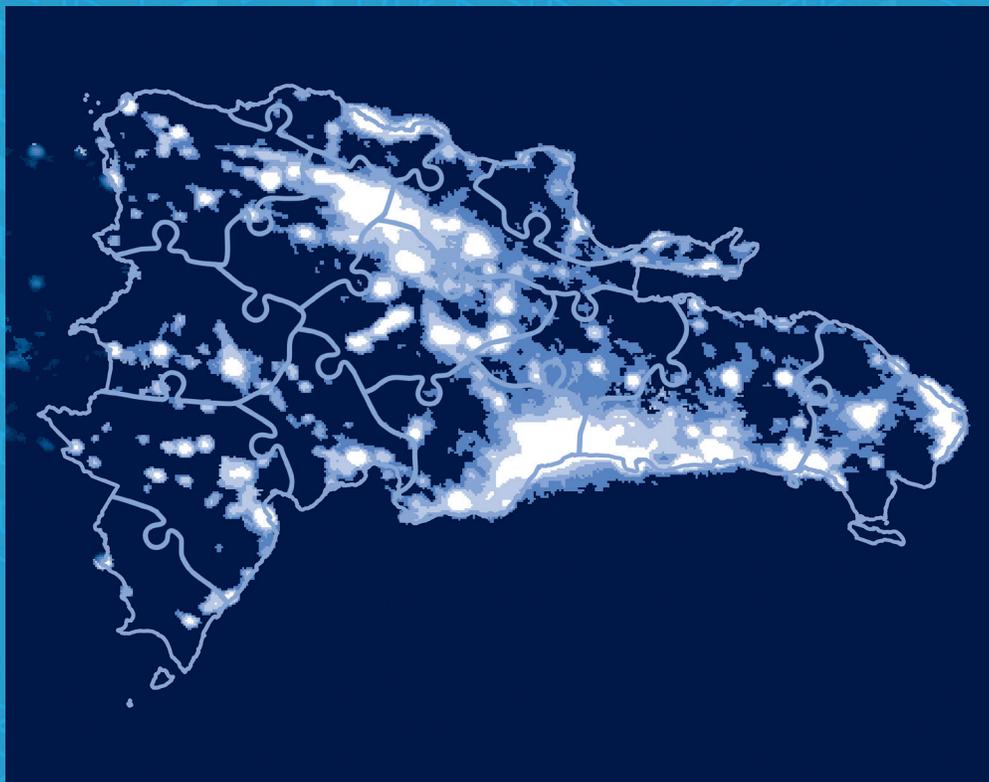


JUNE 2018

# DOMINICAN REPUBLIC

## SYSTEMATIC COUNTRY DIAGNOSTIC





DOMINICAN REPUBLIC  
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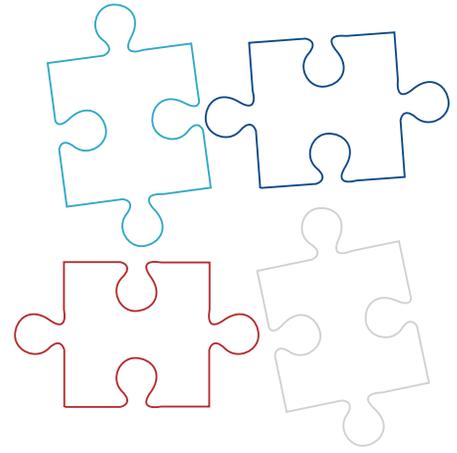
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# List of acronyms

ACS	American Community Survey
ADESS	Administradora de Subsidios Sociales
API	Access to Public Information
BCRD	Banco Central de la República Dominicana
BEC	Broad Economic Categories
BOP	Balance of Payments
BVRD	Bolsa de Valores de República Dominicana
CA	Central America
CAFTA	Central America Free Trade Agreement
CCT	Conditional Cash Transfer
CDEEE	Corporación Dominicana de Empresas Eléctricas
CEI-RD	Centro de Exportación e Inversión de la República Dominicana
CEPAL	Comisión Económica para América Latina y el Caribe
CEPII	Centre d'Études Prospectives et d'Informations Internationales
CIF	Cost Insurance and Freight
CIT	Corporate Income Tax
CNE	Comisión Nacional de Energía
CPF	Country Partnership Framework
CORAA	Corporación de Acueducto y Alcantarillado
DGII	Dirección General de Impuestos Internos
ENFT	Encuesta Nacional de Fuerza de Trabajo
EU	European Union
EXPY	Export Basket Productivity
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FOB	Free On Board
FTA	Free Trade Agreement
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GNI	Gross National Income
GSD	Gran Santo Domingo

GVC	Global Value Chains
HOI	Human Opportunity Index
HPV	Human Papilloma Virus
ICT	Information and Communications Technology
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IMF	International Monetary Fund
IPAC	Iniciativas Participativas Anti-Corrupción
IVACC	Indice de Vulnerabilidad Ante Choques Climáticos
JCE	Junta Central Electoral
LAC	Latin America and the Caribbean
LAPOP	Latin America Public Opinion Project
MEPYD	Ministerio de Economía, Planificación y Desarrollo
MESCYT	Ministerio de Educación Superior, Ciencia y Tecnología
MFA	Multi-Fiber Agreement
MFI	Micro-Finance Institution
MIGA	Multilateral Investment Guarantee Agency
MINERD	Ministerio de Educación de la República Dominicana
NA	National accounts
NDC	Nationally Determined Contribution
NFPS	Non-Financial Public Sector
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development
ONE	Oficina Nacional de Estadística
PEFA	Public Expenditure and Financial Accountability
PISA	Programme for International Student Assessment
PR	Public Relations
PROSOLI	Progresando con Solidaridad
RTI	Right to Information
SCD	Systematic Country Diagnostic
SEDLAC	Socio-Economic Database for Latin America and the Caribbean
SEZ	Special Economic Zones
SIUBEN	Sistema Unico de Beneficiarios
SME	Small and Medium Enterprises
TERCE	Tercer Estudio Regional Comparativo y Explicativo
TFP	Total Factor Productivity
UMI	Upper Middle Income
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
VAT	Value-Added Tax
WB	World Bank
WDI	World Development Indicators
WDR	World Development Report
WHO	World Health Organization
WTO	World Trade Organization
WBES	World Bank Enterprise Survey
WEO	World Economic Outlook
WYSE	World Youth Student and Educational



## CHAPTER 1

# Overview

Geography, favorable external conditions, and the structural reforms of the nineties bolstered twenty-five years of high growth and social progress

**A**fter a severe economic recession in 1990, the Dominican Republic (DR) has experienced a remarkable period of high economic growth over the past 25 years. The economy expanded by an average growth rate of 5.3 percent per year from 1993 to 2017, allowing the country to reduce the gap with respect to the living standards of high-income countries and making it one of the top performers in both Latin America and the Caribbean (LAC), and the world. Moreover, the country has experienced a relatively stable growth. After spiking in the 1980s, growth volatility gradually fell throughout the 1993-2017 period, even amid the country's exposure to natural disasters and coping with two subsequent crises: a domestic banking crisis in 2003 and the global financial crisis of 2009.

**High growth was the result of both a series of key economic reforms implemented in the 1990s and 2000s and favorable geographic and external economic conditions.** The DR pursued economic reforms

including the liberalization of foreign exchange transactions, the introduction of new trade agreements, the elimination of price controls and of restrictions on foreign direct investment (FDI) in almost every sector, as well as trade liberalization. More recently, the country implemented an inflation targeting regime that has helped keep inflation at historically low levels. Broad-based structural reforms were accompanied by a series of laws that provided incentives aimed at attracting FDI, and favoring specific sectors and firms. Following the enactment of law No. 16-95 in 1995, which opened the possibility for foreign investments in almost every economic sector, the country introduced a series of laws providing tax incentives to foreign investment. The pro-growth effects of economic reforms were amplified by favorable external conditions and an advantageous geographic location. The DR was favored by the Multi-fiber Agreement (MFA), which imposed quotas to the exports of textiles from developing countries to high-income markets, and protected Dominican exports of textiles to the US against competition from countries like China. Proximity to North American markets and natural endowment of beaches and access to the ocean, were also pivotal factors shaping economic development in the DR in recent years.

**Proximity to the US and Canadian markets and producers<sup>1</sup> and economic reforms have also shaped FDI inflows.<sup>2</sup>** The US is one of the top sources of FDI inflows into the Dominican Republic, accounting for 25 percent of total inflows between 1993 and 2016. Canada surpassed the US as the main source of FDI since 2010 by a small margin.<sup>3</sup> Propelled by inflows of FDI, investment has played a leading role as an engine of growth over the past 25 years and physical capital accumulation was the biggest contributor to growth. Investment was the fastest growing component of domestic demand between 1992 and 2016 and the incidence of investment on GDP increased from 16 percent in 1991 to 24 percent in 2017.

**The DR's geography, with its beaches and easy ocean access, is also a natural advantage for a strong touristic sector, a shared feature with other Caribbean and some Central American countries.** Since the onset of the current growth episode, tourism has played an important role in the Dominican economy. The Hotels, Bars and Restaurants sector is the fifth fastest growing in the country, averaging 6.4 percent per year over the 1991-2016 period. This sector's rapid growth was the product of supply and demand factors. An explicit policy push to attract FDI expanded the supply of available rooms by 244 percent in the last 26 years. This increase in supply has been met with strong demand, resulting in an increase in the occupancy rate of 10 percentage points since 1991 (from 68 percent in 1991 to 78 percent in 2016). The expansion of tourism has also generated foreign currency for the Dominican economy. The net balance of trade in services increased steadily from 6 percent of GDP in 1994 to close to 9 percent of GDP in 2007. It has since hovered around 6 percent of GDP, with a recent uptick in 2016.

**Economic growth has been accompanied by significant progress in terms of poverty reduction, growth of the middle class, and access to services—especially in the last decade.** Using the national poverty lines, after increasing from 32 to 50 percent between 2002 and 2004 in the aftermath of the banking crisis, monetary poverty has declined steadily since 2004, to reach 29 percent in 2016. Using the LAC regional lines, between 2008 and 2016, poverty was reduced from 35 to 21 percent, and the proportion of the middle class rose from 24 to 37 percent, outnumbering the poor for the first time in 2014.<sup>4</sup> The vulnerable population is the largest income group in the country (41 percent), with risks of falling back into poverty if shocks materialize. Growth over the 2008-2016 period was slightly pro-poor, with per-capita income for individuals in the bottom 40 percent growing at an average annual rate of 4.2 percent, compared to 3.8 percent per year for the top 60 percent. The Gini coefficient decreased by 2 points from 49.6 in 2008 to 47.1 in 2016, below regional inequality levels throughout the period. Access to basic education, water, sanitation, and key assets has improved since the early 2000s, resulting in a decrease of the share of households with deprivations, a proxy for multidimensional poverty.

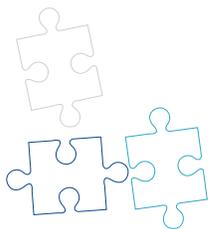
**This SCD presents a storyline on the connection between economic growth and poverty that departs from previous narratives in other studies, including those conducted by the World Bank.** Those studies found a weak connection between the historically high rates of economic growth and poverty reduction in the country. Analyzing the consistency between data from national accounts and the household survey that is used to measure poverty (*Encuesta Nacional de Fuerza de Trabajo – ENFT*), we find large differences in the annual growth rates of private consumption from national accounts and household income from the ENFT before

1 Beyond geographic proximity, the linkages between the US and the DR have historic roots, and were reinforced after the US occupied the Dominican Republic from 1916 to 1924 and again in the mid-1960s.

2 On average, FDI inflows from North America accounted for approximately 45 percent of total FDI inflows and FDI in tourism accounted for 20 percent.

3 The recent uptick in FDI from Canada is partly explained by the boom in the mining sector in the DR, with a large presence of Canadian companies. One of these firms is the Pueblo Viejo Dominicana Corporation/Barrick Gold, the largest foreign investment in the history of the DR. As will be discussed in more detail below, mining is the fastest growing economic sector both in terms of value added and FDI inflows.

4 To compare income distributions and income groups across LAC countries, we use the SEDLAC harmonized datasets, with income expressed in US dollars PPP 2011. These income groups are defined using the LAC regional lines as follows: an individual is poor if her income is lower than US\$5.5 a day; vulnerable if her income is between US\$5.5 and US\$13 a day, middle class if her income is between US\$13 and US\$70 a day, and upper class if her income is greater than US\$70 a day. These values are expressed in PPP 2011.



2008. These differences become smaller after the national accounts were rebased and some methodological improvements were implemented for the ENFT. This is the reason why this SCD uses 2008 as the starting point for the analysis of the relationship between GDP growth and poverty reduction, which yields a higher growth elasticity of poverty than the estimated in previous studies. This observation does not invalidate the conundrum of the DR having social outcomes comparable to those observed in countries with much lower levels of development despite very high rates of economic growth. These issues are discussed in chapter 3.

## Challenges to become a high-income country by 2030 and to improve social outcomes

**The generous and widespread tax incentives provided to the private sector and high informality rates constrain the country's capacity to generate fiscal revenue which, combined with growing and rigid public expenditure, have put public debt in an increasing trajectory.** Government revenue has fluctuated around 15 percent of GDP over the last 10 years, one of the lowest levels in LAC. Tax expenditures are extremely high (estimated 6.4 percent of GDP in 2017) resulting from tax exemptions, and the tax base is small because of firm informality.<sup>5</sup> While tax exemptions have the potential of creating new jobs as new firms start operations to make use of these incentives, they also result in forgone fiscal revenue. Low government revenues, combined with growing and rigid expenditure, have led to a rapid increase in public debt and interest payments.

**The low tax collection constrains the provision and quality of services in education and health.** For instance, public health spending is one of the lowest in LAC despite an increase from 2.1 percent of GDP in

2008 to 2.5 percent in 2015.<sup>6</sup> This increase in expenditure has allowed the country to rapidly increase its health insurance coverage, but not enough to improve significantly health outcomes, as it was compounded by allocative inefficiencies. With education, likewise, increases in expenditure have enabled enrollment rates to increase, but with the worst learning outcomes in regional and international assessments. Moreover, despite increasing in recent years, expenditure in education in the DR stands below the LAC average and other middle-income countries in terms of GDP.<sup>7</sup> Low investments in human capital have potential implications not only on the welfare and lives of individuals, but also on productivity and competitiveness. Poor learning outcomes actually result in lower employability, productivity and wages for workers, and might be associated with high school dropout rates for teenagers. Unemployment rates for ages 15-24 are almost three times as high as rates for ages 25-54.

**Dominican firms typically exhibit low quality, low survival rates in export markets, and low levels of backward linkages by export-oriented firms, outcomes that are likely shaped by economic policies.** Firms are less innovative<sup>8</sup> than similar firms in comparator countries, which partly explains a relatively low propensity to export. Even exporters display lower quality and survival rates relative to comparators. Low quality from domestic firms, combined with tariff exemptions and relatively easy access to high-quality inputs from the US, hinder the development of backward linkages by export-oriented firms.<sup>9</sup> This cycle is rooted in a system of exemptions that discourage linkages, in a lack of incentives to adopt quality improvements, and in a business environment that hampers competitiveness. Targeted economic incentives to local firms and special economic zones (SEZs) create an uneven playing field which provides market power to a minority of economic agents and fosters an enclave-type private sector,

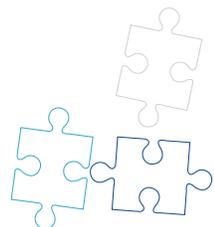
5 See World Bank (2017c).

6 Data from the Global Health Expenditure Database compiled by the World Health Organization (WHO). The numbers represent the domestic general government health expenditure.

7 The DR's expenditure in education as a share of GDP was 0.75 percentage points lower compared the average expenditure of countries in LAC with available data.

8 Innovativeness is defined in a broad sense: adoption of new processes, holding internationally recognized quality certifications, and on-the-job worker training.

9 Access to high-quality inputs from the US has a positive effect in the competitiveness of firms that use these inputs intensively. However, they seem to prevent stronger linkages between foreign firms and domestic firms, limiting the scope for knowledge spillovers.



discouraging quality improvements. An inefficient electricity sector combined with high real interest rates (the highest in LAC behind Brazil) further erode the competitiveness of Dominican firms and prevents greater connectivity between export-oriented and local firms. Additionally, those firms seeking to invest in quality improvements face a shortage of skilled workers.<sup>10</sup>

**An uneven playing field, along with distortions from tax incentives, inhibit competition across and within sectors and limits both the competitiveness of domestic firms and the creation of more and better jobs.** Labor markets in the country are characterized by unresponsive unemployment rates, high levels of informality, and low wages. In the period 2008-2016, the number of unemployed workers grew by 10,000-odd people every year, with 1 out of every 6 workers willing to work additional hours in 2016. The labor market is the main connector between economic growth and poverty in the country, accounting for over fifty percent of poverty reduction between 2008 and 2016, and offers the greatest potential to sustain and deepen poverty reduction going forward. After 2013 the labor market has performed better and the number of unemployed was reduced by 15,000 every year until 2016.

**Women face challenges in labor markets.** Labor force participation rates for women is much lower than for men (59 vs 82 percent), and women account for 83 percent of the economically inactive population. At 20.6 percent the unemployment rate more than doubles that for men (8.6 percent). Furthermore, once employed, women face high sectoral segregation, with women accounting for less than 5 percent of the jobs in some sectors (construction and agriculture) and accounting for much of the jobs in other sectors (social and health services, and education). Women also face a wage gap with average hourly wages around 15 percent lower than men's. Some of the outcomes for women might be partly explained by one of the highest adolescent fertility rates in the world and by high rates of violence against women. They are also underrepresented among firm owners, with 30 percent of the firms in the country

having some female ownership, below the LAC average at 40 percent.

