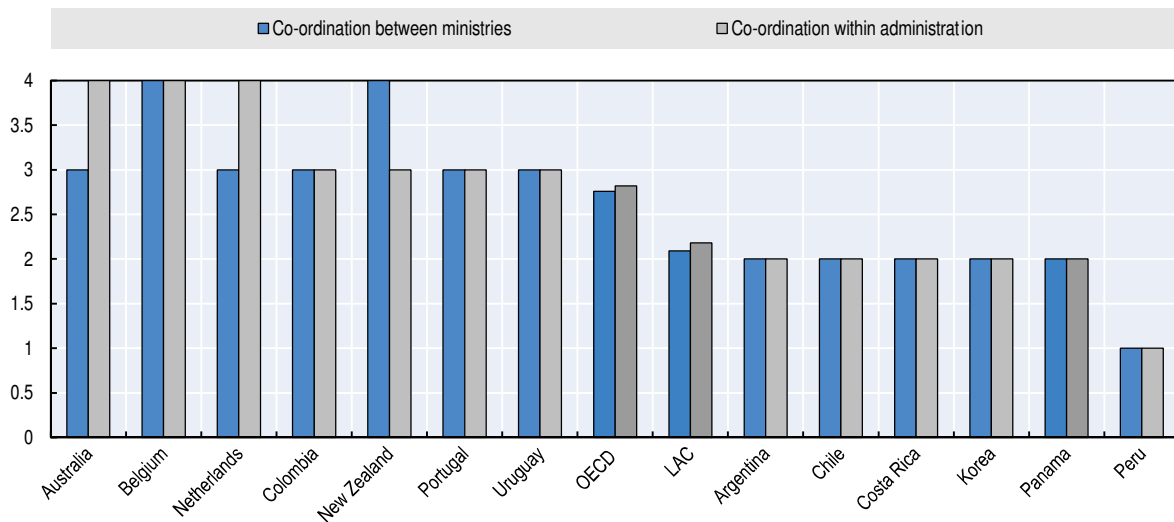
Note: 0 represents very little co-ordination and 4 strong co-ordination. The Institutional Profiles Database provides an original measure of countries' institutional characteristics through composite indicators built from perception data. The perception data were gathered through a survey completed by country/regional Economic Services (*Services économiques*) of the French Ministry for the Economy and Finance and the offices of the Agence Française de Développement.

Source: CEPII (2012), *Institutional Profiles Database*, Paris, *www.cepii.fr/institutions/EN/ipd.asp*.

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Finally, in spite of recent efforts there is little regional decentralisation of government planning and programming, while regional initiatives are not co-ordinated with the central government. Panama lags behind benchmark economies in the co-ordination of public policies. Panama is a centralised country where the government can improve the co-ordination of public policies among ministries and among regions to effective policy making and implementation. This has been highlighted as a concern by participants at the workshop realised in the context of this review and presented in Chapter 1 (Box 5.1). To tackle this challenge, a decentralisation law was approved in 2015 (Law 66 of 2015) to transfer responsibilities and resources from the central government to municipal authorities. This law has also created opportunities for effective citizens' involvement in public management at local level.

> **Box 5.1. Views from the participatory workshop on the effectiveness of public policies**
>
> After developing stories depicting a desired future for citizens in Panama, and working on the different dimensions of the OECD's *How's Life?* framework, participants at the workshop (described in Chapter 1) discussed the different challenges in reaching development objectives. The most frequently cited challenge was political interference in public policy planning, and the issue of improvisation of public policies. Participants discussed challenges linked to an insufficient evidence base driving public policies and the limited capacity to carry out studies to drive public policies. They also discussed gaps in terms of policy planning and implementation, which they explained in terms of limited capacity and lack of a culture of systematic public policy evaluation, as well as difficulties linked to co-ordination of different institutions.

Improvements regarding planning and implementation of policies are needed

Panama is improving its governmental practices and institutional framework to achieve efficiency and transparency in public management. In this regard, the Law 34 on Social Responsibility of 2008 is a valuable tool to control the public deficit while advancing, in a transparent manner, the needed public policies. Such measures to improve monitoring and accountability are vital to overcome Panama's problems of corruption, lack of trust in public institutions and undue influence that represent obstacles to inclusive and sustainable growth. However, the institutional framework still shows problems in its implementation, transparency and monitoring, and with heterogeneous capacities to plan and execute public policies across ministries. Finally, plans have remained limited to medium-term horizons (five-year plans) without links to long-term strategic plans. In that context, current efforts to move towards a strategic plan with a 2030 horizon are welcome (CCND, 2016).

The Social and Fiscal Responsibility Law is a key stepping stone to improve public management, demanding the articulation of strategic government plans with investments plans and the consideration of the multi-annual fiscal projections. Law 34 of 2008 on Social Responsibility requires incoming administrations to develop a five-year government programme during their first six months in office, in agreement with the *Consejo de la Concertación Nacional para el Desarrollo* (CCND) and campaign promises. These plans must include a social and economic strategy and the financing and investment plan necessary to advance the targeted sectors and programmes. The Ministry of Economy and Finances (MEF) then evaluates compliance with the planned budgets on a quarterly and yearly basis. This practice is a fundamental step to provide effective policy making and maintain a stable government deficit. The latest plan is the Strategic Government Plan - *Plan Estratégico de Gobierno 2015-2019* (GRP, 2014).

But these plans fail to aim for a long-term strategic foresight to improve evidenced-based decision making. Strategic foresight refers to a long-term period (exceeding ten years) including planning scenarios. National development plans last only one five-year term and do not correspond in a unified longer-term investment strategy. Likewise, although every year the indicative plan of public investment is updated, capital budgeting only accounts for a five-year term of investments, which is not long enough for large capital investments. All of the current areas of the plan – social strategy, economic strategy, investment plan and financial programming – require short, medium and long-term planning, especially if Panama

is to become a worldwide logistics and trade services hub. The requirement for a five-year government plan can serve as a foundation to develop a more comprehensive long-term strategy. Recent efforts are in the right direction. In co-operation with the Inter-American Development Bank, the government is working on the adoption of a 2030 National Logistics Strategy. In addition, regarding the energy sector, there is already a National Energy Plan with a 2050 horizon.

The regulatory framework foresees the development of specific plans by the sectorial authorities. An illustrative example of such plans is the *Política Nacional de Ciencia, Innovación y Tecnología 2015-2019* by the National Secretariat of Science, Technology and Innovation (SENACYT). This plan develops both a medium-term and long-term (until 2040) strategy for the advancement of science, technology, research and innovation in Panama. It follows the guidelines contained in the 2015-19 *Plan Estratégico de Gobierno*, and also resulted from the dialogue among five inter-sectorial boards, SENACYT and international specialists that aimed to establish policy objectives and the programmes necessary to achieve them. The plan also provides a set of indicators to measure progress as well as the corresponding baseline values for 2009. Other examples of sectorial plans include the *Plan Estratégico Quinquenal 2015-19* (Ministerio de Desarrollo Social); *Plan Estratégico 2014-2019* (Caja de Seguro Social); *Plan Estratégico de la Dirección de Recursos Humanos del Ministerio Público 2015-2025*; and *Plan Nacional de Logística*.