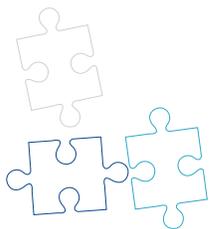
**The lack of opportunities in the labor market and the poor quality of public services are push factors for Dominicans to migrate.** Out of 10.1 million people living in the country in 2016, more than 1.5 million lived abroad, with 1.1 million in the US. Migrants to the US are more educated than those who stay in the country, with 66 percent of migrants 25 or older having completed secondary education or higher, compared to only 40 percent of Dominicans living in the DR. The Dominican diaspora sends remittances amounting to close to 8 percent of GDP, lowering poverty by an estimated 3 percentage points, and reducing the participation of recipients in the labor market.

**Among countries with similar population size in LAC, the DR has a unique combination of relatively high immigration and emigration rates.** Sharing a border with Haiti—a much poorer country, has facilitated migration of Haitians to the DR for economic reasons. According to the latest survey of immigrants (2017) in the DR, almost 500,000 of them are Haitians, with 70 percent having at most primary education with an average of 4.1 years of schooling (compared to 9 years for Dominican-born), and highly clustered in unskilled work, especially in agriculture, construction, and commerce.

**The downside to the country's geographic location is its high exposure to disaster and climate-related risks.** Being in the pathway of major hurricanes in the Caribbean Basin and on the edge of a tectonic plate, makes the DR one of the most exposed countries in the world to adverse natural events. The northeastern region is exposed to floods and mudslides caused by severe storms, while arid parts of the northwest experience increasing temperatures leading to more drought, which in turn reduces crop yields and water supplies. A global comparison suggests that the DR stands out as one of the most affected countries by natural disasters in the last 20 years. The country ranks 10th worldwide in terms of human and economic losses due to weather-related events between 1997 and 2016.<sup>11</sup>

10 See the 2016 World Bank Enterprise Survey Dominican Republic Country Profile (<https://www.enterprisesurveys.org/-/media/GIAWB/EnterpriseSurveys/Documents/Profiles/English/Dominican-Republic-2016.pdf>) and 2017/2018 Global Competitiveness Report.

11 Germanwatch's Global Climate Risk Index (<https://germanwatch.org/en/download/20432.pdf>)



From 1980 to 2008, 40 different disasters affected 2.65 million people, almost a quarter of the entire country's population. In the past 40 years, disasters caused average annual losses amounting to 0.7 percent of GDP per year, and catastrophic events can potentially destroy a greater share of assets in the DR than in the average of Central American and Caribbean countries. The country's increasing debt trajectory could be significantly affected if disaster or climate-related risks materialize, as they would impact fiscal deficits and potentially result in large increases in financing costs. Shocks from natural events have regressive distributional effects insofar poorest households are more vulnerable. Extreme winds are associated with increases in poverty of 1-2 percentage points.

**Climate change is anticipated to increase the frequency and severity of hydrometeorological hazards in the country, notably sea level rise and the variability of slow-onset natural events, particularly droughts.** Temperature variability in tropical regions is highly correlated with the occurrence of cyclonic and associated events such as floods and landslides. In the Caribbean, climate change is expected to increase the intensity of excess rainfall, storm surges, and hurricanes, with relatively higher impacts in the DR. Predicted impacts include flooding in coastal zones and low-lying areas, with potential damages and economic losses projected to reach nearly 17 percent of GDP.<sup>12</sup> The increased frequency of extreme events will have a negative impact and damage hotels, coastal infrastructure and beaches, leading to significant loss of tourism revenues; and will damage fish nursery areas and coral reefs. Likewise, climate change is expected to increase the incidence and reproduction of mosquito-related diseases such as dengue, chikungunya and Zika.

**Rapid urbanization, the lack of infrastructure to accommodate it, and poor natural resource management have increased pressure on natural resources, environmental degradation and the DR's vulnerability to climate change.** Despite the fact that 80 percent

of the population live in urban areas, agricultural activities use 83 percent of the available water, mostly from superficial sources—with little efficiency. Only 1 in 4 of the fully-functioning wastewater treatment plants were at an adequate operating level, creating conditions for the proliferation of water- and sanitation-borne diseases. Moreover, deterioration of natural and fresh water resources increases the risks and cost to deliver safe water and sanitation with quality and availability. These conditions also exacerbate other risks related to climate change impacts and public health. Santo Domingo's current infrastructure, for instance, can only collect 14 percent of the generated waste water, with the excess contaminating rivers and watersheds, posing environmental risks and threats to the health of communities. The contamination of water sources has the potential to affect touristic activity, which is one of the main sources of growth and jobs in the country.

**Increasing perceptions of insecurity in the country affect both households and firms.** Three out of four Dominicans identify crime and violence as the most important challenge facing the country, with seven out of ten reporting it being a conversation topic in the last two weeks.<sup>13</sup> This issue not only affects households, but almost 60 percent of firms spend money on security, potentially affecting investment decisions.<sup>14</sup>

**The potential vulnerability and exclusion of Haitian migrants are threats to social cohesion.** Achieving social cohesion in the face of large cross-border population movements is a policy challenge in the DR, with most of the 500,000 Haitian migrants lacking a regular migration status which would make them less vulnerable to exploitation and discrimination, and allow them to access better paid jobs.<sup>15</sup> Since mid-2014, the Dominican government has been implementing three parallel processes: i) regularization of foreigners with irregular migration status; ii) partial restoration of identity documents for descendants born in the DR; and iii) registration of unregistered descendants.<sup>16</sup>

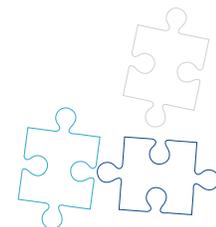
12 <https://www.gfdrr.org/en/dominican-republic>

13 ONE (2017).

14 Jaitman (2017).

15 Wooding and Riveros (2017).

16 Wooding (2018).



**This SCD identifies governance issues which hamper the country's development, and underlie many of the aforementioned challenges.**<sup>17</sup> According to the 2016 Enterprise Survey, 1 out of every 5 firms in the country report corruption as the biggest obstacle to doing business (the highest proportion of answers), resulting in an inefficient allocation of resources. This is consistent with the statements of the government's Estrategia Nacional de Desarrollo (END), which candidly identifies corruption, clientelism and patrimonialism, as phenomena that weaken state institutions and accountability mechanisms, limiting the government's effectiveness. This SCD argues that these governance issues might become binding constraints for the country to graduate to high-income by 2030.

**Many of the governance challenges identified in this SCD are not new; rather, they are rooted in history.** For example, during the mid-20th century the country went through the early stages of an industrialization process in part thanks to policies that protected certain industries. At the same time, these protections favored the emergence of a number of monopolies that over time increased their capacity to influence policy in their favor. The situation has improved since, yet, given initial conditions, there is still progress to be made.

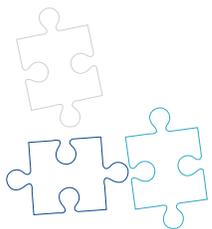
**Moreover, many of the DR's development challenges are tightly linked and reinforce each other, which means that changes to the status quo will require tackling these challenges in tandem.** There is a vicious circle of limited fiscal space, low provision and poor quality of public services, and weak governance. Low levels of tax revenue erode the government's ability to expand the coverage and quality of public services. A small and inefficient state has led many Dominicans to opt out from the public system and purchase, to the extent they can afford it, privately-provided services. This, together with the perception of corruption, weakens people's incentives to pay taxes, which further limits fiscal revenue and weakens the governments' accountability. There is another vicious circle of policies that limit competition, firms that have few incentives to invest in

quality upgrade, and a labor market that does not generate enough good jobs. Policies in the DR have fostered an enclave economy where dynamic, export-oriented firms do not connect with other firms in the economy, discouraging the latter to improve the quality of their production. Disincentives and barriers to innovation are further augmented by the market power enjoyed by firms operating in non-tradable sectors and flaws in the institutional design of governmental agencies that have the goal of facilitating the flow of information and promoting innovation. There is also a tight link between firm-level behavior and labor market outcomes. The dearth of innovation and quality upgrading observed in the DR prevents firms from generating enough quality jobs, discouraging the incentives of workers to invest in skills. Finally, a limited fiscal space and the poor provision of quality services affects the competitiveness of Dominican firms. First, the DR's growing public debt and the relatively high interest payments by the government spillover to high lending rates charged to the private sector. Also, Dominican firms' ability to innovate, adopt quality standards, and move up the value chains is constrained by an inadequately educated workforce.

## Priority areas

**This SCD identifies five key and interrelated challenges the DR needs to overcome to achieve a more inclusive and sustainable growth.** First, despite high economic growth rates, firms in the DR have been unable to achieve substantial quality improvements, and linkages between export-oriented firms and local firms are weak. These productive challenges have hampered integration in international markets and prevented a more inclusive growth across firms. Second, the country has not generated sufficient tax revenues to provide public services or higher quality, and as a result has seen a deterioration of fiscal position. Third, due to lack of resources and an uneven incidence of spending, the country has been unable to afford much-needed investments in human capital. A fourth challenge stems from the degradation of the country's natural capital, mainly

17 See Ministerio de Economía, Planificación y Desarrollo (2016), page 15. "Se parte del entendimiento de que nuestro actual modelo de desarrollo presenta falencias en materia de la calidad de la acción estatal, que se manifiestan en fuertes deficiencias en los servicios públicos que deberían garantizar los derechos constitucionales de la población [...], así como patrones de actuación que entorpecen el desarrollo nacional, tales como corrupción, clientelismo y patrimonialismo." Estrategia Nacional de Desarrollo 2030.



caused by a lack of territorial and urban planning in the face of rapid urbanization, and a lack of supporting infrastructure. The aforementioned challenges are amplified by the country's exposure to natural disasters, the fifth challenge, which impacts economic growth, macroeconomic stability, and households' welfare.

**To address the challenges described above, the SCD identifies six priority areas for the country to overcome its development challenges and achieve its goal to become an inclusive and high-income economy by 2030.** First, credibly improving fiscal balance by increasing revenue and improving the quality of fiscal expenditure. Second, enhancing the accumulation of human capital. Third, pursuing policies that create a level playing field and a business environment that fosters investment in quality upgrading. Fourth, improving the management and conservation of natural resources. Fifth, improving the country's resilience to disasters and climate-related risks. Finally, increasing contestability in the policy making process.

**The impact of dealing with these priorities will increase to the extent that they are tackled in tandem and that they incorporate the linkages between the different challenges.** For example, direct efforts to raise fiscal revenues will probably have a limited effect if they are not accompanied by explicit efforts to improve the provision of public goods and to fight corruption. Similarly, the impact of initiatives to foster innovation or better processes of production will be muted to the extent that they do not address market power and other disincentives to innovation. Moreover, reforms will have to take into account the political economy constraints that they could face.

**These priorities were identified based on the following criteria.** i) A benchmarking exercise that compares the DR's performance with the performance of countries in LAC and the group of upper-middle income countries (UMI). The indicators used for the comparison cover a wide range of topics including growth, fiscal accounts, business environment, competitiveness, human development, natural resources, and governance. The DR's performance in each indicator is compared with the best performers in each comparison group

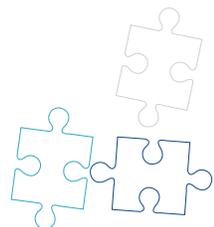
(LAC and UMI - see Annex 2); ii) the validation of findings using both existing literature and the new analysis conducted for this SCD; iii) how a given priority may contribute to making progress in other areas; and iv) a robust process of consultations with Bank staff and in-country stakeholders (see Annex 7).

**The benchmarking exercise highlighted a set of issues where the country's underperformance sets it apart from its peers.** This exercise provided a first long list of issues, that was refined using the diagnostics in the chapters to produce a shorter list of priorities. This short list was used during the consultation process with more than 200 participants in country from a wide range of stakeholders including government, civil society, academia, private sector, and development partners. At every meeting during the consultation process we asked participants to pick a few areas they considered the most critical to address the country's development challenges. The vast majority of priorities selected by participants are embedded in the six priorities identified in the SCD.

### Improving fiscal balance by developing a credible fiscal path that supports the provision of high-quality public services

**The DR's narrow fiscal space and growing public debt limits the country's spending ability in much-needed social programs and erodes the private sector's competitiveness.** These problems are compounded by the country's exposure to natural disasters, which both impacts fiscal accounts by lowering tax collection, and calls for fiscal buffers to respond when shocks materialize. Raising revenues and delineating a credible medium-term fiscal path with prudent fiscal rules are crucial elements to open up fiscal space and ensure fiscal sustainability in the DR.

**To strengthen fiscal sustainability, the DR needs to tackle the revenue and expenditure side of fiscal accounts.** Raising tax revenue will hinge on rationalizing tax exemptions and expanding the tax base. Tax exemptions and informality have been important factors behind the DR's relatively low tax revenues. The limitations of the DR's tax system in producing higher



revenues and the importance of addressing these limitations are recognized in the country's National Development Strategy 2030. The latter outlines a plan aimed at consolidating all existing tax expenditure schemes into a single section of the tax code and establishing a coherent and sustainable approach to tax expenditures which reduces their fiscal impact and minimizes their distortive effect on economic incentives. In addition to tackling a relatively low tax base, the country needs to address the growing rigidity of government expenditure, especially due to growing interest payments. In addition to this, in a context of tight fiscal space, the country needs to focus on mechanisms to improve the quality of public services and, in some cases, reduce its fiscal footprint. The DR has increased its expenditure in key areas such as education and health. However, as discussed in chapter 3, the quality of public expenditure (measured by outcomes) in both these areas is obviously low. Likewise, the public systems of electricity distribution and water and sanitation not only provide an unreliable service of low quality, but their operational costs are high.

**Efforts towards raising revenues and making a more efficient use of resources need to be accompanied by the development of a credible medium-term fiscal plan which anchors expectations and allows the DR to build buffers.** The country needs to strengthen its efforts to contain the rising government debt and its interest payments. To achieve this objective, the country must design a credible and clearly defined fiscal plan, anchored in fiscal rules, that stabilizes debt levels and anchors market expectations. Indeed, a credible fiscal anchor could lead to lower borrowing costs, which in turn could reduce the potential economic impacts of fiscal adjustments.<sup>18</sup> Beyond aiming at stabilizing debt levels, the fiscal anchor, should also seek to build fiscal buffers to respond to economic and natural shocks without affecting the trajectory of public debt.

## Enhancing the accumulation of human capital and addressing gender imbalances

**Improving skills acquisition and learning outcomes.** Despite significant gains in access to education at all

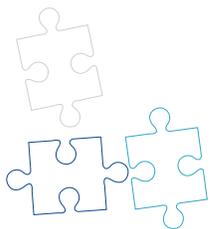
levels, education outcomes are poor, both in regional and international assessments. The country consistently ranks at the bottom of international assessments, and its own standardized assessments indicate low levels of competencies. Cognitive skills and the quality of learning outcomes have potentially large implications for economic growth as they bolster innovation, ultimately resulting in higher productivity gains.<sup>19</sup> Low levels of learning are likely to contribute to high dropout rates, especially in secondary education, and are consistent with complaints from employers that poorly educated workers are an important barrier to doing business. According to diagnostics of the sector, among the entry points to improve skills acquisition and learning outcomes are early childhood development, improved teacher skills and recruitment, curricular reform, and improved school management.

**Close learning gaps and low enrollment in early years and in secondary education.** On school and sector management, it is important to align roles and responsibilities of all levels of the Ministry of Education (MINERD) to respond to the two aforementioned challenges in the system. New approaches to modernizing and articulating links at all levels of the system are promising and have the potential to improve outcomes. These include strengthening in-service teacher training through the strategic use of data and technology; professional development for school principals, including linking it to teacher support, so that behavioral change in instruction in the classroom becomes a reality; using technology to better and strategically monitor service delivery; and empowering each level of the MINERD to make change happens in schools, as exemplified by the performance-agreements for school districts that the Ministry has recently implemented.

**Development of socio-emotional, technical and vocational skills.** Improving the relevance of secondary education by offering clear paths to higher education, links with employers, expanding on-the-job opportunities, and incorporating socio-emotional skill training in pre-tertiary education, can certainly enhance the development of all types of skills, reduce dropout,

<sup>18</sup> See IMF (2017) and Végh et al. (2018).

<sup>19</sup> Hanushek and Woessmann (2010).



increase employability, and increase productivity in the labor market. This would reduce the skills mismatch which the private sector reports as an important barrier to doing business. To achieve this, it is also important that the MINERD works hand in hand with the Ministry of Higher Education, Science and Technology (MESCYT), as the latter oversees technical programs in the country that are offered by universities and institutes.

**Improving health care financing and expenditure efficiency to ensure the quality of health care provision and equitable access to health services.** The quality of care and health outcomes is clearly lagging behind the gains in coverage. The country faces a double burden of high maternal and child mortality rates and an increasing share of noncommunicable diseases. Poor health outcomes do not only affect worker productivity and children's learning outcomes, but cost human lives in the country. At 1.7 percent of GDP in 2016, the health public expenditures as a share of GDP are one of the lowest in LAC. While the sector requires more public resources to keep on improving the quality of services and expand financial protection, there is room to improve both efficiency and the cost-effectiveness of spending. Sector budgeting and resource allocation have merely followed previous allocations and spending is heavily skewed toward curative care and hospitals at the expense of primary health care and public health services.