However, there are mixed capacities among the different government institutions in the programming and the implementation of these plans, with some ministries achieving proposed goals while others lag behind. To increase the effectiveness of public policies to reduce inequalities and boost productivity, the government has to build capacities within its institutions and take ownership of strategic plans. The centre of government in Panama faces challenges related to leadership, co-ordination and capacity to design the government's strategic plan. For instance, following the implementation of the Social Fiscal Responsibility Law, for the second time Panama is developing a country strategy plan along with a financing and investment plan. Although Panamanian authorities have the objective to increase technical capacity to produce internally such plan in the future, currently the administrations have delegated the responsibility of designing such plan to private consulting firms.

Strengthening technical capabilities within the ministries can ameliorate planning and evaluation difficulties. For this purpose, further in-work training is important. At the same time, a more stringent and transparent admission process will contribute towards the professionalisation of public servants (GRP, 2014).

Panama also needs to continue improving evidence-based decision making and information availability to better monitor the results of public policies. The adoption of programme-based budgeting is a step forward by the present administration to improve monitoring and transparency of public funds. Tracking programmes allows for closely monitoring the use of funds, which is better than tracking only the entities' capital and current expenses. Nevertheless, the inefficient allocation of financial resources and deviations from the fiscal budget persist owing to the lack of feasibility studies for programmes. This occurs despite the Social and Fiscal Responsibility Law's requirement for the elaboration of pre-feasibility and feasibility studies. The challenges of monitoring and evaluating programmes' performance are made worse because not all entities have proposed detailed plans with objectives by which to assess the relevance of the programmes. Panama needs

to improve the public availability of reports regarding budget compliance and programme reviews. The inaccessibility of reports affects Panama's accountability, transparency and monitoring capacities.

Moreover, sectorial plans have still to be made binding in terms of the implementation of regulatory or investment policies to achieve the objectives highlighted in the *Plan Estratégico de Gobierno 2015-2019*. To this end, it would be valuable to associate costs to deviations for the budget and delegate the overview of the plans to an independent entity. The Social and Fiscal Responsibility Law requires framing public investment plans with consideration of multi-annual fiscal projections, which results in the *Plan Quinquenal de Inversiones*. However, the normative framework does not foresee any explicit deterrent actions to prevent deviations from the plan, besides the evaluation done by the MEF. Explicit costs have to be associated with deviations from the plan to make them binding. Indeed, the planned budgets have been exceeded on various occasions, although during the past administration compliance has improved (IMF, 2016). To further improve accountability and transparency, an independent entity from the government should be appointed to oversee compliance with the plans' budgets. A natural candidate for this role is the Comptroller General of Panama – *Contraloría General de la Nación*.

Towards better long-term financial governance

This section focuses on key areas affecting long-term financial sustainability. First it analyses the pension system in Panama, then focuses on recent measures to guarantee fiscal sustainability in Panama. Finally, following a review of historical experiences, it discusses the possibility of guaranteeing the solvency of the financial system in the context of deposit runs and the non-existence of a central bank.

The pension system within the Social Security Agency presents a long-term risk to public financial sustainability

The Social Security Agency (SSA) is an autonomous public agency in charge of managing the social security system. The SSA runs four independent programmes: disability, old age and death benefits; health and maternity care; professional risks; and administration. The disability, old age and death benefits account for more than one-half of the overall revenues and expenditures of the SSA. Affiliation to the SSA is mandatory for most workers in the private sector and all workers in the public sector.

Transitioning from a defined-benefit system to a mix of defined benefits and contributions has been a challenge. Before reforms in 2005, the pension system was entirely a defined benefit system, but faced both actuarial and cash deficits. The 2005 reforms tightened the eligibility requirements and raised contribution rates. Strong opposition limited these reforms, and changes in the parameters had the effect of postponing rather than resolving the actuarial imbalance of the defined benefit portion of the system. After the 2005 reform, the system included two subsystems: exclusively defined benefit (old system) and the subsystem of mixed defined benefit and defined contribution (new system). Starting in 2008, all new affiliates entering the system contributed to the new system. For affiliates under the old system, workers earning less than USD 500 a month as well as workers older than 35 years of age in 2008 continued to contribute to the exclusively defined benefit scheme. Workers younger than 35 years and earning more than USD 500 a month had the option of either staying in the old system or contributing to the new system. Even after the reforms, the pension system remains generous by international standards, more than in most Latin American economies.

The legacy defined-benefit pension system contains unfunded liabilities. In the absence of further reforms to the pension system, pension obligations after 2024 could represent an annual cost to the budget of about 2% of gross domestic product (GDP). The unfunded pension liabilities in the exclusively defined-benefit system are estimated at about USD 10 billion. Actuarial studies indicate that the exclusively defined-benefit subsystem will incur losses in cash terms in the short term and reserves will be depleted in 2024. To the extent that the defined-benefit component of the new system has similar features, it is also expected to eventually become unsustainable.

A legislated framework for a sustainable fiscal framework

Panama has introduced a series of laws intended to limit fiscal deficits to sustainable levels while smoothing the stance of fiscal policy and ensuring that it can help offset exogenous shocks.

In 2012, the Panamanian government established a Sovereign Wealth Fund (FAP), or *Fondo de Ahorro de Panama*. This law built on and amended the 2008 Social and Fiscal Responsibility Law (SFRL), which prescribed limits to the non-financial public sector deficit and public debt levels. The FAP law modified the earlier framework to support countercyclical fiscal policy, by introducing limits to the "adjusted balance", and to ensure that the rule could absorb significant external shocks. The FAP law set a fiscal consolidation path, from 2.9% of GDP in 2012 to 0.5% in 2018 and thereafter. The revised budget balance rule may also be helpful to enhance credibility and attain stabilisation as economies from the region that have applied fiscal rules are associated with a more stabilising role for fiscal policy (Alberola et al., 2016). The law also introduced a rule intended to mitigate the impact of potential volatility in Canal revenues to the budget by limiting these revenues to 3.5% of GDP, and saving any additional revenues in the FAP, while allowing the fiscal deficit to widen by the amount that contributions from the Canal are less than 3.5% of GDP. The fund was initially financed by absorbing the capital (worth about 3.5% of GDP) from the Fiduciary Fund for Development, which was liquidated.

The FAP law described conditions under which escape clauses could be used and eliminated the possibility of carry-over of funds. The law allows for temporary suspension of deficit ceilings in the cases of:

National emergency declared by the Cabinet. In this case, the maximum additional deficit cannot exceed 1.5% of GDP in the year the emergency occurs or the cost associated with the emergency, whichever is less;

Economic deceleration when GDP grows 2% or less during two consecutive quarters. In this case, the maximum additional deficit allowed is scaled to the magnitude of the deceleration but capped at 2% of GDP. The return to the ceiling should be achieved by the third year with one-third of the needed adjustment in each year. The waiver may be maintained for three consecutive years only as long as the rate of growth of real GDP remains below 2%.

Maintaining the discipline laid out in these laws in practice has been challenging, resulting in amendments to the laws as deficits have exceeded targets. In 2014, the deficit ceilings were changed through one-off amendments to the law, to permit a fiscal deficit of 4.1% of GDP, 1.4% of GDP beyond the limits in the original law.

Towards a lender of last resort in Panama

Panama's history of financial stability reinforces the perception of a highly liquid, self-disciplined and resilient banking sector. The only systemic banking crisis in the last 45 years was the crisis of 1988-89, which was political in origin. There has not been any systemic

banking crisis caused by contagion from foreign financial markets nor from excessive risk taking. Bank failures have been isolated cases with no contagion effects to other domestic banks, even during the 2008-09 global financial crisis. This resilience has shaped the view that the lack of backstops reinforces extreme market discipline, so that banks are very conservative at managing their risks, in particular by holding a large amount of liquidity.

Panama does not have several of the standard fiduciary regulatory institutions and this increases the potential impacts of stress in the financial sector. The absence of a central bank makes Panama the only country in the region that has neither a deposit insurance scheme nor a lender of last resort (LOLR) facility. However, historical experiences show it is possible to insure against deposit runs in the absence of a central bank and they underline the role of the banks in such design (Box 5.2). In addition, market mechanisms do not seem to operate smoothly in allocating liquidity among Panamanian banks, as the interbank market is segmented. Indeed, foreign banks tend to lend only to larger domestic banks. Most countries' financial stability frameworks include institutional arrangements and market-based solutions to mitigate liquidity risk. Deposit insurance schemes reduce the ex-ante probability of bank runs and LOLR facilities provide ex-post support to prevent illiquidity at an individual bank level, in order to contain contagion risk. Similarly, a well-functioning interbank market can be instrumental in managing idiosyncratic liquidity shortages by redistributing aggregate liquidity during periods of stress. The Financial Stimulus Programme in 2009, in which banks made little use of those resources (mainly because both their liquidity and the cost of such resources were relatively high), are useful to take into consideration for an effective design in the future of such mechanisms.

Box 5.2. **Lender of last resort from a historical perspective: Lessons for Panama from earlier experiences**

History offers some examples of how bank runs can be addressed in the absence of a central bank. Under full dollarisation, authorities cannot generally engage in lender of last resort policies in the event of a liquidity crisis. However, alternatives to a central bank liquidity provision might be found, and these can offer some lessons for Panama.

Before the general expansion of central banking, several countries adopted banking systems in which banks' formal or informal co-operation and government intervention attempted to avert banking runs in a context of notes' convertibility to gold or silver and fractional reserves. The international experience is diverse and despite occasional failures some countries manage to set up stable banking systems.

In the case of Canada, between 1867 and 1934 no institutional mechanism against banking runs was established, but the country managed to avoid them successfully. The banking sector consisted of a relatively limited number of large, multi-branch banks, lightly regulated but with very strict limits to entry. The Canadian Bankers Association, established in 1891, served to regulate banks and deal with bank failures, thereby mitigating their effects (Calomiris and Gorton, 1991). This body could guarantee the failing banks' liabilities while distributing their assets and branches among the guaranteeing banks (Bordo, Redish, and Rockoff, 2015).

From 1837-1913, prior to the creation of the Federal Reserve System, the US banking system operated without a central bank. However, a private substitute for a public lender of last resort progressively emerged as members of the main financial centres' clearing houses pooled their liquid resources during crises. In addition to the traditional role of clearing houses, during the banking panic of 1857, the New York City clearinghouse started issuing emergency liquidity to the banks in the form of loan certificates (Gorton, 1985). To access these facilities and therefore to obtain resources in case of a bank run, a member bank needed to

Box 5.2. **Lender of last resort from a historical perspective: Lessons for Panama from earlier experiences** (*cont.*)

submit collateral to the clearinghouse's loan committee. After assessing the value of the posted collateral and applying a haircut, the committee issued one- to three-month debt certificates which were \ backed by the bank's portfolio of assets, jointly guaranteed by all clearinghouse members and paid an interest rate. Debtor banks could then use the certificates instead of cash to pay creditor banks in the clearing process. During the panics of 1893 and 1907, clearinghouses even allowed banks to redeem deposits to the public in loan certificates (Gorton, 1985). At the same time, clearinghouses also closely supervised their member banks by auditing their balance sheets and subjecting them to capital and reserve requirements.

The clearing houses' activities during banking crises were very similar to those of a central bank (Gorton, 1985). However, clearing houses differed from traditional central banks because they did not directly issue currency to the public. Instead their main role was to stimulate interbank lending during crises (Hoag, 2016). In addition, restrictions in clearing-house membership had negative consequences as non-member banks that were not subject to regulation engaged in riskier investment decisions, which threatened the stability of the overall financial system (Jaremski, 2017). In contrast to a central bank issuing its own currency, clearing houses also did not have unlimited ability to expand liquidity. Nevertheless, they appear to have played a stabilising role during banking panics.

In Argentina, following the currency and banking crisis of 1890, free banking was abandoned and two new institutions were constituted, the *Caja de Conversión* and the *Banco de la Nación Argentina* (BNA). The former was the first Argentinian currency board. It was in charge of the monetary issue and established the convertibility of the currency (Gomez, 2016). The latter acted both as a government and as a commercial bank, and increasingly assumed functions of lender of last resort, albeit with limited rediscount capacity (Capie et al., 1994; Della Paolera and Taylor, 2001). The functions of both institutions were strictly separated, in an attempt to boost the confidence in the monetary regime (gold standard). Only under exceptional circumstances could the BNA have access to the reserves and funds granting the convertibility of the currency, for which authorisation had to be obtained from the Ministry of Finance. The system operated successfully until 1914 and the BNA occasionally intervened providing credit and rediscounting bills to banks in financial distress.

Sources: Box prepared by Olivier Accominotti, Associate Professor, London School of Economics and Political Science, and Juan Flores, Associate Professor, Université de Genève.

Towards better international transparency and exchange of information to rebuild reputation

The unauthorised release of about 11.5 million documents from Mossack Fonseca, a Panama-based law firm, in April 2016, raised serious reputational risks for Panama. The result of years of secretive investigation by journalists and data scientists, the leak included 2.6 terabytes of data from about 215 000 offshore bank accounts and shell companies over the period 1977–2015 (Santiso and Roseth, 2017). Although the immediate macroeconomic, direct impact seems to be low, the reputational risk could have widespread impact on the country. Legal services related to incorporations (the establishment and selling of companies, foundations and trusts) are estimated to represent only around 0.7% of GDP (IMF, 2016). Following leak of data from the Mossack Fonseca documents, the sovereign bond spread remained stable and low at close to 200 basis points. However, there is concern that the lack of confidence and the reputation of the country in international markets could have important effects on foreign investment and service sectors of the economy (see Chapter 2), including the operations linked to financial markets.

In 2016, following the leaks, the G20 announced plans to prepare lists, by July 2017, of jurisdictions that are non-cooperative with regard to implementation of tax transparency standards. The European Union also announced similar plans with tax transparency as one of three key criteria for determining a jurisdiction as co-operative and with the list to be prepared by end of 2017. To minimise the reputational damage for the country, and to avoid being put in the G20 or EU lists of non-cooperative jurisdictions (thus risking further reputational damage and possible defensive measures), Panama should demonstrate effective implementation of the global standards of transparency and exchange of tax information. Following the data leaks, in 2016, Panama took several steps in this regard. While its 2016 peer review report, which assessed the effective implementation of the international standard of exchange of information on request (EOIR), rated Panama as overall non-compliant, Panama brought about many changes to its legal framework and its practices for exchange of information to address the recommendations made in the report.