**The health sector also exhibits inadequate accountability mechanisms. In addition, the limited capacity of the Ministry of Public Health to monitor, regulate and enforce, contribute to inefficiencies in spending.** Enhancing the quality of health services can save lives, improve the quality of life, and increase worker productivity. Not all necessary quality improvements require large increases in resources. For instance, most maternal deaths, too high a number for the country's coverage of institutional birth and antenatal care, could be prevented having properly trained personnel adhere to standards and follow protocols and quality standards.<sup>20</sup>

**Enabling human capital accumulation and enhancing risk protection for the poor and vulnerable through social protection and labor market interventions.** Sustaining the recent gains on poverty reduction will require further efforts to build the human capital of poor and vulnerable group, and to protect poor households from either economic risks or disasters. However, the largest fiscal expenditures are poorly targeted, while the programs that are well targeted are relatively small. Both the incidence and average per capita value of government transfers have increased for all socioeconomic groups since 2008, including the middle class, with per capita transfers increasing along with average per capita household income. These facts suggest the need to further improve the targeting and adequacy of conditional cash transfers.

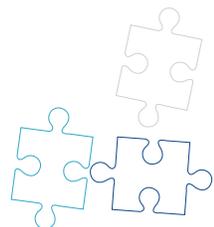
**Enhancing protection for the poor and vulnerable from either economic risks or disasters.** Connecting poor households to productive inclusion initiatives, and preparing the social protection system and instruments suited to disaster preparedness and response, will contribute to deepen and sustain the recent gains on poverty reduction. The country should continue its efforts to provide identification documents to all citizens to remove barriers of access to social programs, financial services, political participation, and secondary education.

**Addressing gender imbalances.** Women in the country not only face high rates of violence and adolescent fertility, but also lower labor force participation, much higher unemployment, and high employment segregation across sector and lower wages. For instance, potential productivity gains from incorporating women who completed some level of education but then do not enter the labor market are about 4 percent of GDP in the DR.<sup>21</sup> Higher female labor force participation is associated with lower infant mortality rates and higher life expectancy. It also has positive effects on children's development and well-being, increasing their future earnings capability, which may reduce the intergenerational transmission of poverty.<sup>22</sup>

20 Castro (2016).

21 These estimates assume that current returns to each education level remain unchanged. See Mateo Díaz and Rodríguez-Chamussy (2016).

22 Ibid.



## Promoting a level playing field for firms and a business environment which fosters quality improvements and competitiveness

**The Dominican economy is characterized by relatively high perceptions of market power and a regulatory divide which unbalance the playing field for firms and lowers incentives to innovate.** The country stands out in LAC and worldwide in terms of perceived market dominance. Moreover, perceptions about market dominance in the DR have worsened. The SEZ's regime continued focus on specific industries such as textiles, footwear and leather goods, could entrench economic distortions and perpetuate the country's dual export structure. The DR has made progress towards greater competition and generating a more level playing field (such as the full implementation of the DR's pro-competition law), but the country needs is penalized by distortions such as targeted tax exemptions, that generate market power. Beyond the lack of competition, the quality of exports and inputs is affected by a weak regulatory and institutional capacity.

**Firm performance could also benefit from a deeper and more competitive financial market.** Dominican firms face higher real interest rates than firms in most LAC countries or from comparator countries, and real interest rates have been on the rise since 2010. High real interest rates may be one factor behind the country's relatively low credit volumes, one of the lowest in LAC. Capital markets are also shallow, with stock market capitalization to GDP ranking among the lowest in the region.

## Improving the management of natural resources

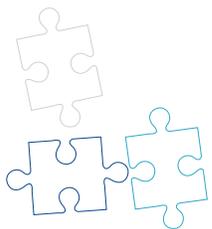
**Improving the efficiency of water and sanitation provision to increase resilience, improve service quality, and reduce the degradation of water resources.** Environmental degradation and increased vulnerability to climate change were caused by inadequate resource management. About two thirds of the Dominican

territory is critically sensitive to desertification which is mainly caused by intense and inadequate land use practices. Increased pressure on water resources from urbanization and land use change, threatens the main engines of growth in the country. Creating institutional and policy incentives for providers to improve efficiency such as increasing metering, billing and collection, and reducing non-revenue water<sup>23</sup> would not only increase resilience to natural disasters and improve service quality, but also increase commercial viability (reducing dependence on central government subsidies) and reduce the degradation of water resources. Increasing access to private sector financing and reducing subsidies will be required to finance critical investments to close regional disparities in access to water supply and sanitation infrastructure (contributing to human capital), and to reduce the degradation of water resources stemming from urbanization through increased investments in sanitation and wastewater reuse. Slowing down watershed degradation will contribute to increase the country's resilience to climate change, reduce the spread of gastrointestinal and respiratory diseases, and prevent negative effects on touristic activity, a pillar of economic growth and employment generation.

**Strengthening integrated water resources management (IWM) to ensure stewardship of freshwater resources to meet growing demands.** Even though 80 percent of the population live in urban areas, agricultural activities use over 80 percent of the available volume, mostly from superficial sources, with little efficiency. To address water use imbalances, the country should keep up building on its recent efforts in basin level planning for municipal, industrial, and agricultural water consumption. This implies continued focus on better coordination between the water and agricultural sectors to create conditions for water reuse for industrial and agricultural activities with the aim to reducing freshwater exploitation as well, particularly in more arid parts of the country. Stewardship and sustainability of freshwater resources through better planning and allocation are critical to meet the growing competing demands from tourism,<sup>24</sup> municipalities, industry, and the agriculture sector.

23 Non-revenue water is defined as water which is pumped and then lost or unaccounted for.

24 Recent literature (Lim 2017) highlights the relationship between polluted water sources and beaches and tourism activity. On the one hand,



## Improving resilience to disasters and climate-related risks

**Improving resilience to disaster and climate-related risks would have positive effects on economic growth, fiscal sustainability, and households' welfare.** Between 1961 and 2014, average annual economic losses caused by disasters in the DR amount to about 0.69 percent of GDP, and the country exhibits a unique combination of similar and relatively high potential losses from catastrophic hurricanes and earthquakes among Central America and the Caribbean countries. Accelerating the design and implementation of disaster and climate-related risks management strategy, well integrated with the overall management of fiscal risks, would not only contribute to fiscal and macroeconomic sustainability, but also improve the government's fiscal capacity to respond and recover quickly in the aftermath of a large disaster. Increasing the resilience to disaster and climate-related risks of poor and vulnerable households through targeted programs would contribute to sustain the gains in poverty reduction. Estimations indicate that extreme wind events are associated with increases in poverty equal to the average annual poverty reduction between 2004 and 2012. Territorial and urban planning will play a key role in increasing

resilience by ensuring the safe location of population and managing issues of population relocation when required, by building disaster and climate-risk informed territorial and land use instruments, and through a comprehensive management of natural resources.

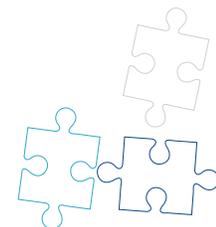
## Increasing transparency and accountability

**Improvements in transparency in the allocation and execution of resources by the government, including the procurement of goods and works, are needed to increase accountability,** and to gradually enhance the effectiveness of coalitions for social dialogue such as the *Pacto Eléctrico* and the forthcoming *Pacto Fiscal*. They will also gradually help to level the playing field for the private sector, which will require to strengthen both supply of and demand for information. On the supply side, the implementation of the access to public information framework should be strengthened, as well as the availability of government data. On the demand side, efforts by the civil society, the media and academia to effectively use available information to monitor government's performance and hold it accountable should be explored; and the private sector will have to be encouraged in identifying business opportunities.

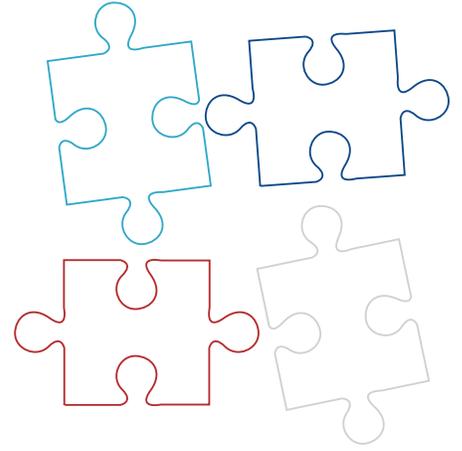
**TABLE 1. Priorities and their impact on the Dominican Republic's development challenges**

Priority Area	Growth challenges	Inclusion and human development challenges	Sustainability challenges
Improving fiscal balance	Indirect effect	Indirect effect	Direct effect
Enhancing the accumulation of human capital	Indirect effect	Direct effect	Indirect effect
Promoting a level playing field and a better business environment	Direct effect	Indirect effect	Indirect effect
Improving the management of natural resources	Indirect effect	Indirect effect	Direct effect
Improving resilience to disasters and climate-related risks	Indirect effect	Indirect effect	Direct effect
Increasing transparency and accountability in the policy making process	Indirect effect	Indirect effect	Indirect effect

water effluents from industry, cruise ships and human activity that are untreated flow into natural water and oceans cause eutrophication: the ultra-high concentration of nutrients like nitrogen and phosphorus in a body of water. This results in a massive blooming of algae, covering ponds and streams, affecting the oceans and water bodies used by tourists in the country. Also, more tourism in the Dominican Republic implies more traffic from cruise ships. Cruise ships are one of the largest contributors to the problem of effluents and waste in the ocean. Integrating wastewater, port-efficiency and effluent treatment can have multiplicative and positive effects to reduce ocean pollution and make tourism more sustainable.







## CHAPTER 2

# Economic Performance and Growth

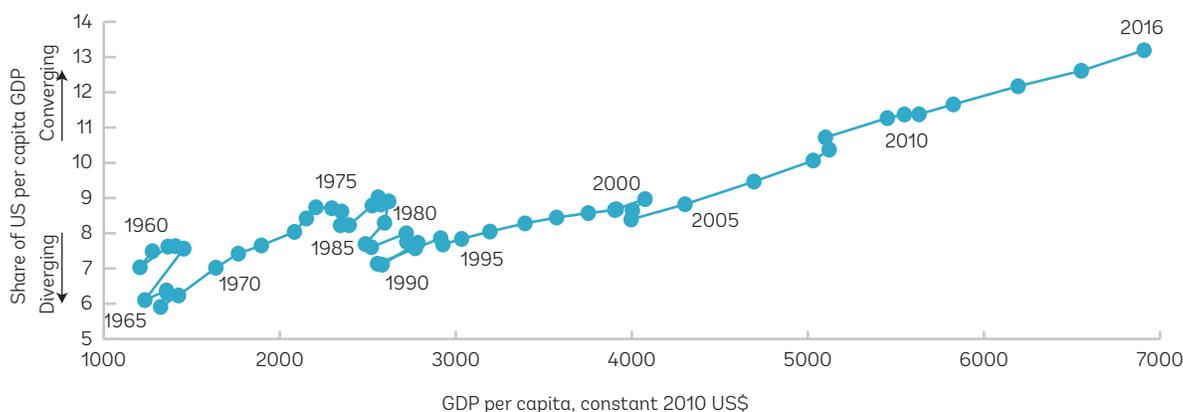
**T**he DR has benefitted from a long period of sustained high-growth. Policy reforms and geographic endowments facilitated FDI attraction and investment growth, the main driver of GDP growth. The country's private sector has been equally dynamic, with formal firm growth exceeding benchmarks. These positive developments notwithstanding, there is still untapped development potential. Some of the same factors that fostered investment hinder the incentives of Dominican firms to engage in quality upgrading, which leads to uneven export performance and limits the country's ability to connect fast-growing sectors with other parts of the economy and its potential to create high-quality jobs. To fully unleash the country's growth potential, the country needs to address structural factors distorting firms' incentives, such as improving the provision of inputs like electricity and skilled workers, reducing the relatively high financing costs faced by Dominican firms, developing a relatively shallow financial market, and creating a level playing field.

### Twenty-five years of fast economic growth and convergence

**The DR has enjoyed 25 years of rapid economic growth.** The economy expanded by an average growth rate of 5.3 percent per year from 1993 to 2017, one of the highest in the LAC region. This episode of economic dynamism was ignited by a series of structural reforms undertaken in the early 1990s, which allowed the country to grow at an average rate of 6 percent per year between 1993 and 2000. Growth in the country remained high in the 2001-2017 period, averaging a yearly rate of 4.9 percent.

**The rapid growth of the last 25 years allowed the country's real per capita income to increase substantially and helped the country reduce the gap with respect to the living standards of high-income countries at a faster pace than the average country in LAC and the world.** Real gross domestic product (GDP) per capita in 1993 stood at US\$3,000 (in 2010 dollars), or 7.5 percent of the GDP per capita of the US (Figure 1). By 2016, the country's real income was US\$7,000, or 13.5 percent of the GDP per capita of the US. Thus, the DR closed the gap with respect to the income of the US by 6 percentage points (pp) over the last 25 years. By contrast, the median country in LAC and in the world,

**FIGURE 1: Over the past 25 years, the Dominican Republic has converged to the living standards of high-income countries at a faster pace than the average country in LAC and the World**



Source: World Bank staff's calculation based on WDI data.

closed their income gap with respect to the US by 2 and 4 percentage points, respectively, over the same time-frame. Moreover, during the 1993-2017 period, the country saw a sharper reduction in its income gap with respect to the US than 86 percent of countries in LAC and 87 percent of countries in the world.

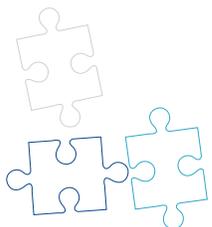
**The recent episode of high growth followed a decade of economic convergence in the 1970s and a decade of stagnation in the 1980s.** The country experienced more than a decade of income convergence in the late 1960s and the 1970s, after the country overcame the political and economic turmoil that followed the assassination of dictator Rafael Trujillo in 1961, and pursued a series of reforms that boosted economic activity, such as the creation of special economic zones (SEZs). In the 15 years between 1965 and 1980 average growth in the country exceeded 6 percent per year and real income per capita doubled. As in most countries in LAC, the economic progress of the 1970s came to a halt in the 1980s, in part because of the debt crisis that hit the region during that period. GDP per capita remained stagnant throughout the 1980s and the country's income diverged relative to that of the US, falling from 9 percent in 1980 to 7 percent in 1990. It took the country 26 years to return to the levels of real income relative to the US observed in 1980.

**The relatively high GDP growth rate was bolstered by a combination of factors, including a series of structural reforms and stabilization policies that started in the early 1990s.** As many other countries in LAC, the process of structural reforms started in 1991 and accelerated in the period between 1995 and 1999. This process included reforms to trade policy, to foreign investment policies, to the financial sector, and reforms to the tax and labor codes. This is documented in Lora (2012), who constructs an index of structural reforms that quantifies the intensity of reforms across LAC countries. According to this index, the country had a relatively closed and economically repressed economic system in 1986, with an index of structural reforms (0.3) that stood behind the regional average (0.35). By 1999 the process of structural reforms in the country peaked, with an intensity that surpassed that of many of its regional peers, and the regional average. Between 1999 and 2009 the pace of structural reforms in the DR and LAC slowed down. Structural reforms and stabilization policies were the largest contributors to the GDP growth acceleration in the country in the 1990s,<sup>25</sup> but had no impact on growth in the 2000s.<sup>26</sup>

**Linkages between economic reforms and growth have been accentuated by the country's geographic location and the resulting strong ties with the US.**

<sup>25</sup> See Loayza, Fjanzyber and Calderon (2005).

<sup>26</sup> This could be the result of a slowdown in the pace of reforms or the types of reforms that were pursued in the 2000s. See Araujo et al. (2016).



The Dominican Republic is highly responsive to growth in the US<sup>27</sup>, which suggests that the strong growth performance of the US during the 1990s also contributed to the growth acceleration observed in the DR. The high elasticity of the country's growth with respect to US growth is also anecdotally illustrated in recent years, with the DR's growth over the past two years exceeding its average at the same time as growth in the US accelerated.

**In spite of facing two crises and two major hurricanes and tropical storms,<sup>28</sup> the remarkable growth performance of the last 25 years was accompanied by low levels of volatility, both in historical terms and compared to other countries.** After spiking in the 1980s, the coefficient of variation of growth, a common measure of volatility, fell by half after 1993 (Figure 2, panel A). This happened even as the country coped with a domestic banking crisis in 2003 and the global financial crisis of 2009, and despite exposure to natural disasters. The newfound resilience of the Dominican economy is in part the product of the structural and stabilization policies, all of which made the country nimbler.<sup>29</sup> Compared to other countries, the DR stands out for having a combination of high growth rates and low levels of volatility (Figure 2, panel B).

## Investment and capital accumulation have been the main drivers of growth, and they were accompanied by productivity growth

**Capital accumulation has been the main driver of growth, accounting for half of the country's econom-**

**ic expansion since the early 1990s, and it has been accompanied by total factor productivity (TFP) growth.** The contribution of physical capital has been relatively stable over 5-year periods, hovering around 50 percent of total growth and stands out as the largest among comparator countries<sup>30</sup>, except for Peru (Figure 3, panels A and B). The relative stability of the contribution of capital contrasts with that of TFP and labor. Labor accounted for approximately 50 percent of the growth between 1990 and 2000. Since then, its contribution has remained more modest, at about 30-40 percent of total growth. The share of growth explained by TFP growth over the last 25 years was 13 percent, but it varied significantly from period to period.<sup>31</sup> The positive contribution of TFP to total growth in the DR stands in contrast to what is observed for regional peers, where TFP growth has been negative.