In May 2016, Panama also committed to the international standard of Automatic Exchange of Financial Account Information, and in October 2016 signed the multilateral Convention on Mutual Administrative Assistance in Tax Matters. The first test of these changes is likely to take place under a fast-track review procedure put in place by the Global Forum on Transparency and Exchange of Information for Tax Purposes[2] in the first half of 2017, as well as a new round of peer reviews that will follow shortly afterwards.

Advances in the exchange of information on request for tax purposes

Since Panama joined the Global Forum in 2009, and following several interactions and recommendations from the Global Forum, some progress has been achieved to improve the exchange of information. Starting with the Phase 1 Peer Review by the Global Forum in September 2010 to assess the EOIR legal and regulatory framework, and followed by two supplementary reviews in 2014 and 2015, Panama has advanced key legislative changes (OECD, 2010). This includes the introduction of a mechanism to identify the owners of bearer shares and their custodial regimes, the enhancement of its Anti-Money Laundering framework, and the signing of some treaties enabling exchange of information. In light of these actions undertaken, the Global Forum concluded in 2015 that Panama was in a position to move to its Phase 2 Peer Review which examines EOIR in practice.

Following the Phase 2 Peer Review Report adopted by the Global Forum in November 2016, Panama has undertaken key measures aimed to comply with international standards on EOIR. Panama's Phase 2 review rated Panama overall as non-compliant with the EOIR standard and showed that Panama experienced serious difficulties in obtaining and exchanging information for tax purposes during the 2012-15 review period (OECD, 2016a). Since the review was completed, Panama has addressed many of the recommendations made by the Global Forum. Some of these measures included amendments to its domestic legislation. These amendments aim to introduce an enhanced strike-off regime regarding deemed inactive companies; eliminate uncertainty regarding bearer shares, by clarifying that bearer shares that have not been deposited with a custodian are cancelled and cannot be reactivated or restored; introduce requirements to keep accounting information for all relevant entities and enhance their access powers and enforcement provisions; and reorganise its Competent Authority office, processes and procedures with substantial new resources allocated.

The Global Forum in November 2016 agreed on a fast-track review procedure to assess changes made by jurisdictions with partially compliant or non-compliant ratings, with the evaluation to be made in the first half of 2017, and the results communicated to the G20 for

the purposes of consideration in preparation of the list of non-cooperative jurisdictions. Consequently, Panama underwent the fast-track review procedure in the first half of 2017 and the Global Forum assigned the following provisional up-grade to Panama as a largely compliant country. A new round of reviews will follow this decision. Finally, over the past years, Panama has received EOI requests from a number of jurisdictions in Europe and North America, including OECD countries. Panama's responses and communications regarding EOIR have improved as it works towards complying more fully with the international standards.

Recent commitments to implement the automatic exchange of information and to tackle tax avoidance and evasion

In May 2016 Panama committed to implementing the international standard of Automatic Exchange of Financial Account Information (AEOI), the Common Reporting Standard endorsed by G20 leaders and the Global Forum, with exchanges starting in 2018. With this commitment, Panama joins the other 99 jurisdictions that have committed to implementing the AEOI standard by 2017 and 2018. Significantly, at the end of 2016 Panama passed domestic legislation regarding the implementation of the AEOI. In addition, Panama has been in contact with some OECD countries to initiate AEOI and put in place an international legal framework for automatic exchanges. In particular, some advancement has been realised with Germany and Japan. At the end of October 2016 Panama signed the multilateral Convention on Mutual Administrative Assistance in Tax Matters, greatly extending its exchange of information network. This convention is the most comprehensive multilateral instrument available for all forms of tax co-operation to tackle tax evasion and avoidance, a top priority for all countries. The convention was ratified in March 2017.

At the end of October 2016, Panama also joined the Inclusive Framework on Base Erosion and Profit Shifting (BEPS). Strengthening the international tax rules of Panama, including through the implementation of the recommendations of the BEPS project, will help create a more even playing field, which will enhance the reputation of the country. The recent move towards Automatic Exchange of Information for Tax Purposes will help fight tax evasion and give greater scope to tax both domestic and foreign-source income earned by tax-resident businesses and households. Finally, Panama may also want to strengthen its tax administration in order to reduce tax evasion as part of a broader tax reform strategy that aims at increasing productivity and reducing inequality. Twelve Latin American countries – Argentina, Brazil, Chile, Colombia, Costa Rica, Haiti, Jamaica, Mexico, Panama, Paraguay, Peru and Uruguay – are among the 94 countries that have joined the inclusive framework on BEPS.

Better regulation and institutions to entrepreneurship and private sector involvement

Panama's business regulation to promote entrepreneurship ranks well but there is room for improvement

To promote entrepreneurship and the long-term ability of firms to accumulate in-house innovation capabilities, policies should go beyond greater expenditure on research and development. In addition to the education and skills challenges (see Chapter 3), business environment and regulation can affect entrepreneurship.

Panama has introduced programmes to support start-ups since 2010. This is similar to some Latin American economies, such as Argentina, Brazil, Chile, Colombia, Mexico, Peru and Uruguay. Unlike more traditional policies to support innovation and competitiveness,

these programmes have evolved rapidly. In the space of a few years they have taken on a different design, focus and structure. Results are beginning to emerge, especially regarding people's perceptions of the region and its image as a place for innovative entrepreneurship (OECD, 2016b). These policies are fundamental to guaranteeing that entrepreneurship is a choice rather than an obligation that can affect formal jobs (OECD/CAF/ECLAC, 2016).

While political corruption and improvements in the judicial system (including contract enforcement) remain a concern in Panama (see Chapter 5), Panama ranks well in practices regarding regulations concerned with starting businesses and entrepreneurship.

Over the last decade Panama has taken action to simplify business regulations and strengthen legal institutions to promote formal business practices. For instance, the World Bank *Doing Business* indicator regarding the cost of starting a business in Panama fell to 5.8% of income per capita in 2016 from 14.6% of income per capita in 2005, placing Panama better than most Latin American economies and the average of benchmark economies. Similarly, its worldwide position regarding red tape is backed up by time and number of procedures needed to start a business. With only five procedures and six days to start a business, Panama ranks as one of the best performers in the region and better than the average of benchmark economies. In addition, property rights including financial assets are perceived to be well-protected (World Bank, 2016).

The OECD's Indicators of Product Market Regulation (PMR) are a set of comprehensive and internationally comparable indicators that measure the degree to which policies promote or inhibit competition in many areas of the product market. Alongside the pillars of state control and barriers to trade and investment, barriers to entrepreneurship constitute the third pillar with which to analyse product market regulation in the OECD framework (Barbiero et al., 2015). Based on the PMR indicators, the World Bank and the OECD have jointly compiled quantitative indicators measuring the extent to which regulation in emerging-market economies promotes or inhibits competition in product markets. In the case of Panama and five other Latin American economies, a PMR indicator has been compiled through collaboration among the World Bank, the Inter-American Development Bank and the OECD.

Panama diverges from the rest of the region by exhibiting low barriers to entrepreneurship that are similar to the OECD average. The "barriers to entrepreneurship" component of the PMR measures the extent to which regulations facilitate or inhibit the entry of new firms. This component captures the complexity of regulation related to licence and permit systems, and to communication of those rules and procedures; the administrative burdens on start-ups (e.g. number of procedures and bodies needed to contact to register a company); and the regulatory protection of incumbents through legal barriers to entry and antitrust exemptions (Barbiero et al., 2015). In these three categories Panama ranks well compared to Latin American economies and the average of benchmark economies (Figure 5.6). However, there is room for improvement in the "complexity of regulatory procedures" component, and in particular in aspects related to communication and simplification of rules and procedures. In that respect, Panama's gap remains particularly high compared to best practices in OECD benchmark countries, such as Australia, Korea, Netherlands and New Zealand. Also, as highlighted below, in a sub-component of the regulatory protection of incumbents (i.e. barriers in network sectors), Panama should still increase competition.

Figure 5.6. **Barriers to entrepreneurship index (Product Market Regulation)**

(Scale 0 to 6 from least to most restrictive)
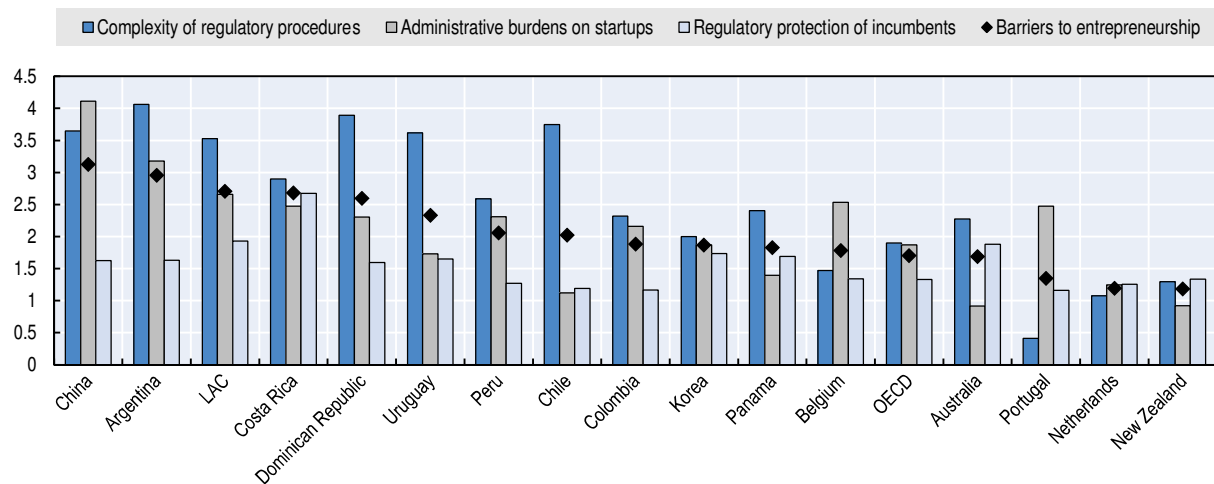
Note: In the case of Panama (2015 data), the PMR indicator has been compiled through collaboration among the World Bank, the Inter-American Development Bank and the OECD. The result for Panama is reported as preliminary. LAC (Latin American and the Caribbean) countries are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

Source: OECD PMR database for all OECD economies, and OECD-World Bank Group PMR database for other Latin American economies. For Panama the data are for 2015, and for all others the data are 2013.

StatLink ⧉ *http://dx.doi.org/10.1787/888933551903*

Stronger competition, regulatory and institutional framework should promote further entrepreneurship

Competition among firms can lead to increased productivity and economic growth. Policies promoting competition, entry of new firms in the market and expansion of existing firms may have a relevant impact on improving total factor productivity. Experiences across different industries in emerging and developed markets corroborate this positive relationship (Lewis, 2004; Cole and Ohanian, 2004). Furthermore, policies that promote competitive markets, such as enforcing competition law and removing regulations that restrict competition, result in faster economic growth (OECD, 2013).

Eliminating barriers in the network sectors should promote competition in Panama. Following the Indicators of Product Market Regulation described above, the category "regulatory protection of incumbents" has three sub-components: legal barriers to entry, antitrust exemptions and barriers in network sectors (Barbiero et al., 2015). While Panama performs at the OECD levels for the first two sub-components, improvements in the third are needed. Barriers in the network sectors (i.e. telecommunications, utilities, post, rail, air passenger transport and roads) hinder competition. The OECD's Competition Assessment Toolkit could be used to assess regulation applicable to those sectors in order to identify competition restrictions and propose less-restrictive measures. In contrast, Panama's legal system performs well in preventing anti-trust behaviours and establishes few legal barriers for the entry of new firms.

Acknowledging the benefits of competition, the Panamanian constitution safeguards free competition and unhindered access to markets. *The Autoridad de Protección al Consumidor y Defensa de la Competencia* (ACODECO) is responsible for guaranteeing compliance with competition policies and for protecting consumer rights and interests. ACODECO is a

public body independent of the central government and comprises two directorates, one focused on consumer protection and the other on competition policies. Fulfilling its role as a competition regulator, ACODECO's National Directorate of Free Competition keeps watch on market competition through market studies and technical reports to identify and discourage monopolistic practices. The selection of markets studied follows suggestions from government agencies, consumers and research carried out at ACODECO. This selection process is further refined by considering, among others, market structure, size and impact to consumers. Based on the National Directorate of Free Competition's assessments, ACODECO advances competition advocacy and recommends concrete pro-competition measures to be undertaken by governments and regulatory agencies.

ACODECO's investigations may lead to the prohibition of monopolistic behaviour or efficiency-reducing mergers. Such investigations may include dawn raids to collect information when authorised by a judge. Moreover, if a court confirms the existence of anti-competitive practices, ACODECO indicates the appropriate measures. In the case of mergers, the agency can modify the conditions of the transaction or prevent the merger from taking place. Sanctions imposed for monopolistic practices may include fines up to USD 1 million (OECD/IDB, 2010). The fines collected in 2016 amounted to USD 1.67 million and USD 3.37 million in 2015 (ACODECO, 2017).

ACODECO has improved both transparency and accountability by adopting strategic objectives and the corresponding results-based framework. Yet ACODECO should develop a framework for assessing impact of advocacy/promotion measures regarding the importance of competition. ACODECO should also asses the implementation of the recommendations resulting from market studies, and quantify the economic benefits of the recommendations (OECD, 2015b).

Although the management and results of ACODECO have been positive in the selection of competition cases and in advocacy campaigns, its limited budget and workforce affect its performance. The number of ACODECO staff increased to 620 employees in 2015 from 248 in 2005, yet it fell to 482 employees during the past two years owing to budget constraints. The increasing number of on-going investigations into monopolistic practices demands further staff and budget. ACODECO's advocacy programmes on consumer rights reached about 38 000 people in 2016. It is therefore fundamental to continue promoting the benefits of competition, both among citizens and policy makers. The implementation of multi-annual budgets would contribute to consolidating the independence of ACODECO.

A complete set of recommendations on how to foster competition in Panama could be achieved through a peer review of competition law and policy. The OECD country reviews of national competition laws and policies assess how each country handles competition and regulatory issues, from the soundness of its competition law to the structure and effectiveness of its competition institutions. A competition law and policy peer review in Panama was carried out in 2010 (OECD/IDB, 2010). In addition, in 2015 the OECD published a report focusing on market studies covering six Latin American countries including Panama (OECD, 2015b). Seven years after the first peer review report, Panama would now benefit from an updated assessment, in light of the changing market conditions and the results of the first review. Panama's regulations in the network sectors could also be subject to a competition assessment on the basis of the OECD's Competition Assessment Toolkit to identify competition restrictions imposed by the regulation and to point to less restrictive measures.