**The predominant role of capital accumulation in the growth process is explained by high investment growth rates.** Investment has played a leading role as an engine of growth over the past 25 years. It was the fastest growing component of domestic demand between 1991 and 2017, followed by consumption and exports. Because of its robust growth, the incidence of investment on GDP increased from 16 percent in 1991 to 24 percent in 2017. Moreover, between 1991 and 2016, investment growth outpaced the levels observed in a set of comparator countries, except for Peru (Figure 3, panel C).<sup>32</sup>

**In part, investment was propelled by inflows of foreign direct investment (FDI), especially since the mid-1990s.** FDI as a share of GDP rose sharply after 1996, from an average 1.2 percent of GDP between

27 Estimations presented in Végh, Lederman, and Bennett (2017), show that GDP growth in the DR is highly elastic to the growth rate of G7 countries, of which the US represents a big part. More specifically, the authors use quarterly data to estimate the elasticity of year-on-year growth rates of different LAC countries with respect to external factors (growth of G7 countries, China's growth, commodity prices, and the US 10-year treasury rate). Their findings show that, after controlling for other external factors likely affected by US growth, the elasticity of the DR's growth (in terms of deviations from the country's average growth) with respect to G7 growth is positive and significant, and is the fourth largest among LAC countries with available data.

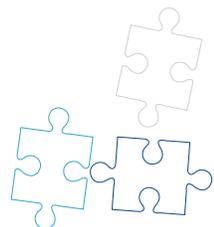
28 Hurricane Georges in 1998 and Tropical Storms Noel and Olga in 2007.

29 The reforms of the 1990s were mainly structural reforms that opened the Dominican economy to trade and foreign capital flows, and reforms to specific sectors. The reforms of the 2000s, such as the adoption of an inflation targeting regime by the Central Bank, sought to strengthen the country's macro policy framework and financial stability.

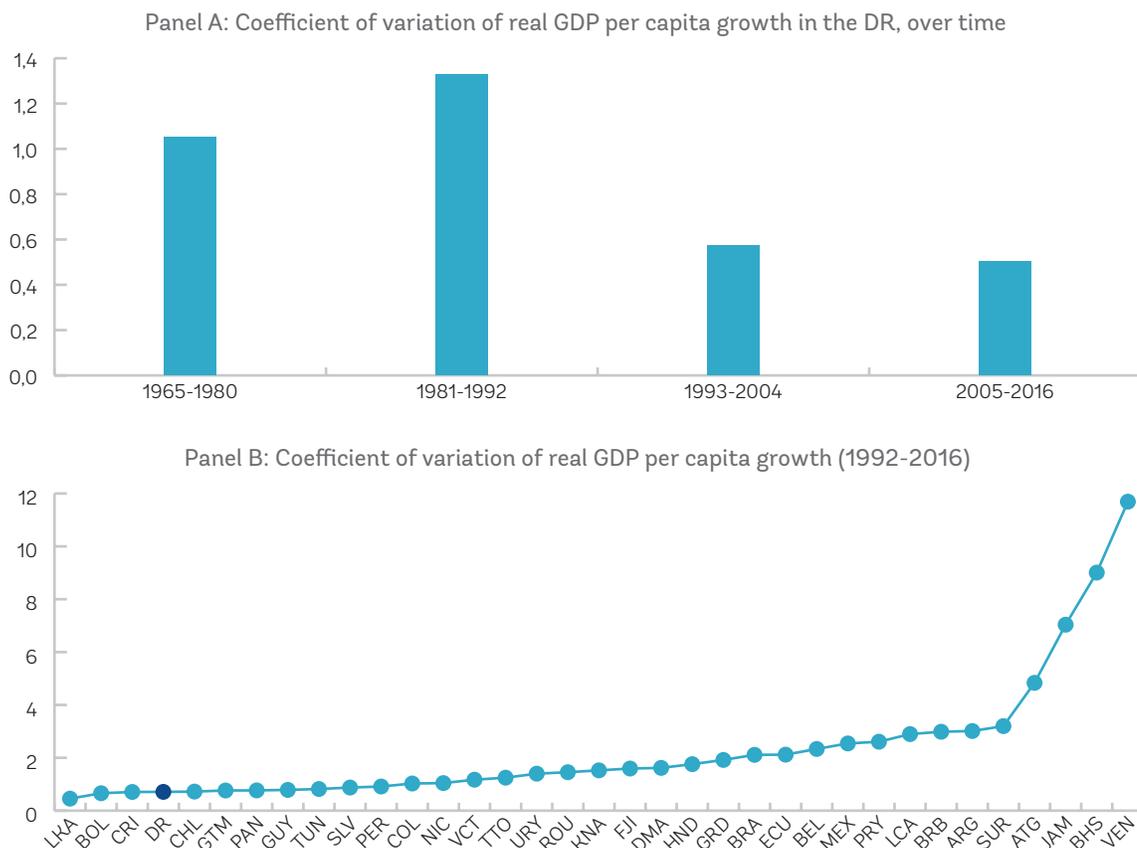
30 See Annex 2 for a description of the country comparators.

31 One should be cautious in interpreting these results because TFP growth typically captures everything affecting growth that is not captured through capital accumulation and labor growth. These measurement problems are even larger when analyzing short periods of time.

32 For comparability, the benchmarking exercise uses UN National Accounts estimates. In some cases, the numbers defer from national sources. For example, in the case of the DR, UN data points to investment growing at an average 7.2 percent between 1991 and 2016, while data from the Dominican Republic's Central Bank points to higher growth closer to 9 percent.



**FIGURE 2: The DR’s recent growth episode has been accompanied by historically low levels of volatility**



Source: World Bank staff’s calculation based on data from WDI.

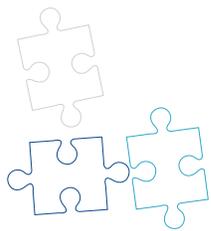
1980 and 1995 to an average 3.8 percent of GDP after 1995 (Figure 4, panel A). FDI also increased noticeably as a share of total investment over the past 25 years. It accounted for 8 percent of total investment in 1991, and by 2016 that number had doubled to close to 16 percent.

**Two policy factors that contributed to the sharp increase in FDI inflows were the structural reforms and stabilization policies of the 1990s and the explicit efforts to attract foreign investments.** Broad-based structural reforms, like the enactment of law No. 16-95 in 1995, which opened the possibility for foreign investments in almost every economic sector, were accompanied by a series of laws providing tax incentives (CIT and VAT exemptions) to foreign investment. The

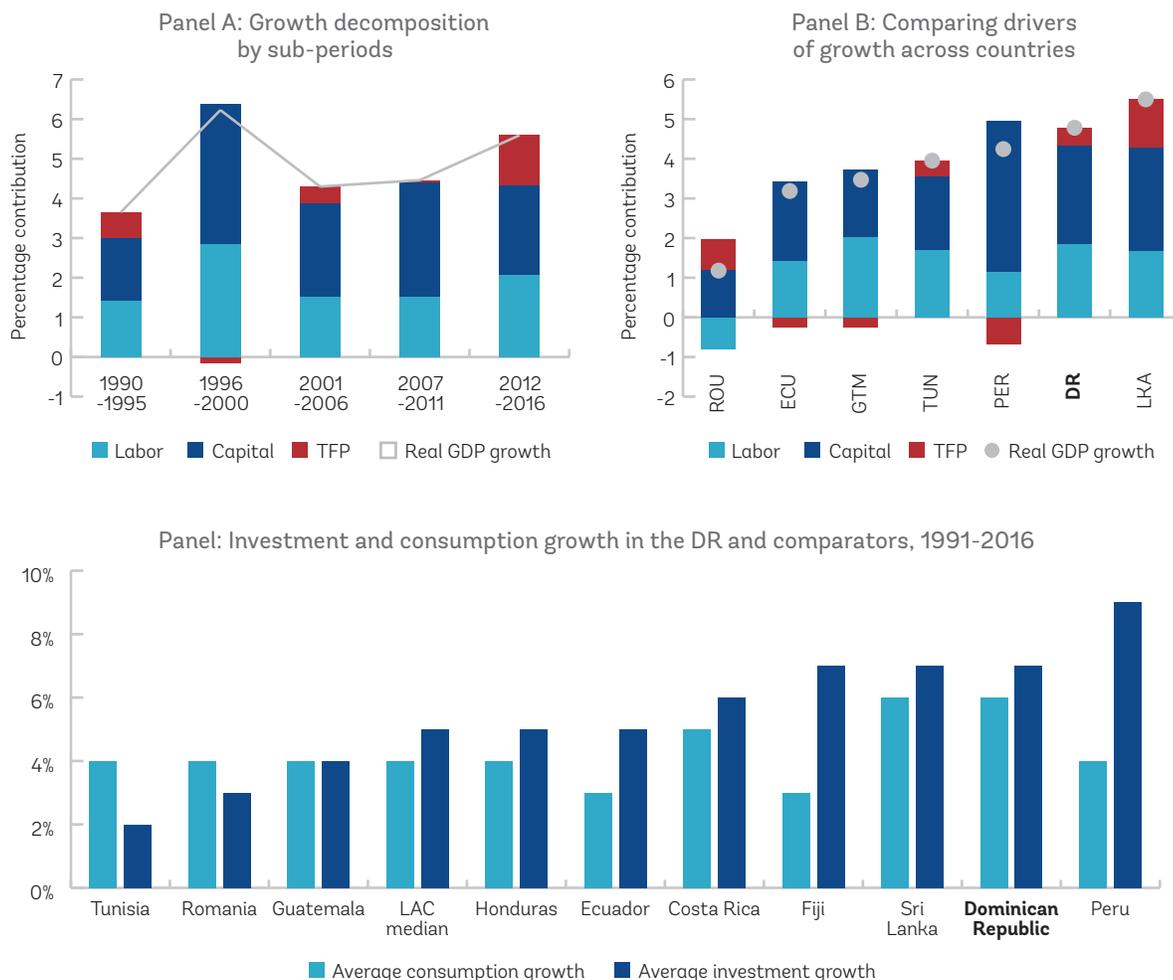
sharp increase in FDI as a share of GDP occurred between 1996 and 1999, a period when the process of structural reforms accelerated in the country and tax incentives entered into force.

**The country’s geographic characteristics have also favored FDI inflows.** Proximity to the US and Canadian markets and producers<sup>33</sup>, the country’s Caribbean location, with its beaches and easy access to the ocean, and its newfound wealth of natural resources are three geographic attributes that have shaped the composition of FDI inflows, both in terms of origin and sectors of economic activity. From 1993 until 2010, over 50 percent of total FDI inflows came from North America. That share fell in the aftermath of global financial crisis, but still represented 34 percent of total FDI inflows in the

33 Beyond geographic proximity, the linkages between the US and the DR have historic roots, and were reinforced after the US occupied the Dominican Republic from 1916 to 1924 and again in the mid-1960s.



**FIGURE 3: Drivers of growth in the DR**



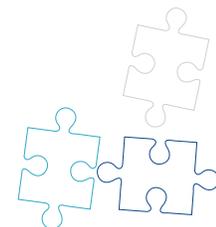
Sources: World Bank staff's calculation based on data from The Conference Board, DR Central Bank (BCRD) and UN national accounts estimates.

2010-2016 period (Figure 4, panel B). The influence of capital from North America on the DR's economy can be more clearly seen in the special economic zones (SEZs), with a third of the firms being of US origin.<sup>34</sup> This makes the US the largest foreign presence by number of firms, followed by Germany with only 2.5 percent of the total number of firms in SEZs. In terms of sectoral composition, two sectors that have a relatively large and stable participation in total FDI are industry and commerce (accounting for approximately 30 percent) and tourism (hovering around 20 percent) (Figure 4, panel C). The rest of sectors have seen significant changes over time. The participation of utilities in total

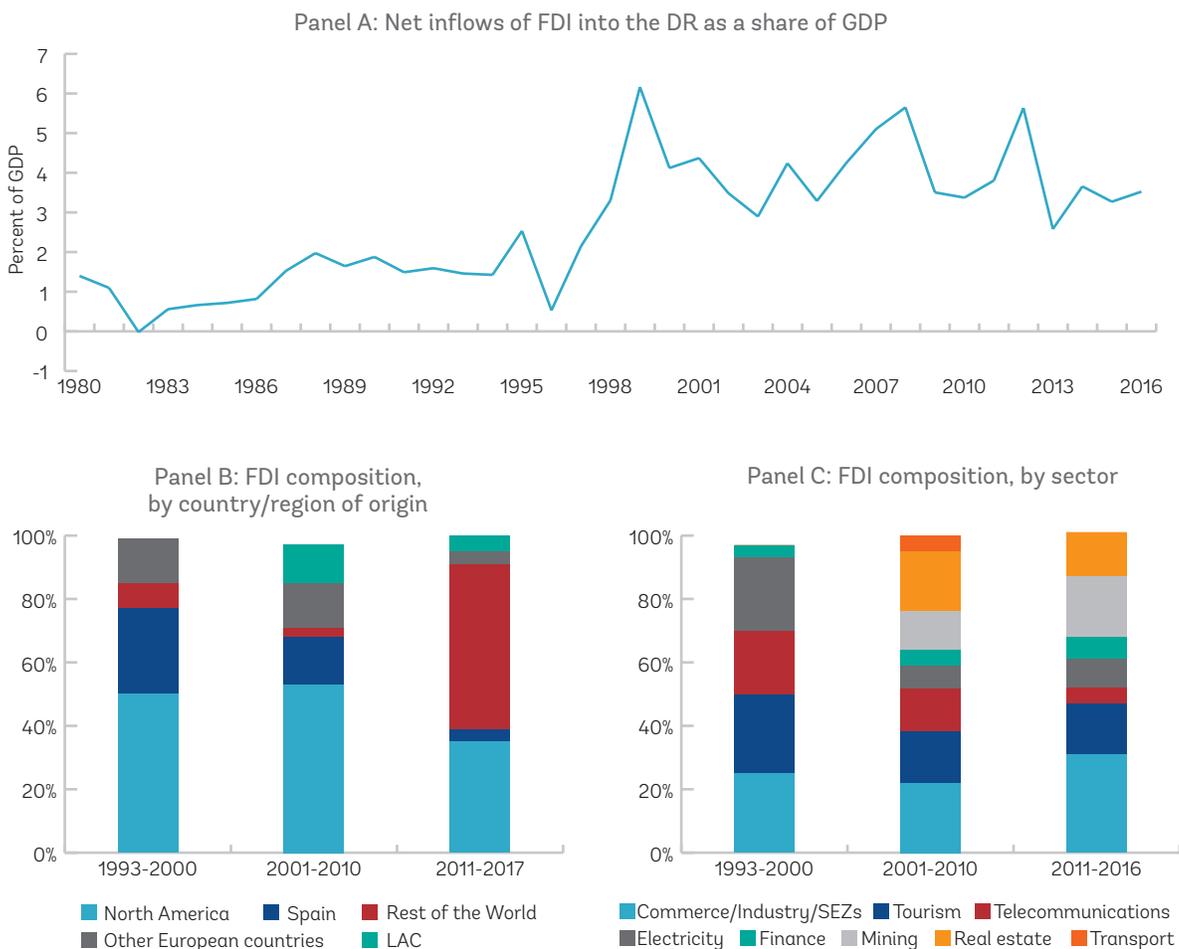
FDI, which stood at around 40 percent in the 1990s, fell to less than 15 percent in the 2011-2016 period. In contrast, mining and real estate have gone from incipient levels in the 1990s, to representing over 30 percent in the 2010-2016 period.

**Changes in the growth and composition of FDI inflows are related to changes in the composition of demand and supply in the Dominican economy.** On the aggregate demand side, the growth rate of investment fell in the 2000s (from an annual average of 13 percent between 1992 and 2002 to 7 percent between 2004 and 2016). The deceleration in investment growth of the

34 See Consejo Nacional de Zonas Francas de Exportación (2016).



**FIGURE 4: FDI inflows into the Dominican Republic**



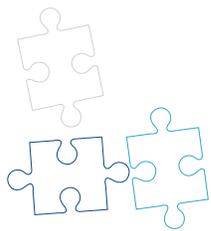
Source: World Bank staff's calculation based on data from WDI and BCRD.

2000s occurred while the country navigated through two economic crises—the 2003 banking crisis and the 2009 global financial crisis, which translates in a more stable participation in total GDP. This can be seen in the specific case of FDI, which has stabilized at around 4 percent of GDP since the late 1990s. Consumption, on the other hand, accelerated from an average growth rate of 4.8 percent in the 1992-2002 period to 5.4 percent between 2004 and 2016. On the supply side, FDI data shows an increase in the participation of extractive sectors and some services, like financial services. The next section looks in more detail at the supply side of the Dominican economy and its implications for growth, productivity, and employment.

### A look at the supply side: the rising role of services

**Services has been the leading sector, consistently adding 2.5-3 percentage points of growth per year over the past 25 years.** Between 1992 and 2017, the broad services sector<sup>35</sup> grew at an annual average of 5.3 percent, exceeding the average annual growth of total value added of 5.1 percent (Figure 5, panel A), and contributing between 50 and 65 percent of the growth. Construction, which grew at an average annual rate that exceeded 8 percent, has contributed close to one percentage point of GDP growth over the period, although its contribution declined in the 2000s. Agriculture and manufac-

35 These are all sectors except for agriculture, manufacturing, mining, and construction.



turing have grown at an average of around 4 percent per year, and their joint contribution to growth has fallen from close to 30 percent of total growth in the 1990s (approximately 2 percentage points of GDP growth) to 20 percent after 2000 (less than 1 percentage point). As a result, the country has experienced noticeable changes in the sectorial composition of its GDP since the early 1990s, with services increasing its weight in the economy over time (52 percent of GDP in 1992 to over 65 percent in 2017) and manufacturing and the primary sector declining by 12 and 6 percentage points between 1992 and 2017, respectively (Figure 5, panel B).<sup>36</sup>

**The service sector has also played a rising role in job creation and employment growth.** The total labor force increased at an average annual rate that has ranged between 1.7 percent and 2.3 percent in different periods over the past 15 years. Of this growth, employment growth in the broad services sector has been the largest contributor, adding approximately 2 percentage points of total employment growth in each sub-period (Figure 5, panel C). The growth of total employment and of employment in services has been particularly strong since 2012. In contrast, the primary sector has seen an absolute contraction in the number of people working in the sector and the manufacturing sector has had an uneven performance.<sup>37</sup> As a result, the share of employment in the broad services sector in total employment increased by 10 percentage points between 2000 and 2016 (from 60 to 70 percent) (Figure 5, panel D). In contrast, manufacturing and the primary sector have lost ground in terms of their incidence in total employment, with declines of 3 and 7 percentage points between 2000 and 2016, respectively.