Towards sound regulatory and institutional frameworks for public-private partnerships in Panama

Public-private partnership projects on transport in Latin American countries have been inefficient and have led to increases in the total cost of these projects. The performance of concessions is determined by the contract, and by regulatory and institutional design. Flaws in the design of concession contracts have caused excessive costs in Latin America (OECD/ECLAC, 2012). For instance, in the case of Chile, Colombia and Peru for the period 1993-2010, 50 out of 61 road contracts have been modified at least once, resulting in more than 540 renegotiations. All modified contracts were changed for the first time less than three years after the initial signing of the concession (Bitran, Nieto-Parra and Robledo, 2013).

Between 2012 and 2014, Panama descended to 14th place from 11th place out of 19 countries on the environment for public-private partnerships, the biggest deterioration in ranking of all Latin American and Caribbean (LAC) countries. In particular, Panama showed inefficiencies on public-private partnerships in three key components, and ranks at the bottom of the 19 LAC countries covered. First, regarding the institutional framework, Panama needs to improve the quality of institutional design, the design of public-private partnerships contracts, and the management of hold-up and expropriation risks. Only Ecuador and Venezuela rank worse than Panama for this component. Second, regarding operational maturity, there is low public capacity to plan and oversee public-private partnerships as well as methods and criteria for awarding projects, and poor regulators' risk allocation. Third, sub-national adjustments, including sub-national activities and capacities on public-private partnerships at local level, should be improved. Panama ranks at the bottom among countries covered. Regarding the two last components, only Venezuela ranks worse than Panama (EIU, 2015).

Panama needs to update current legislation on public-private partnerships. The law regulating concession projects, including roads and airports, is from 1988 (Law No. 5 of 1988). In 2011 a law proposal was withdrawn at the Congress. A key actor in road concessions is the *Empresa Nacional de Autopistas S.A.* (ENA), or the National Road Company. ENA is a state-owned company created in 2010 that can undertake road concessions directly or invest in private sector transport companies. The institutional framework of the ENA encourages fiscal discipline and incentivises public-private partnerships where value for money exists. However, ENA can initiate concessions by itself, crowding out private participation and raising possible conflicts of interest within the institution.

Sound regulatory and institutional frameworks are fundamental to increasing the effectiveness of public-private partnerships in Panama. Weaknesses in the prioritisation and planning phases cause inefficiencies in public-private partnership projects. Empirical analysis in Latin American economies, such as Chile, Colombia and Peru, suggests that state-led renegotiations, which were more common than firm-led renegotiations, were motivated by the opportunistic behaviour of governments. State-led renegotiations that added new stretches of roads and that included additional complementary works during governments' last year in office were costlier than other renegotiations (Bitran, Nieto-Parra and Robledo, 2013). Furthermore, delays and inefficiencies in the processes of environmental and land licensing as well as consultation with local actors have affected the timing and certainty of concession contracts in the region. Finally, most of the concession schemes at national level do not apply to regional and municipal governments, affecting the capacity to undertake effective public-private partnerships at local level. Future legislation in Panama
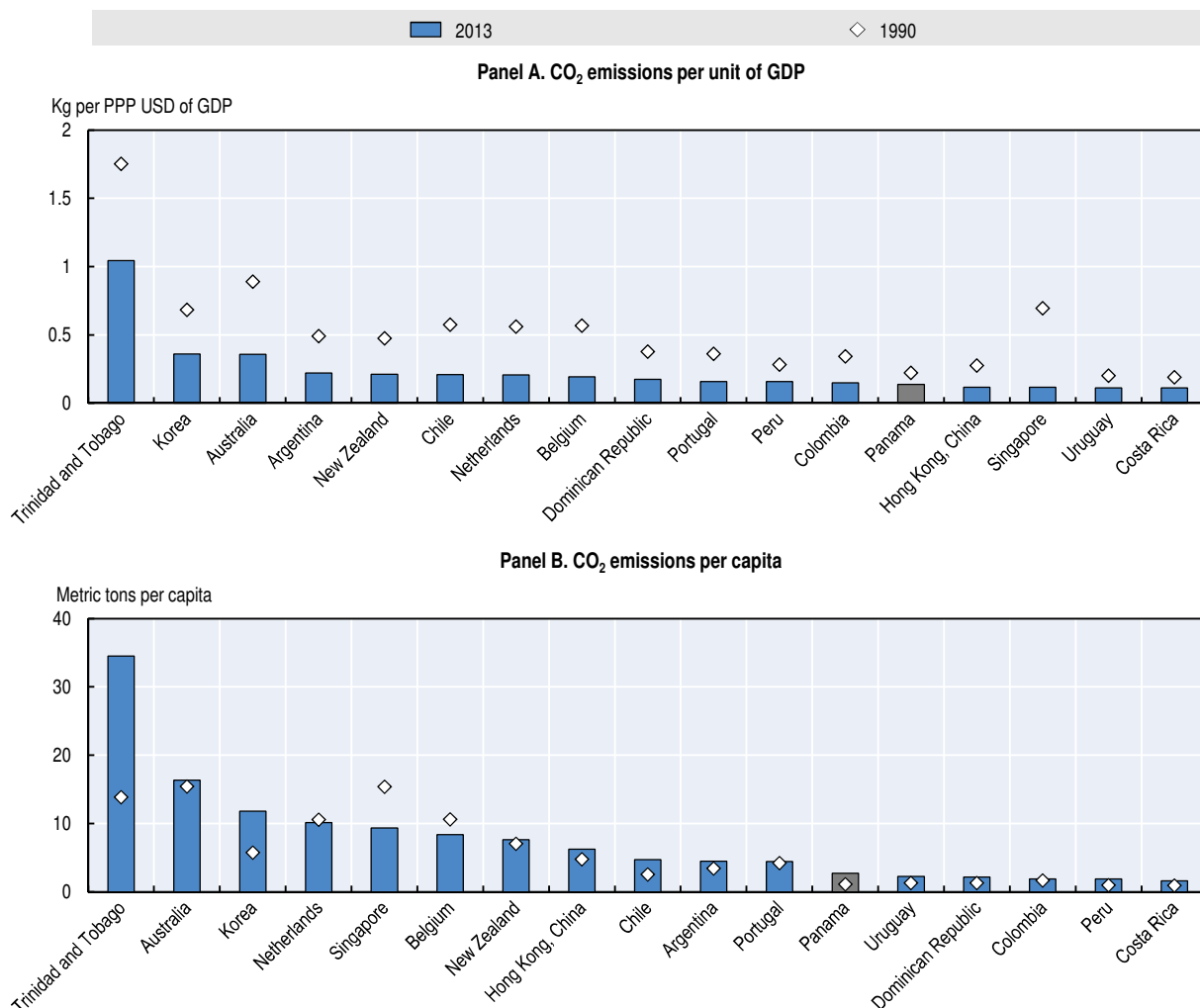
regarding public-private partnerships should take into consideration measures to avoid these inefficiencies. Ex-ante feasibility studies and the institutional framework supporting value-for-money evaluations could help solve difficulties at the stages highlighted above.

Environmental sustainability to green growth in Panama

Environmental factors will also have a bearing on the sustainability of Panama's development in the medium to long term. Looking forward, the changing sectoral composition of Panama's economy may intensify the environmental impact of growth. The country's regulatory framework and institutional capacity need to be ready to ensure that economic progress does not come at the cost of environmental degradation.

Panama's infrastructure and services-dominated development model has put the country on a relatively low-carbon growth path. The carbon intensity of Panama's economy has fallen since 1990 and while CO_2 emissions per capita have risen in the same period, they still remain low relative to the benchmark economies (Figure 5.7).

Figure 5.7. **Panama's CO_2 emissions are relatively low compared to benchmark economies**

Panel A. CO_2 emissions per unit of GDP

Panel B. CO_2 emissions per capita

Source: World Bank (2017), *World Development Indicators, http://data.worldbank.org/data-catalog/world-development-indicators*

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Looking forward, the changing sectoral composition of Panama's economy may intensify the environmental impact of growth. Tourism and mining, two potential growth sectors in Panama, can bring with them considerable local environmental impacts such as habitat loss, natural resource depletion, and water, air and soil pollution. In addition, they could potentially increase the carbon intensity of growth depending on how the energy requirements of the sectors are met.

Meeting the growing demand for energy has so far relied on the increased use of fossil fuels. Since the 1990s the expansion of energy supply has been achieved through a greater reliance on fossil fuels (especially oil products and coal), and the share of renewable energy has fallen by 22 percentage points to 19% in 2014 (Figure 5.8). As Chapter 2 showed, energy supply is already a constraint reported by firms in Panama. The need to increase the energy supply will be even greater if the economy shifts towards energy-intensive sectors such as mining. Already, a 300-megawatt coal-fired power plant is proposed to power the Cobre Panama open-pit copper development project. Coal is the most CO_2-intensive fuel, but even beyond greenhouse gas emissions coal-fired power plants have local environmental and health consequences through emissions of SO_2, NO_x and particulate matter. This is a particular concern given that levels of $PM_{2.5}$ air pollution have already started to creep up again after having declined in the 2000s.

Figure 5.8. **The share of renewables in Panama's energy mix has been falling**

Renewable energy as percentage of primary energy supply, 1980-2014
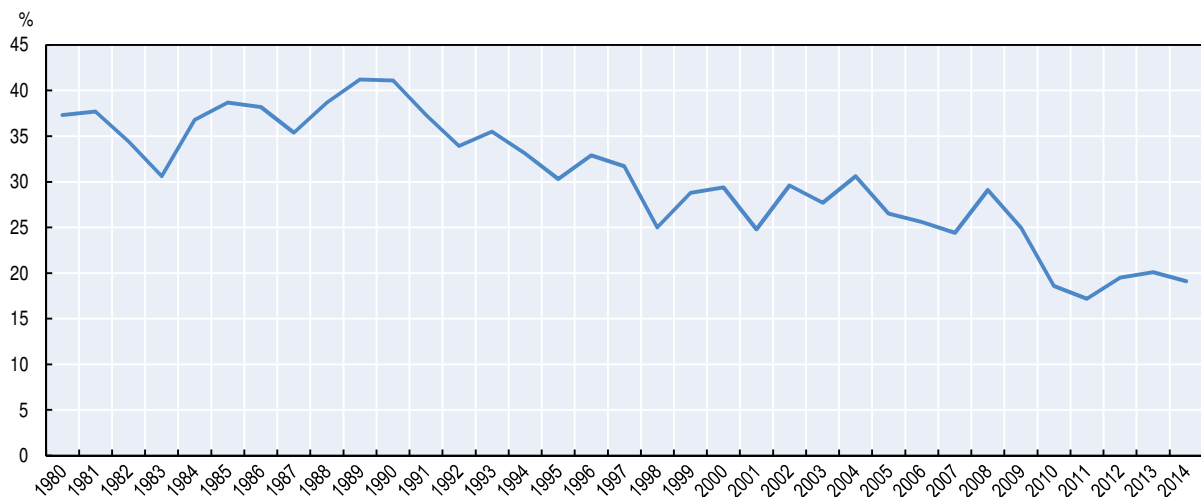
Panama has stated its commitment to pursuing a low-carbon development path. Its nationally determined contribution to the United Nations Framework Convention on Climate Change Paris Agreement states the goal to increase the installed capacity from renewable sources such as wind and solar by 30%, and the *Plan Energético Nacional 2015-2050* (National Energy Plan 2015-2050) establishes that 15% of Panama's generation capacity will come from renewables by 2030 and 50% by 2050 (Secretaría Nacional de Energía, 2016). The government is also bringing liquefied natural gas (LNG) into the country's energy mix. A planned LNG facility will displace at least 2 100 gigawatt hours of power currently generated from heavy fuel oil and diesel and will offset 4% of Panama's CO_2 emissions each year.

Water management has been a perennial priority given the importance of the Panama Canal to the economy. The Canal requires huge volumes of fresh water drawn from the Panama Canal Watershed (PCW) to operate. The PCW also provides drinking water for 95% of the population in the cities of Colón (207 000 people), Panamá (881 000 people), San Miguelito (315 000 people) and, in the near future, in La Chorrera (161 000 people).[3] The original Panama Canal uses 52 million gallons of fresh water for each ship that passes through, equal to the daily domestic consumption of 500 000 Panamanians (Carse, 2012). With an average of 40 ships crossing the isthmus each day, this amounts to 2 billion gallons in total daily. The Canal expansion has nearly doubled the water demand, requiring an additional 1.8 billion gallons of fresh water per day. Ensuring an adequate water supply for the Canal's operations and for the population in the PCW is a challenge that is periodically exacerbated by El Niño. This weather system occurs every two to seven years, bringing drought to Panama and lowering the water level in the Canal, limiting the size of ships that can pass through.