**Both in terms of employment and value added, the services sector in the country exceeds that of its peers and what is predicted by its level of development and**

**size.** The DR has a larger share of value added and employment in services in 2016 than most of its structural peers. Moreover, a simple benchmarking exercise of value added in services as a share of GDP in 2016 and the share of employment in services, show that these two numbers exceed what the country's GDP and population predict (Figure 6).

**Amid these changes in the structure of the economy, labor productivity, defined as value added per worker, has increased between 2000 and 2016, consistent with TFP growth.** Aggregate labor productivity increased by 52 percent over the 2000-2016 period, which is equivalent to a 2.5 percent average yearly growth rate (Figure 7). Labor productivity has increased in all sectors, but growth has been particularly strong in the primary sector and construction. In general, labor productivity growth can be due to both within-sector productivity growth as well as reallocation of workers across sectors. Within-sector productivity accounted for about 2.6 percentage points of productivity growth per year, while reallocation effects had a small negative contribution of about 0.26 percentage points per year.

**Productivity growth could be associated with the large presence of foreign firms and the country's policy efforts to integrate into global markets since the mid-1990s.**<sup>38</sup> In addition to tax incentives to foreign investment, the country significantly reduced most-favored-nation (MFN) tariffs (non-preferential tariffs) since joining the World Trade Organization (WTO) in 1995. From 1995 to 2014, the country slashed its average MFN tariff by 7.5 percentage points, the second largest reduction in LAC after Peru (see Bown et al. 2017). In 2006 the DR gained preferential access to the US market when the Dominican Republic-Central America Free Trade Agreement (CAFTA-DR) with the US. DR-CAFTA has created a

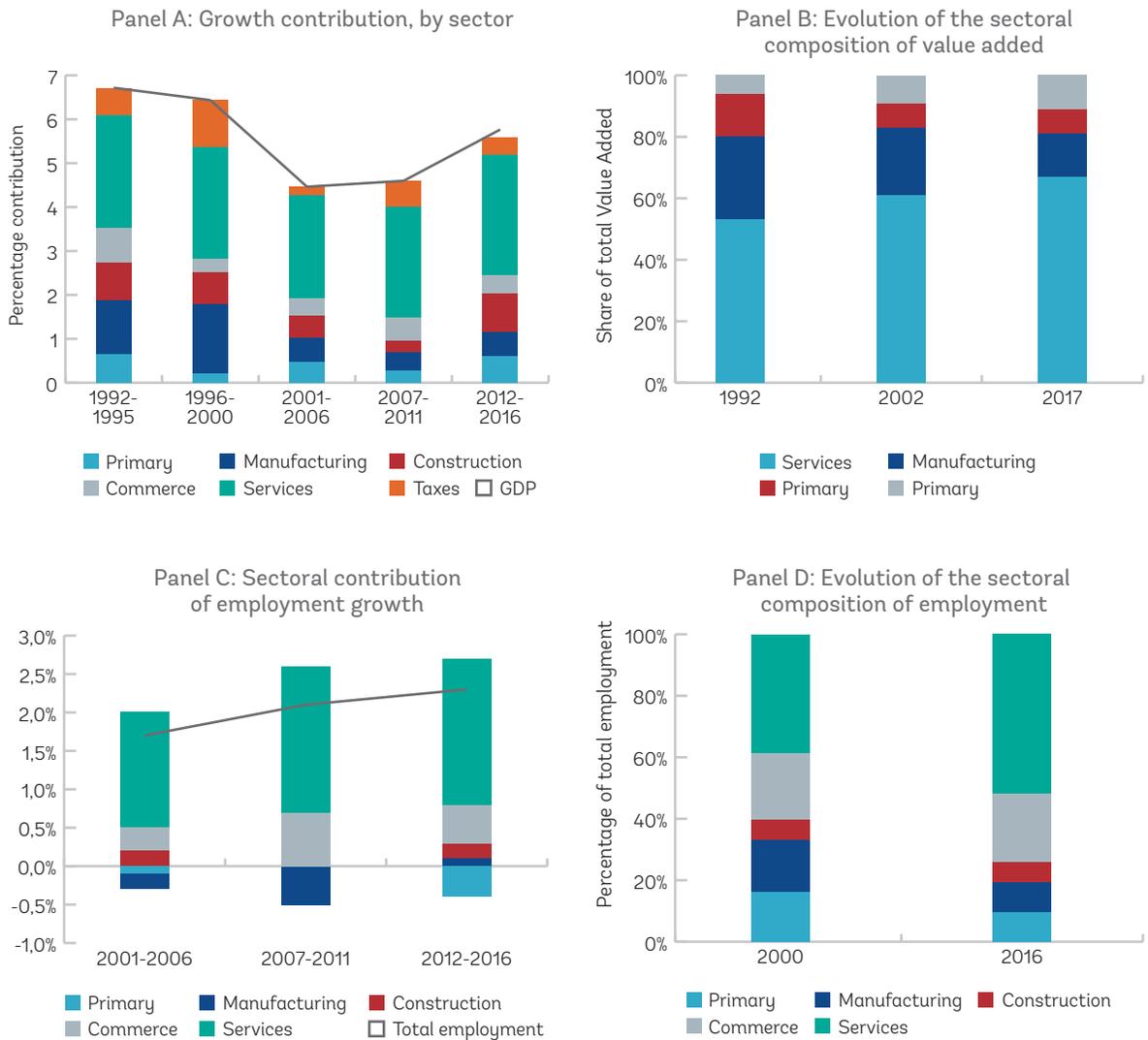
<sup>36</sup> Within the primary sector, most of the decline is explained by a fall in the share of agriculture. In contrast, mining has doubled its participation from 2 to 4 percent of total value added.

<sup>37</sup> Manufacturing employment fell between 2000 and 2011, amid the DR's banking crisis, a decline in demand for Dominican manufacturing due to the end of the multifiber agreement (MFA), and the global financial crisis. Since 2012, however, it has recovered, and has contributed positively to employment growth.

<sup>38</sup> There are at least two channels through which foreign firms can have positive direct benefits in the local economy. First, they are typically highly productive from (high-income) countries closer to the technological frontier. Data show that multinational firms are highly innovative, representing 70 percent of business R&D in the world and with a high propensity to patent; see Javorcik (2010) and Lederman et al. (2014) for a discussion. Second, foreign firms create new jobs and pay on average higher wages compared to local firms. For evidence of externalities and spillovers through input-output linkages, see Javorcik (2004). For an assessment of the direct and reallocation effects see Alfaro and Chen (2012). For evidence on the positive impact of worker turnover from foreign firms to domestic firms, see Poole (2013).



**FIGURE 5: The service sector has been the main driving force of GDP growth and employment in the DR**

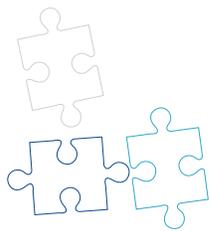


Source: World Bank staff's calculation based on data from BCRD.

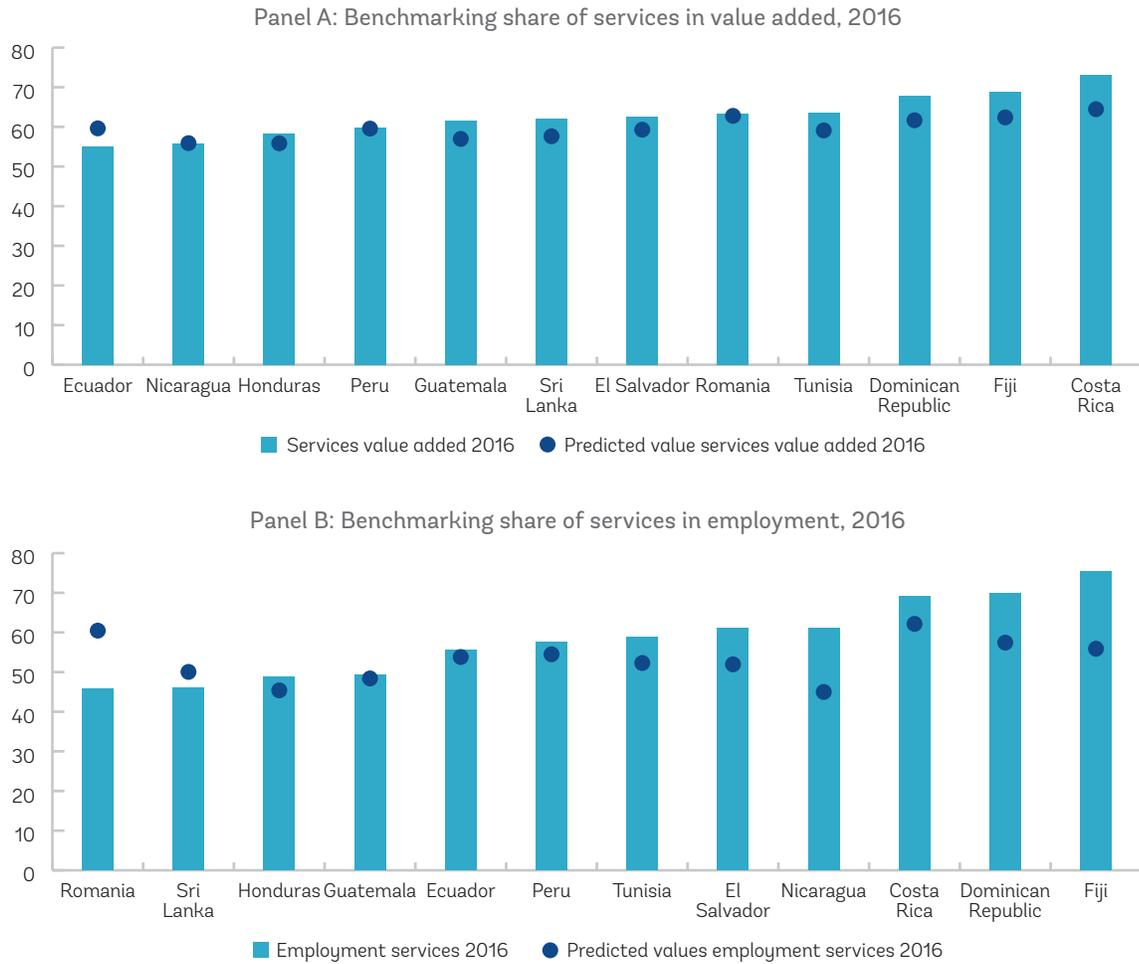
wider and safer market for DR exports thereby having a positive overall impact for the economy (Calvo and Cruz 2016 and Alemany 2011).

**Trade openness and FDI can have a positive impact on a country's productivity through several channels.** Trade can give firms in a country access to higher quality inputs, which can in turn lead to productivity gains. Import competition can force firms in a country to innovate (Amiti and Khandelwal 2013) and can force unproductive firms to exit the market. Also, exporting firms have been found to be systematically more productive than non-exporters, in part due to selection

(Melitz 2003) and learning-by-exporting (Atkin, Khandelwal, and Osman 2017), but also because of productivity-enhancing actions taken prior to becoming exporters (Labanca, Molina and Muendler 2013). FDI can increase a country's productivity directly and can yield productivity improvements in the local economy through positive externalities to local firms and technological spillovers. These productivity-enhancing effects can occur through direct market transactions (for example, business relations between the foreign firm and domestic suppliers), worker turnover (that is, the movement of workers from foreign firms to local firms), through the reallocation of resources towards the most

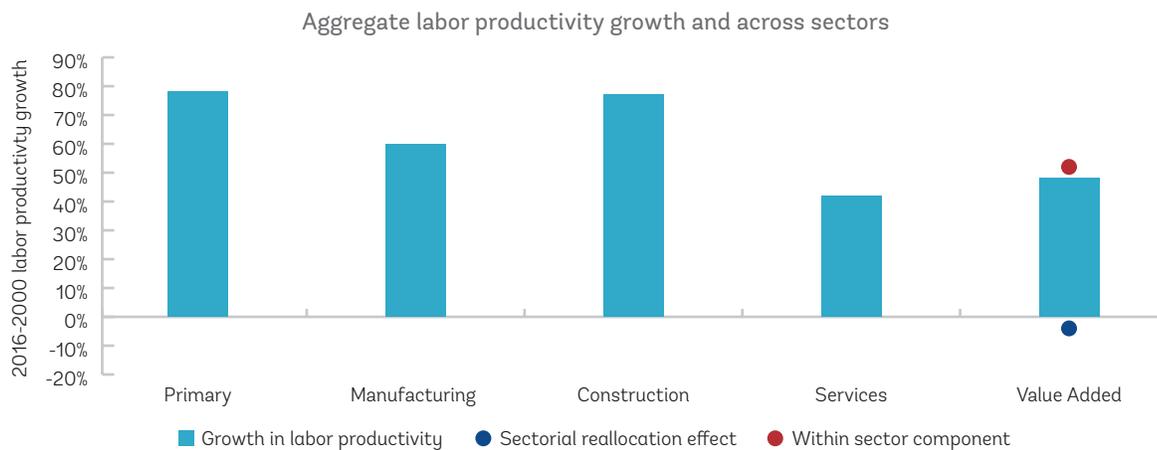


**FIGURE 6: The DR has a larger share of services in value added and employment compared to peers and predictions**

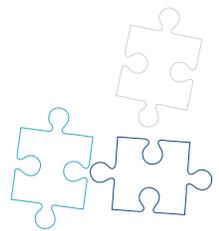


Source: World Bank staff's calculation based on data from WDI. Note: Predicted values are obtained from a regression of the share of services in either employment or value added in a specific year on log GDP and log population.

**FIGURE 7: Productivity has increased in all sectors, but employment flowed to lower productivity sectors**



Source: World Bank Staff's calculation based on data from BCRD.



productive firms, or indirect exposure to better technologies (see Lederman et al. 2014 and references therein).

**While there are no rigorous evaluations of the impact of FDI and trade on the country's productivity and growth, a systematic analysis of the performance of Dominican firms and exports and the links between foreign firms and local firms, could provide indirect evidence and shed some light on these potential impacts.** In what follows the chapter turns to this analysis.<sup>39</sup>

## Fast firm-level growth but little evidence of quality upgrading and weak links to exports

### Dominican firms tend to grow faster compared to similar firms from other countries

**The economic dynamism of the last 25 years is clearly reflected at the firm level.** On average, data from the World Bank's Enterprise Surveys (WBES) show that formal Dominican firms have grown at a relatively strong pace both in terms of employment and sales. Consistent with GDP data, employment and sales growth were higher in the 2013-2016 period compared to the 2007-2010 period, and relatively higher than those observed in comparator countries (Figure 8, panel A).

**In fact, sales and employment growth rates of Dominican firms were higher compared to firms of similar characteristics from other countries.** Differences in growth rates between Dominican firms and those of other countries could be potentially driven by firm characteristics (such as size, age or exporter status), the sector in which the firm operates, integration into global markets, and the year of the sample.<sup>40</sup>

Data show that, on average, firms from the DR have a higher growth rate compared to firms of similar individual, sectorial and geographic characteristics (Figure 8, panel B).<sup>41</sup>

**There is, however, little evidence of quality upgrades and linkages between Dominican firms and firms in export-oriented sectors, suggesting that there are unexploited growth opportunities**

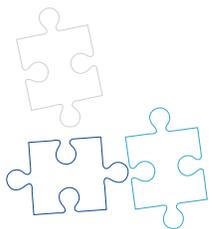
**Despite their dynamism, Dominican firms lag those in other countries in terms of quality upgrading and their propensity to export.** Firms in the DR have, on average, a lower propensity to hold internationally recognized certifications compared to firms of similar size, age and sector of operation from other countries. Similar gaps are observed in terms of in-the-job worker training and process innovation (Figure 9, Panel A). Dominican firms have a lower probability to export compared to those with similar characteristics in terms of age, size, geographic proximity to large markets, and other country characteristics (Figure 9, Panel A). Moreover, the gap between a firm's observed probability of exporting and the level predicted by firm and country characteristics is larger in the DR than in comparator countries. The observed gaps in terms of quality upgrading may be one of the factors explaining the low propensity to export observed for Dominican firms. Clearly these averages mark a large degree of heterogeneity in firm performance, as many firms, especially those in SEZs, are competitive in global markets. Nevertheless, these patterns are indicative of the broad challenges of the private sector.

**The relatively small size of the DR's economy, the low propensity of Dominican firms to have international recognized certifications, and proximity to the US market, partly explain the low levels of backward linkages observed in the country, but there are additional factors.** Evidence presented in Sanchez-Martin, de Pinies and Antoine (2015) shows that countries of small size (measured by GDP) have lower levels of backward linkages (measured by the share of inputs bought domestically). Additional factors that may affect a country's decision between buying inputs domestical-

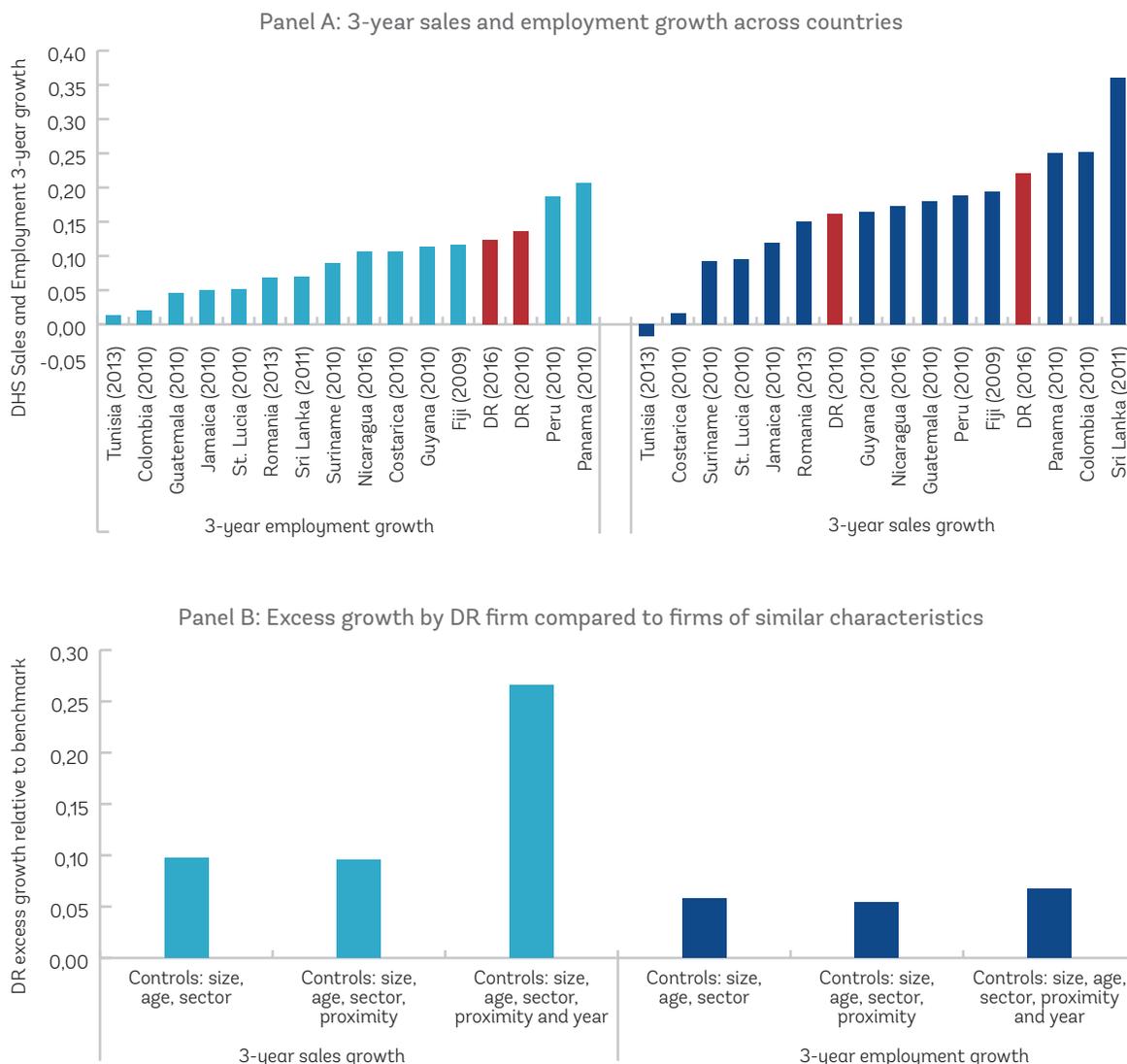
<sup>39</sup> A detailed description of trade patterns and the performance of SEZs, tourism and agriculture, three outward-oriented sectors, is presented in Annex 4 and Annex 5, respectively.

<sup>40</sup> On average, younger firms grow faster than older firms; see Lederman et al. (2014) and references therein. Similarly, there could be differences in sectoral growth due to global demand and supply forces. Integration with specific markets and the year of the survey could also partly explain differences in growth rates.

<sup>41</sup> These differences in employment and sales growth are statistically significant at the 90 percent significance level.



**FIGURE 8: Sales and employment growth rates in the DR have been high compared to peers**



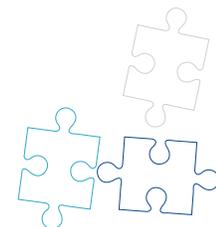
Source: Authors' calculations using the World Bank's Enterprise Service. Note: Growth is measured using the Davis, Haltiwanger, and Schu (1996) growth rates, which allows to calculate growth for firms with 0 initial values.

ly or in international markets include the availability of local high-quality inputs and the costs of importing high-quality inputs (Figure 10, panel A).<sup>42</sup> Using an extension of the regression analysis in Sanchez-Martin, de Pinies and Antoine (2015), Dominican firms display lower levels of backward linkages with local firms than those predicted by observable factors such as firm characteristics, sectoral characteristics, country size, and geographic proximity to high-income countries. In contrast, the gap between observed levels of backward

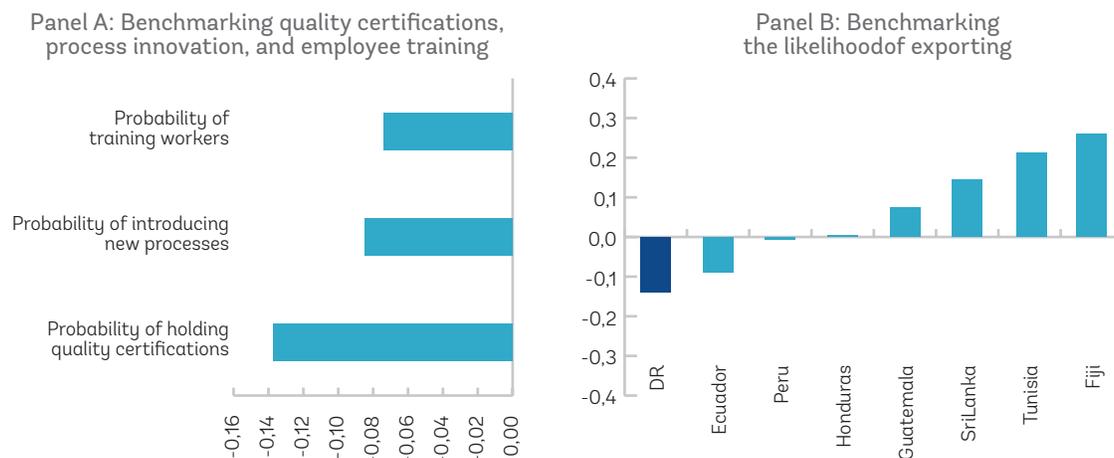
linkages and predicted levels is positive or non-significant in all comparator countries apart from Ecuador (Figure 10, panel B).

**Low levels of backward linkages and low levels of quality prevent the country from reaping larger benefits from the structural changes observed in the export basket.** Since the early 2000s the export basket has tilted towards goods of higher technological content, and of longer quality ladders, and has

42 The costs of importing are affected by distance and a country's trade policy. The results in Javorcik and Spatareanu (2011) suggest that Multinationals have a higher probability of buying locally the farther away they are from their home country.



**FIGURE 9: Dominican firms lag those of other countries in terms of quality upgrading and likelihood to export**



Source: World Bank Enterprise Surveys (latest available year). Note: All results come from linear regressions of the dependent variable controlling for the firm's size, age, sector and year fixed effect. In panel A additional controls include log of GDP, log of population, and the minimum distance to a G7 country or Russia. In panels B and D additional controls include a dummy variable taking value 1 if the firm has a quality certification, a dummy taking value 1 if the firm trains its workers, log GDP, share of firms in the country with quality certifications, log population, the minimum distance to a G7 country or Russia, a dummy variable if the country has an FTA with a G7 country or Russia, and dummy variables for the DR and its comparators.

moved from final goods to intermediates and capital goods (see Annex 4), changes that have the potential of fostering quality upgrading in the exports and larger knowledge spillovers from exporters to local firms.<sup>43</sup> However, materializing these potential hinges in the country's ability to foster stronger ties between exporters and domestic firms. Moreover, the growth of the export quality has been lower compared to countries that export similar products and are at similar stages of development as the DR, limiting the country's ability to take advantage of the changes in its export basket. The average quality of Dominican exports, proxied by the relative unit value of exports, has grown in recent years (Figure 10, panel C). In 2011 the average ranking of an export product from the DR stood at the 18th percentile of the quality distribution of that product. In 2016, the average ranking increased to the 30th percentile. Despite this improvement, the country's relative quality remains below that of structural peers and is below the level predicted by its size, income,

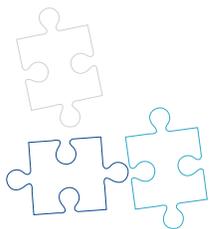
and geographic characteristics (Figure 10, panel D).<sup>44</sup> Moreover, quality upgrading occurs at a slower pace compared to what is observed in countries exporting similar products and with similar initial quality levels as the DR.<sup>45</sup>

**Problems of perceived low quality are particularly evident for Dominican agro-exports.** Rejection rates at the US border are higher for Dominican fruits and vegetables than those from other countries of the Central America Free Trade Agreement (CAFTA). The Dominican Republic has historically received favorable US market access due to strong economic ties and favorable CAFTA-DR trading rules, but its ability to comply with US Sanitary and Phytosanitary (SPS) regulation is low. In addition, evidence suggests that Dominican products may be subject to more frequent and stringent inspections due to past compliance problems (Jouanjean et al. 2012). For more details about the performance of the agricultural sector see Annex 5.

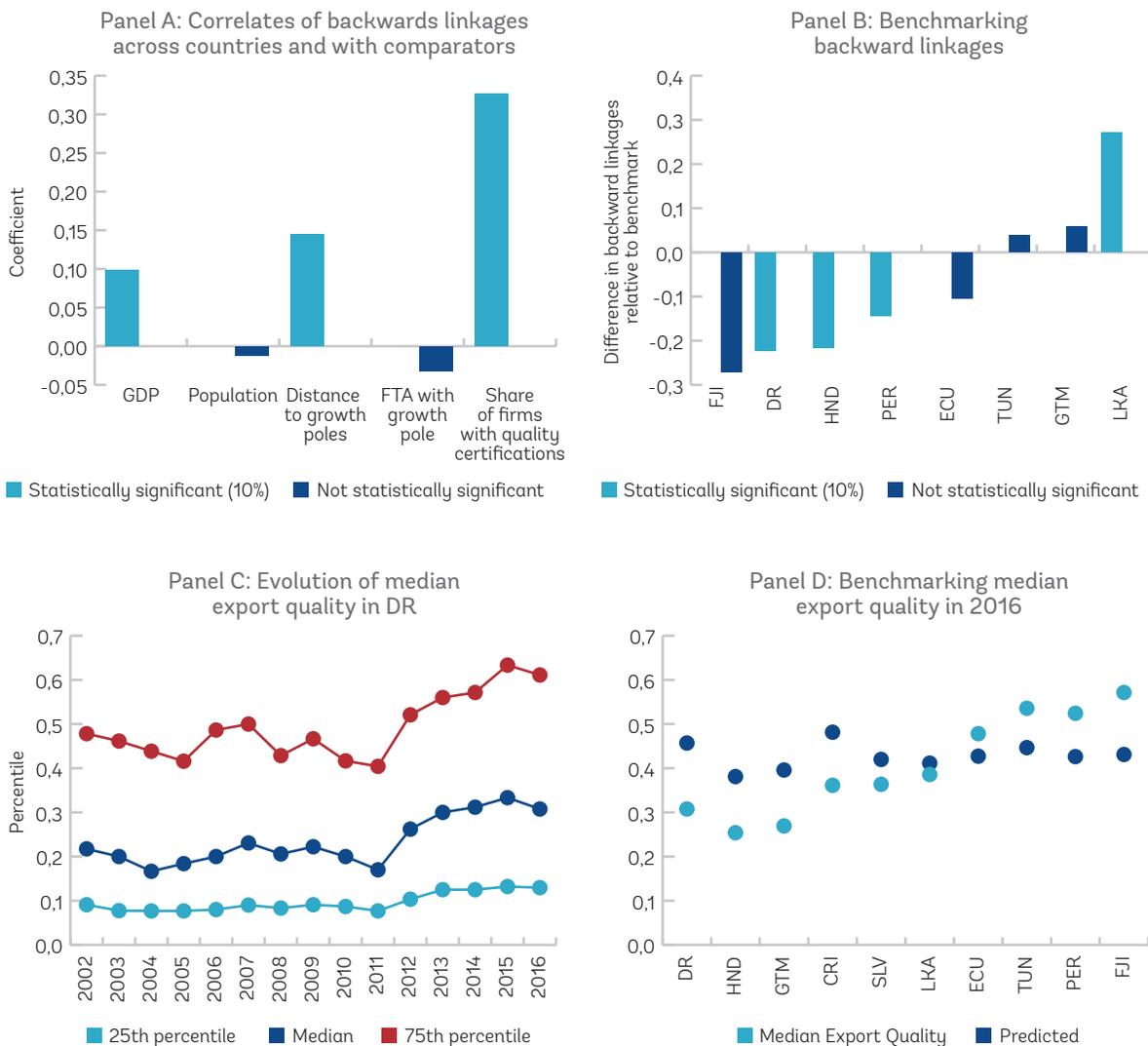
<sup>43</sup> Technological intensity is measured according to Lall (2000). Quality ladder estimates come from Khandelwal (2010). Export classification into intermediate, capital, final goods is from the BEC classification. Importantly, the attributes mentioned above are associated with higher growth (de la Torre et al. 2015).

<sup>44</sup> The result refers to a regression of the median relative quality of a good exported by a country against the log of GDP, the log of population and the log average distance to trading partners.

<sup>45</sup> A regression of the change in the relative quality of a country on initial quality and sectoral fixed effects shows that the DR's change is significantly lower compared to benchmarks.



**FIGURE 10: Dominican firms create less backwards linkages compared to similar firms in other countries and exporters lag in quality**

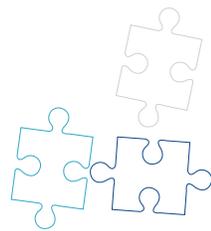


Source: World Bank staff calculations based on World Bank Enterprise Surveys (latest available year) and in CEPII. Note: Panel A and B are results from linear regressions of the dependent variable controlling for the firm's size, age, sector and year fixed effect. In panel A additional controls include log of GDP, log of population, and the minimum distance to a G7 country or Russia. In panel B additional controls include log GDP, log population, the minimum distance to a G7 country or Russia, a dummy variable if the country has an FTA with a G7 country or Russia, and share of firms in the country with quality certifications. Predicted values are obtained from a regression of the country's 2016 log median export quality on log GDP, log Population, and the average distance from trading partners.

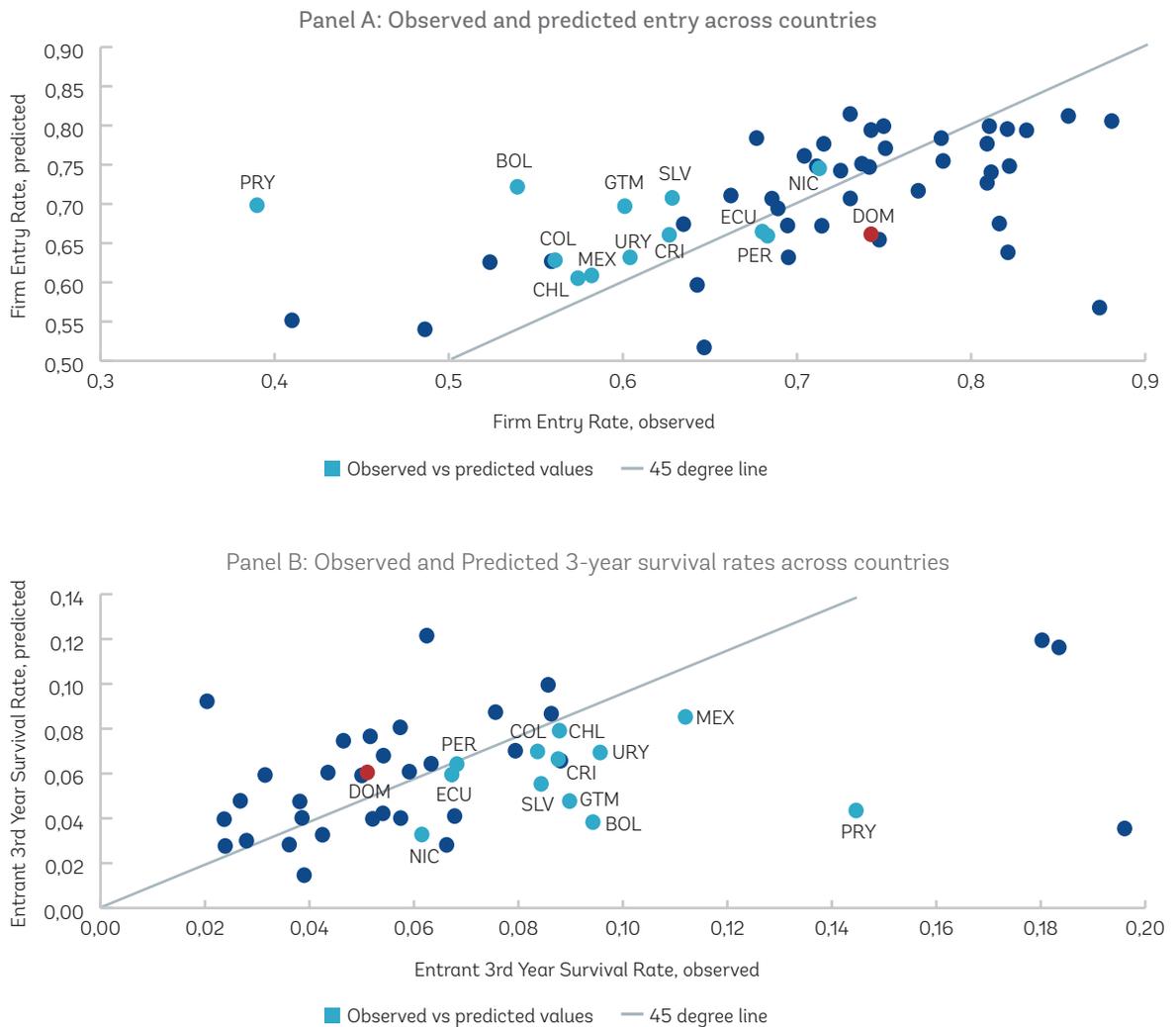
**Poor performance in terms of quality upgrading may be one factor why, despite having relatively high entry rates, Dominican exporters have lower survival rates than any country in the region.** The country exhibits entry rates (defined as the ratio of new exporters to incumbent exporters) that exceed the level predicted by a regression model that controls for economic size and geographic variables (Figure 11, panel A). However, Dominican exporters exhibit the lowest 3-year sur-

vival rate among LAC countries (Figure 11, panel B). A new exporter in the country has a 5 percent probability of survival after three years, half the LAC average. This rate is also lower than the levels predicted by using a model like the one described above.