Panama practises integrated watershed management that combines engineered technologies with land use planning and environmental regulations. Integrated watershed management has been practised since the signing of the Canal Treaties in 1977 (Carse, 2012). Deforestation leads to increased run-off from the land that deposits sediment into the Canal, threatening its operations. In addition to the system of locks, dams, reservoirs and hydrographic stations, the watershed's forests are considered to serve the Canal and form an integral part of managing its water supply. The Panamanian government has acted to protect the remaining watershed forests, launched reforestation initiatives and restricted farming practices in order to ensure an adequate supply of water for the operation of the Canal.
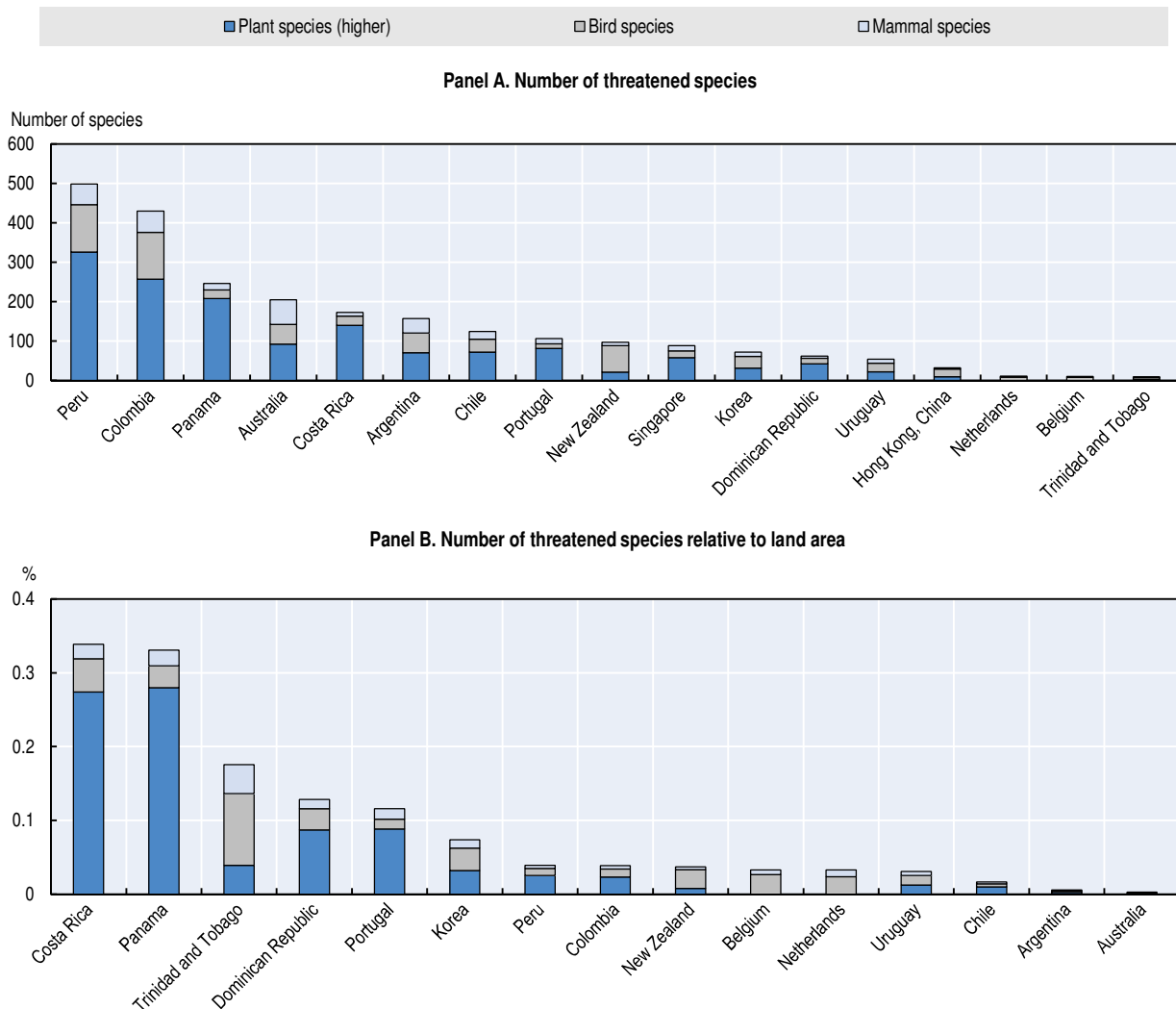
Astute water management will remain critical to Panama's development. Increased water demand from the expanded Canal combined with a growing urban population puts the country at risk of water stress. It is predicted that by 2040, Panama City will become threatened by water supply vulnerability as urban sector demand increases and the supply basin fails to simultaneously meet demands from human, environmental and agricultural users (Padowski and Gorelick, 2014). Changing weather patterns due to climate change will also need to be factored in to the long-term planning for PCW management. Water quality as well is a concern that will need careful monitoring as the environmental impact of the Canal expansion unfolds. Seawater intrusion of Lake Gatun, for example, has been cited as one of the risks (Jongeling, 2005).

Despite efforts, deforestation is a concern in parts of the country. Today over 60% of Panama's land is covered by forests and the country's annual deforestation rate has remained stable at 0.4% per year between 1990 and 2015 (FAO, 2015), a lower rate than in previous decades. However, deforestation remains a concern in certain regions, such as the Colón, Darién and Bocas del Toro provinces, where it could initiate a process of soil erosion and nutrient depletion of the land, contribute to greenhouse gas emissions and threaten biodiversity (Figure 5.9). Panama enjoys the most diverse wildlife of all Central American countries and its forests form an important corridor for migrating birds and animals. Forests have been cut down to make way for roads, agriculture, cattle ranching and mining, and illegal logging is a particular concern. The government has been taking action to address the problem. For example, it signed the Agreement for the Establishment of the Legal Timber Network, which is intended to promote policies for the responsible purchase of forest products (FAO, 2017). It has also expanded designated protected areas (now 27% of the country is protected), although there has been mixed success in terms of its ability

to control deforestation: some protected areas have been relatively effective while others, such as Palo Seco and La Amistad, have not (Oestreicher et al., 2009).

Going forward, there are signs that Panama's development trajectory and in particular the emergence of new sectors such as mining and tourism will result in greater environmental impact of economic activity. The regulatory framework and institutional capacity need to be ready to ensure that economic progress does not come at the cost of environmental degradation. As well as resulting in the loss of a resource of intrinsic value, environmental degradation could constrain further development. The Ministry of Trade and Industry announced in 2015 that the government was working on a reform package to overhaul the institutional and environmental framework for mining activities. The environmental implications of any reforms need to be carefully scrutinised. With regards to tourism, the government is taking steps to sustainably develop the sector. In 2016, the Ministry of Environment, the Tourism Authority and the National Institute of Culture with the support of the Chamber of Tourism presented their vision for the development of the sector along with plans to develop a Green Tourism action plan.

Figure 5.9. **Many species are under threat in Panama**

Panel A. Number of threatened species

Panel B. Number of threatened species relative to land area

Source: World Bank (2017), *World Development Indicators*, *http://data.worldbank.org/data-catalog/world-development-indicators*.

StatLink 🖳 *http://dx.doi.org/10.1787/888933551960*

Conclusions

Rebuilding confidence and trust in institutions is fundamental to achieving Panama's agenda for development and therefore inclusive growth. Better institutional capacity to deliver public services to citizens is also fundamental to move towards a social contract in the country. At the international level, the effective implementation of international transparency and exchange of information should rebuild confidence in the international arenas.

In addition, to increase the soundness of financial sustainability in the economy, the progress achieved in the past five years at the fiscal level could be expanded to a better management of the pension system and the solvency of the financial system through a lender of last resort in case of deposit runs.

Sound institutional and regulatory frameworks are fundamental to enhance entrepreneurship and promote private sector involvement in public services. Compared to other Latin American economies, Panama ranks well in policies promoting entrepreneurship. However, there is room for improvement in the complexity of regulatory procedures and in barriers in network sectors to increase competition. Regarding public-private partnerships, Panama needs to enhance both the regulatory and institutional frameworks.

Finally, to move towards a green growth economy, the regulatory framework and institutional capacity need to be ready to ensure that economic progress does not come at the cost of environmental degradation. Recent efforts by the Ministry of Environment are steps in that direction.

Notes

1. See *http://www.oecd.org/gov/cog.htm* for further OECD analysis of the role of Centre of Government (CoG).

2. The Global Forum on Transparency and Exchange of Information for Tax Purposes has 139 member jurisdictions, all of which have committed to the standard on exchange of information "on request". In addition, 100 jurisdictions including two non-members, Faroe Islands and Greenland, have committed to implementing the standard of automatic exchange of financial account information (the Common Reporting Standard) with exchanges starting in 2017 or 2018. Furthermore, 106 jurisdictions have joined the multilateral Convention on Mutual Administrative Assistance in Tax Matters.

3. See *http://micanaldepanama.com/nosotros/cuenca-hidrografica/*.

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