**Thus, policies and structural factors beyond size, the sectoral composition of the economy, and proximity to the US, appear to deter quality upgrading**



**FIGURE 11: The DR has a higher export entry rate than comparators, but underperforms in the terms of survival**



Source: World Bank staff calculations based on Export Dynamics Database. Data is available for a panel of countries between 1997 and 2014. Note: Predictions are the predicted value of a linear regression of the variable of interest on log GDP, log population, the average distance of the country to its trading partners, year and product fixed effects.

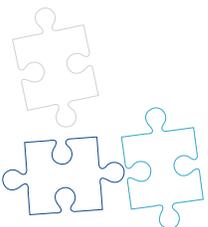
**and more integration between Dominican firms, hampering the country’s ability to achieve higher growth and create more and better jobs.**<sup>46</sup> Moreover, the ability to reap the full benefits of the presence of foreign firms depends on the ability of local firms to connect more robustly to local markets.<sup>47</sup> This implies that addressing the factors impeding Dominican firms

from improving their quality is crucial to securing the country’s future growth. The creation of more and better jobs could also help the country reducing its stubbornly high level of informality, a topic that is further discussed in chapter 4.<sup>48</sup> The rest of this chapter studies the potential causes preventing Dominican firms from becoming more outward-oriented and dynamic.

<sup>46</sup> Evidence in Lederman et al. (2014) shows that employment growth and wages paid by firms are positively correlated with size and quality upgrading.

<sup>47</sup> Fostering backward linkages is a necessary condition for knowledge spillovers from foreign firms to local firms, but it does not guarantee these spillovers.

<sup>48</sup> Lederman et al. (2014), using a framework proposed by Poschke (2013), argue that LAC’s high level of informality responds to the lack of dynamism of the region’s formal firms, as a potential worker’s decision to enter informality is associated with the scarcity of high-quality jobs in the economy.



## Challenges to competitiveness and inclusive growth

**As described throughout this chapter, the country has benefitted from a relatively long period of economic progress, which is explained in part by a dynamic private sector.** The dynamism of the economy has been facilitated by private sector reforms. Based on the World Bank Group's Doing Business indicator the Dominican Republic ranked above the regional average for LAC, vis-à-vis business settings, at 99th out of 190 countries. This compares favorably with its 2016 ranking of 103rd. The enhanced business climate is also evident in its international trade performance with strong growth in exports, largely in sugar, coffee, tobacco, textiles, tourism, medical devices and electronics (see World Bank 2015 and World Bank 2017).

**Nevertheless, there are still factors preventing the country from achieving higher and more inclusive growth across sectors and stronger export performance.** Four characteristics appear to undermine the DR's ability to achieve these objectives. Poor infrastructure, especially in electricity, poor availability of an adequately prepared labor force, high financing costs, and an uneven playing field, appear as the largest constraints to a more robust process of economic development, based on perceptions and international benchmarking of data.

### Despite improvements, the country's poor infrastructure constrains private sector development and export performance

**As an island state highly dependent on trade, good road and port infrastructure is critical for successfully creating functional domestic supply chains, to increase productivity and competitiveness, and to connect domestic SMEs into exports and global value chains.** The impact of trade on competitiveness is clearly illustrated by oil. Oil products are imported and over 70 percent of the electricity generated depends on diesels and gas imports. Road and port infrastructure is

critical to connect local suppliers and to connect Dominican exporters to world markets.

### Infrastructure has improved but challenges remain.

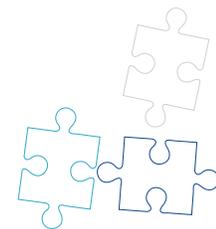
According to the World Bank's Logistic Performance Indicator (LPI), the quality of the trade and transport-related infrastructure improved between 2007 and 2016—the indicator improved by approximately 5 percent (from 2.18 to 2.29) and the DR cut the distance to the best performers in the world. These improvements notwithstanding, the country ranks 111th in a sample of 160 countries, and it lags regional peers, the LAC and Central American averages (2.45 and 2.43, respectively). Similarly, according to the 2017-2018 Global competitiveness Index (GCI) the country scores 3.3 out of 7 (101st place out of 137 countries worldwide) on the quality of the overall infrastructure. ICT infrastructure also appears to lag, with the country ranking 94th out of 137 countries in terms of internet bandwidth (measured as kb/s/users), behind all LAC countries with available data except for Paraguay and Venezuela.<sup>49</sup>

### The relatively poor quality of infrastructure is most visible in the electricity sector.

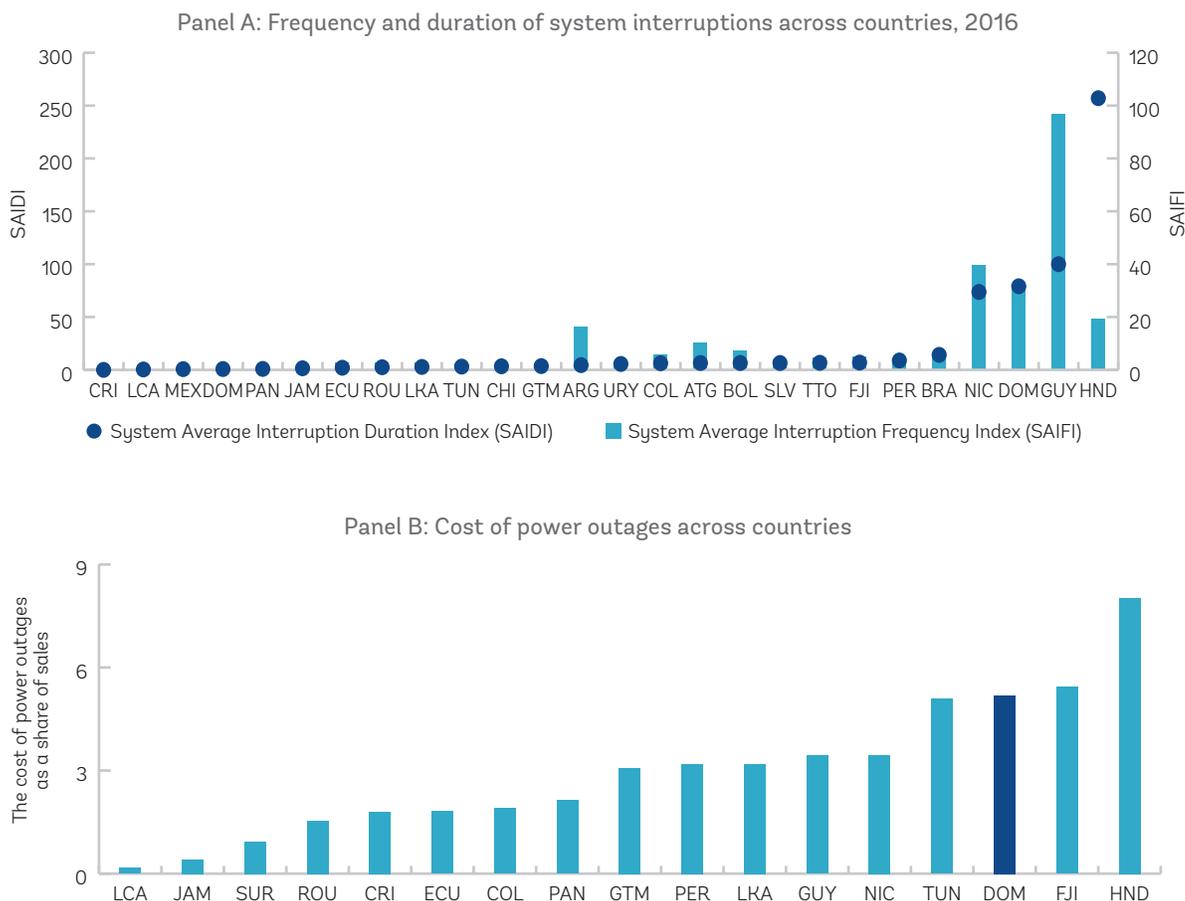
According to the GCI, the quality of the supply of electricity ranks 125th out of 137 countries in the world, a lower standing compared to overall infrastructure. According to the World Bank's Enterprise Survey conducted in 2016, 14 percent of Dominican firms rank electricity as the main barrier to growth, making it the second most common response. This contrasts with other LAC countries, where only 7 percent of firms report electricity as the main constraint to firm growth.<sup>50</sup> The poor quality of electricity provision is reflected in power outages due to rationing. While the electricity access rate in the DR is 98 percent, higher than the average for Latin America, it is estimated that only 52 percent of the electric consumers have 24-hour service. These interruptions affect the production costs of Dominican firms and increases spending on alternative sources of energy. The country has the fourth highest frequency and third highest duration of power system interruptions among LAC countries and structural peers (Figure 12, panel A). However, contrary to Central American countries suffering from

49 See Global Competitiveness Report 2017-2018.

50 Enterprise Surveys: 2016 Dominican Republic Country Profile.



**FIGURE 12: The DR suffers from frequent and long power outages, which have large economic costs**



Source: World Bank staff estimates based on data from World Bank, *Doing Business 2018*, and World Bank Enterprise Surveys.

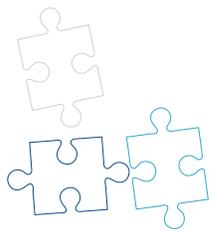
low quality of electricity provision, the DR as an island economy has a limited ability to trade electricity and connect its grid with nearby countries.

**The economic impacts of the problems of the electricity sector are large.** On average, Dominican firms lose 5 percent of their sales because of power outages (Figure 12, panel B). This is the second largest value in LAC, and the third largest value if one considers LAC countries and the country’s structural peers. To minimize the costs of outages, businesses must make large investments in back-up equipment, to be able to carry out their day-to-day activities. Approximately 95 percent of large industries have electric generators as well as 78 percent of small ones.<sup>51</sup> This situation increases the cost of production and goods and services provision

and undermines business competitiveness, with monthly spending on backup generation increasing with firm size. Beyond power outages, the country’s electric system features the third highest industrial electricity prices in the region at about 0.3 US\$/kWh (Beylis and Cunha 2017). Lower oil prices and changes in the composition of the energy matrix may help lower the costs of electricity. Nevertheless, the structural constraints of the sector suggest that the additional costs induced by the sector’s problems will persist even if the efforts to change the generation matrix materialize (Box 1).

**The economic costs associated with problems in the electricity sector are disproportionately larger for small firms.** Analysis using data from the WBES shows that the relative losses associated with power outages

51 “Impact of the Crisis in the Electric Sector in the Dominican Economy,” IDB/INTEC.



## BOX 1. The structure and problems of the electricity sector

**The electricity sector is probably the paradigm of malfunctioning public goods in the Dominican Republic.** High losses, high cost of energy generation, a weak regulatory environment, and the lack of transparency and accountability around the use of government transfers to the sector, are persistent challenges despite the creation of a modern legal and regulatory framework.

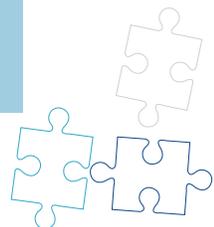
**To improve the reliability and continuity of electricity service, the Dominican Republic (DR) began a series of structural power sector reforms at the end of the 1990s.** This included allowing private sector participation in the generation and distribution sectors to expand the sector and improve the efficiency of service provision. In 2001 an Electricity Law was passed that created a modern legal and regulatory framework, including the creation of a new policy making institution, the National Energy Commission (CNE), and an energy sector regulatory institution, the Superintendence of Energy (SIE). Three regional distribution companies (EdeNorte, EdeSur and EdeEste) were also created to supply electricity service. These companies were initially privatized but later sold back to the State between 2003 and 2009. The Dominican Corporation of State-Owned Electricity Companies (CDEEE) was set up to control and coordinate all of the country's state-owned electricity companies.

**This first wave of power sector reforms led to increased investment, technical capacity, and improved systems operations, but has not ensured the market's financial sustainability.** The Dominican experience with opening the electricity sector resulted in increased competition and private sector participation and was successful in increasing investment in generation capacity, improving operation of the National Interconnection Electricity System (SENI), strengthening the technical capacity of sector agencies and improving commercial practices. This investment has assisted in diversifying the generation matrix of the country, transitioning from a matrix supported mainly by fuel oil and hydropower to a more diversified one that also includes natural gas, coal, and other renewables.

**Despite reforms, the electricity sector still faces challenges that range from financial sustainability to problems in the regulatory framework and the governance of the sector.** At the point of the spear of the financial problems are the problems with distribution companies. The continuous cash deficits of the EDEs compromise the financial stability and viability of the entire sector and represent a large fiscal burden for the government. There are numerous factors behind the high financial deficit, including poor administration and commercial management, a tariff scheme that does not reflect the costs of delivering the service, and high technical and non-technical losses (due mainly to the poor condition of distribution networks, un-metered supply, theft, fraud, and mismanagement). Generation companies have been typically affected by payment uncertainty. Since the inception of the SENI there has been a significant debt owed by the distribution companies to the generation companies, in large part due to the gap between the applied and cost recovery tariff level as well as the high distribution losses. At the end of 2010 the debt represented around US\$418 million, rising to US\$781 million in 2014 prior to the fall in oil prices after which levels fell to US\$202 million in 2015. These payment delays limit the cash flow of generators and their ability to generate electricity, and limits competition by deterring the entry of new companies. Similar problems of payment uncertainty also afflict transmission companies.

**While the past electricity reforms created a modern legal and regulatory framework, implementation of this framework has been less effective.** The sector continues to suffer from a duplicity of functions among the main institutions. There is a duplication of functions among the newly established Ministry of Energy and Mines (MEM), CNE, and CDEEE with regard to the design of policies and planning for the power sector. There is no a single entity responsible for developing a long-term integrated strategic plan for the sector. Moreover, there is little continuity in the execution of the plans when there are changes in the administration. There is also ambiguity regarding the roles of the public versus private sector, distortions which hinders investment in the sector and effective and independent regulation.

**The persistence of the challenges described above suggests the sector is in an inefficient and stable equilibrium.** According to Ruffin et al. (2014), traditionally reforms in the electricity sector have mostly focused on the careful design of technical solutions, ignoring the underlying political economy of policy implementation. Even well-designed technical solutions have produced limited results (investments in distribution in exchange for a com-



mitment from the community to pay the energy bill), were reversed (pre-paid meters) or not implemented for years (a technical tariff scheme was prepared in 2010). An institutional and governance review for the country<sup>1</sup> concludes that reforms are more likely to be blocked when the costs are concentrated in a small number of well-organized stakeholders while the benefits are widely shared among groups that are not well organized. On the contrary, reforms are likely to succeed when the costs are widely shared in the society and benefits are concentrated in small groups (for instance, when the DR liberalized telecommunications at the end of the 90s). Given that most reforms required in the electricity sector will have costs concentrated in a small number of powerful stakeholders, the country embarked in an open process, known as “*Pacto Eléctrico*”, to reach a consensus on a set of reforms in the sector.

**All the sector’s stakeholders were invited to participate in the Pacto, including generation companies, both public and private, and distribution companies (public sector) which would affect power purchase agreements in the years to come.** The *Pacto* seeks to find a final solution to the issues of the electricity sector, so that the country can count on “reliable, competitive and sustainable electricity for all”. Deliberations in the *Pacto* began in 2015, and after more than two years of deliberations, has not been signed and has been criticized by academics and some private sector associations for not addressing the structural issues of the sector. The apparent shortcomings of the *Pacto* illustrate the difficulties to break the long-standing inefficient equilibrium in the sector.

Source: Carneiro et al. (2016).

<sup>1</sup> See World Bank (2013).

decrease with the firm’s size, even after considering sector characteristics and a firm’s age. This is reflected in the observed differences in responses by firms of different size regarding their main business environment constraint. Electricity is the most common response by small firms and the second most common response by medium-sized firms. In contrast, electricity does not appear in the top 3 constraints of large firms.

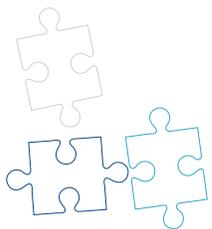
**The consequences of the problems of the electricity sector may go beyond direct output losses and increases in production costs, as they distort quality upgrading decisions and exert fiscal costs on the Dominican government.** Cross country evidence from the WBES suggests that the likelihood of a firm holding an internationally recognized quality certification decreases with losses due to power outages, even after controlling for size, age and sector of operation. In addition, the financial losses of the electricity sector, arising from operating and capital costs, are partly covered by the Dominican government. Over the past 10 years the Dominican government spent on average 1.3 percent of GDP per year, or almost 10 percent of tax revenues. As is discussed in chapter 4, this adds to the limited fiscal space and limits the government’s ability to address oth-

er expenditure needs that could enhance private sector competitiveness and meet social demands. It also adds to the recent increase in government debt.

## Increasing human capital and forging a more capable labor force will be crucial to the country’s ability to reap the benefits of structural transformation

**The trade basket has moved to goods that demand more skilled workers.** The change in the relative demand for skills in the exporting sector can be seen in SEZs. Since 2007, the skill composition of employment in SEZs changed towards more skilled positions. Before 2007, blue-collar workers accounted for approximately 90 percent of total employment in SEZ firms. After 2007 the share of blue-collar jobs has steadily fallen, reaching 80 percent in 2016 (Consejo Nacional de Zonas Francas de Exportación (CNZFE), 2016). More broadly, the trade basket has changed in a way that resembles more those observed in high-income countries (the EXPY index has increased), which are also countries that rely more heavily on high-skilled workers.<sup>52</sup>

<sup>52</sup> World Bank (2015).



**While the country has made noticeable progress in expanding access to education, the quality of education remains a constraint to growth.** The recent push to increase public funds allocated to education has resulted in an expansion of access to education. This has resulted in a change in the composition of the labor force, towards higher educational attainment. Despite this positive sign, the country underperforms in terms of standardized tests, as discussed in detail in chapter 3. The poor quality of education is also perceived by private sector actors. The GCI ranks the DR 123rd out of 137 countries in an index of quality of education, putting the country behind all LAC countries except for Nicaragua, El Salvador, Haiti and Paraguay.

**Lacking adequately prepared workers constraints the growth potential of large exporting firms, which have the largest potential to create high quality jobs.** An inadequately prepared labor force is perceived as major business constraint by 31 percent of firms in the 2016 WBES. It is the 3rd most common response for large firms, with 14 percent of all large firms reporting it as the main business obstacle, and the 4th most common response among exporters, with 11.5 percent reporting it as the main obstacle to growth. This, in turn, implies that a limited supply of appropriate skills limits the overall ability of the country to create well-paying jobs and reduce informality, since exporters and large firms tend to pay higher wages, on average, compared to small, non-exporting firms.<sup>53</sup>

The DR compares favorably to other countries in the region in terms of access to finance, but capital markets are shallow, financial costs are high, and the country lacks a robust insurance market

**Access to financial markets allow firms to fund the purchase of fixed assets – such as buildings, land, machinery, and equipment – and working capital necessary to operate and grow.** Efficient financial markets reduce the reliance on internal funds or informal

sources such as family and friends by connecting firms that are creditworthy to a broad range of lenders and investors.

**Compared to other LAC countries, a larger share of formal Dominican firms uses bank credit to finance operations and investment.** Data from the 2016 WBES show that approximately 57 percent of Dominican firms have a bank loan or line of credit. In contrast, the share of firms that have a bank loan or line of credit in the average LAC country is 47 percent. In addition, Dominican firms finance a larger percentage of their purchases of fixed assets through banks compared to firms in other LAC countries (28 percent compared to 20 percent). As a result, DR firms rely less on internal funds for the purchase of fixed assets compared to firms from other LAC countries (55 percent compared to 64 percent).<sup>54</sup>

**The country also stands above or close to regional numbers in measures of access to finance for individuals.** Data from the Financial Inclusion Dataset (Findex) shows that a larger share of Dominicans ages 15+ had savings at a financial institution compared to other LAC countries (26.5 percent compared to 13.5 percent), and borrowed from a financial institution (18 percent compared to 10 percent). As in LAC, close to half of Dominicans ages 15+ have a bank account, and over 60 percent of those who borrowed from financial institutions used those funds for a farm or business venture.

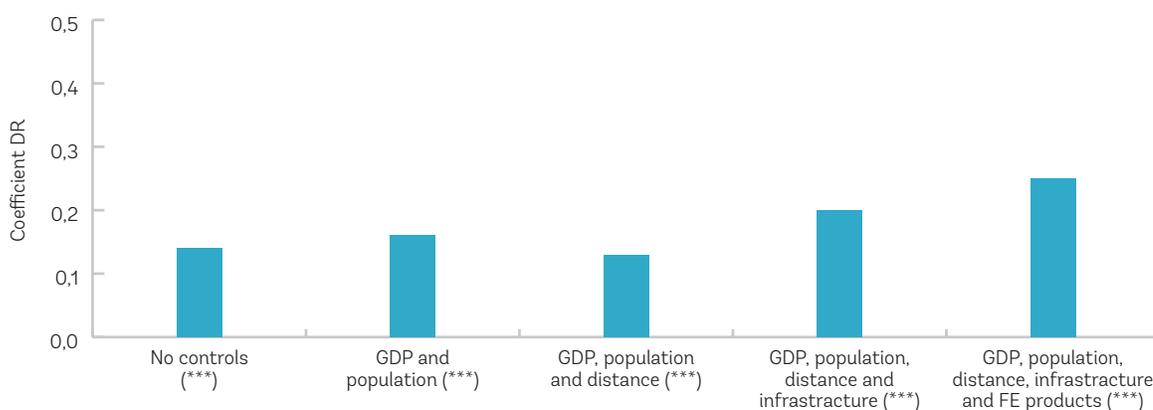
**The relative good standing in terms of access to finance is also reflected in firm perceptions, although there is some variation across firms of different characteristics.** Approximately 5 percent of firms list lack of access to finance as the main business obstacle in the country, compared to 14 percent of firms in LAC. Non-exporting firms are more likely to report lack of access to finance as the main obstacle compared to exporting firms (5.5 percent compared to 2 percent). Similarly, smaller firms tend to view problems of access to finance as larger hurdles compared to larger firms—6.3 percent of small firms report it as the main business obstacle compared to 3 percent of medium and large firms.

53 In addition, countries where the growth rate of large firms is higher experience larger reductions in informality. See Lederman et al. (2014), and Lederman, Maloney and Messina (2011).

54 Other sources of financing include equity and supplier credit.



**FIGURE 14: The DR has a larger gap between prices at the destination and prices in the point of origin, even after controlling for factor affecting this gap**



Source: World Bank's staff calculation based on CEPII (Trade Unit Values); WDI, World Bank and Global Competitiveness Report. Note: The DR coefficient is the coefficient of a dummy variable taking value 1 if the exporter is the DR in a regression of the log difference between CIF and FOB prices on a series of controls described in the x-axis.

**Despite having access to finance, Dominican firms face higher real interest rates than firms in most countries in LAC or from comparator countries, and real interest rates have been on the rise since 2010.**

The average real lending rate charged stood at around 14 percent in 2016, more than 6 percentage points higher than the regional average (Figure 13, panel A). The average real lending rate is the third highest rate among LAC countries and comparator countries from other regions (Figure 13, panel B). The real lending rate in the country has been on the rise since 2010 while the LAC average has hovered around its average.

**High real interest rates may be one factor behind the relatively low credit volumes.**

Total credit to private sector and total deposits have one of the lowest penetrations relative to GDP of all LAC countries. Total credit to the private sector in the DR was 28 percent of GDP, the third lowest value in LAC. Commercial loans to SMEs increased from around 12 percent of GDP in 2007 to 17 percent in 2015, but average loan amounts remain low and maturities are typically short.

**The high real lending rates appear to be related to the high interest burden of government debt, the exposure to natural disasters, and other country risks.**

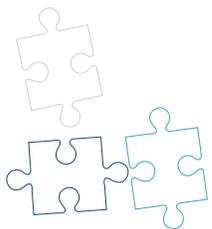
A cross-country regression of real lending rates shows

that real lending rates decrease with GDP, increase with government debt (a proxy for economic risk), increase with the incidence of interest payments on public debt (a proxy for the opportunity cost of banks), and increase with natural disasters (all else equal, Caribbean and Central American countries have larger real interest rates than other countries in the world). In the case of the DR, while bank concentration stands below the regional average, exposure to natural disasters and the country's relatively high interest burden of government debt appear to be larger than in other countries. The incidence of interest payments on gross debt in the country was the highest among comparator countries from LAC and other regions.<sup>55</sup>

**Government debt also appears to crowd-out private investment in capital markets.**

Capital markets in Dominican Republic are shallow, featured by a crowding-out effect between public/private sectors, and financing for large businesses provided mainly by banks. Equity shares are not publicly traded, and there are only around 20 corporate debt issuers in the local stock exchange "Bolsa de Valores de la República Dominicana" (BVRD). Stock market capitalization to GDP is one of the lowest in the region. The government is the main issuer, and public debt accounts for the bulk of trades. Returns on these instruments are higher than commer-

<sup>55</sup> The DR has the second highest interest payment as a share of government revenue in LAC, behind Brazil.



cial rates, and will deter inter-bank-rate competition and corporate debt issuance. The fact that the government issues long-term debt through two different entities, the Central Bank and the Ministry of Finance, with a substantial rate spread for the same underlying risk and tenor, will continue to send mixed signals to the market and undermine price discovery.

## Market power, institutions, and fiscal incentives limit the country's ability to produce a level and well-functioning business environment, hampering competitiveness and reducing incentives to innovate

**Having a level and well-functioning business environment, where resources are efficiently allocated and firms are given incentives to innovate and invest, is crucial to a country's ability to generate inclusive growth.** All else equal, a level playing field allows firms to compete for scarce resources and to innovate to try to outperform their competitors (Aghion et al. 2005). Similarly, having contractual certainty and fair treatment encourages investments. Creating a business environment that generates a level playing field and fosters quality upgrading is crucial for the competitiveness and ability to strengthen backward linkages in an economy that is integrated in global markets. A well-functioning business environment also relies on institutions that facilitate the flow of information among as many private agents as possible, in such a way that they make decisions with as much information as possible. Thus, well-functioning markets take into account the public good nature of information.

**The country stands out as one of the worst performers in LAC and in the world in terms of perceived market dominance.** The 2017-2018 Global Competitiveness Report ranks the country 7th in the world in terms of market dominance, making it the second highest in LAC after Haiti. Moreover, a comparison over time shows that in the past 10 years perceptions about

market dominance in the country have worsened—the indicator decreased from 2.8 in the 2007-2008 report to 2.6 in the 2017-2018 one.<sup>56</sup> Market dominance may be one of the forces driving the country's limited quality upgrading. Using data from WBES, Lederman et al. (2014) show that higher levels of competition are positively associated with a variety of innovation and quality indicators.

**Market power erodes the country's competitiveness in international markets, which is crucial for an island economy that aims at integrating robustly in the global stage.** First, lack of quality upgrading and innovation by Dominican firms makes Dominican exports, and the inputs used in these exports, less competitive vis-à-vis those of other countries. In addition, firm concentration and monopolistic practices in non-tradeable sectors used intensively by exporters could hamper the country's competitiveness. In fact, like many other countries in LAC, the DR has non-tradeable sectors that are more concentrated compared to other global peers and to what their income and size predicts. (Lederman et al. 2014).

**In the specific case of ground transportation, market power, compounded by a lack of scale, leads to higher prices and discourages investments, making it more difficult for exporters to connect with local suppliers.** The country shows much lower fleet productivity than countries in Central America, driven by average trucking tariffs that at 4.75 USD/km, more than triple the average of Mesoamerica; very old and inefficient truck fleet with an average age of 21 years (by comparison on average LAC trucking fleet is 15 years old and OECD is 8 years old);<sup>57</sup> and average distances travelled do not allow to take advantage of the economies of scale of the sector (the DR's average mileage is 9,000 km/truck/year much lower than the 60,000 in Panama, and 42,000 in Salvador).

**In addition, firm concentration and monopolistic practices in non-tradeable sectors used intensively by exporters could erode the country's natural geo-**

56 The Global Competitiveness Report rates countries in a scale from 1 to 7 in several dimensions based on surveys and data. In the specific case of market dominance, the survey question asks "In your country, how do you characterize corporate activity? [1=dominated by a few business groups;7=spread among many firms]".

57 See Barbero and Guerrero (2017).



**graphic advantage to compete in US markets.** An analysis of the difference between export prices in destination markets (CIF prices) and prices at the port of origin (FOB prices), shows that Dominican exporters have a larger gap between these two prices even after controlling for the GDP and population of the exporter, the GDP and population of the importer, the distance between markets, the type of products exported, and the quality of infrastructure (Figure 14). These results suggest that lack of competition among shipping and insurance companies may increase the costs of exporting in the DR. Indeed, Mesquita Moreira, Volpe and Blyde (2008) present evidence that low levels of competition among shipper lines is an important determinant explaining the difference between the price of Dominican exports in the US and the price of European exports.

**Despite recent progress, the DR lags other countries in the region regarding competition agencies.**

The 2017-2018 Global Competitiveness Report ranks the country next to last among 137 regarding the effectiveness of anti-monopolistic policies, and has the third lowest score among LAC countries. The lack of effectiveness of pro-competition policies is partly due to delays in the full establishment of Pro-Competencia, the pro-competition agency. Efforts to pass competition laws in the date back to 1997 and the competition law was signed in 2008, but failure to appoint an Executive Director until early 2017 blocked the enforcement of the Competition law and prevented any legal investigations from being launched.<sup>58</sup>

**Beyond lack of competition, the quality of exports and inputs is affected by a weak regulatory and institutional capacity, clearly evidenced in the case of agricultural export rejections.** As argued in World Bank (2015), there is a need to create standardization bodies, system certifications, conformity assessments, and accreditation mechanisms. A deeper involvement in international SPS standard setting institutions as well as the WTO SPS committee could ensure that the Dominican support infrastructure conforms international norms and prompts updates of regulations on

SPS and pesticides. Existing institutions in charge of the surveillance of animal health and control of plant pests could also benefit from capacity building. In addition, vaccination campaigns and wider dissemination of risk-mitigation methodologies could be organized.

**The country's institutional arrangement also presents problems of design, constraining the efficient flow of information among private agents.**

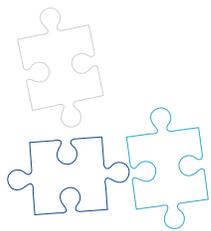
In the case of the institutional infrastructure supporting international trade, there is a marked duality and fragmentation, which is likely to result in suboptimal export promotion and entrepreneur support efforts (World Bank, 2015). The National Council for SEZs and the center for exports and investment (CEI-RD) are de facto in charge of investment attraction inside and outside SEZs. A similar duality is found in private exporter associations. In spite of commendable coordination efforts, duplicities are likely to appear, and achieving economies of scale in supporting exporters would be more difficult. Under its current structure, CEI-RD may not be sufficiently empowered to efficiently perform its mandate to promote exports and attract investment. Its budget per employee is the lowest in Latin America, indicating a heavy staffing burden. This limits space for commercial support and technical assistance as well as its presence abroad. Most Dominican trade representatives abroad are in fact diplomats belonging to the Ministry of Foreign Affairs who devote only part of their time to export promotion.

**An additional factor creating an unbalanced playing field is the presence of special tax regimes.**

According to the Ministry of Finance, at the end of 2016 there were 8 tax laws that generated tax expenditures, and 31 regulations granting tax exemptions to different sectors and for different reasons.<sup>59</sup> These tax regimes grant exemptions on a variety of taxes, including corporate income tax, value added tax, and import tariffs. The rationale for these tax exemptions is the creation of new jobs by firms that get established in the country because of these incentives. However, the use of incentives results in forgone fiscal rev-

58 Article 67 of the competition law (42-08) stipulates that the law would become effective as soon as the Board of Directors and the Executive Director take office.

59 Ministerio de Hacienda (2016).



## BOX 2. Fiscal incentives and FDI attraction: Results from a global survey

**Fiscal incentives are a common tool used by developing countries to attract FDI.** Developing countries pursue policies to attract multinational corporations (MNCs) with the goal that these firms create jobs and generate knowledge spillovers to domestic firms. However, many countries seek the attraction of a limited number of firms, leading to competition in the incentives offered to these firms. As a result, between 50 and 70 percent of developing countries with available data offer corporate tax incentives to attract multinational corporations operating in specific sectors into the country (World Bank 2018).

**Tax incentives are an important consideration for foreign firms in deciding the country where they ultimately operate.** The 2017/2018 Global Investment Competitiveness Report (World Bank 2018) shows that 59 percent of foreign firms of a global sample of MNCs say that low taxes are an important factor in their decision to invest in a country. The importance of low taxes appears to be greater for efficiency-seeking FDI (foreign investment that seeks to save costs in international production networks), compared to other types of foreign investment (investment seeking market access or assets specific to a country)—64 percent of efficiency-seeking firms rank low taxes as an important factor compared to 52 percent of non-efficiency seeking foreign firms.

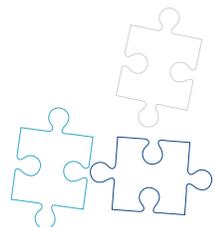
**However, tax incentives are not the only factor affecting foreign firms' location decisions.** Political stability and a strong legal and regulatory environment are important factors affecting MNCs' decisions to locate in specific countries—approximately 85 percent of foreign firms (both efficiency-seeking and non-efficiency seeking ones) reported these factors as important determinants of location decisions. Similarly, the availability of a talented and skilled workforce is another important factor affecting FDI decisions, especially for efficiency-seeking firms (78 percent of efficiency-seeking firms and 68 percent of non-efficiency seeking MNCs report it as an important determinant of location decisions).

**Thus, the country's ability to raise revenue by means of rationalizing tax exemptions in the medium term will hinge on the country offering political and institutional stability, as well as a well-prepared labor force.** Tax exemptions are not the only path to attract FDI. However, the viability of an FDI attraction model that reduces or eliminates tax exemptions in the medium-term will depend on the country's ability to improve the quality of macroeconomic, political and regulatory institutions and producing a better qualified workforce.

enue. In addition to the fiscal implications, that are discussed in chapter 4, special tax regimes create an unlevel playing field that reduces the tax burden for certain economic actors and sectors. The differences in the tax burden across types of firms are clearly evidenced in firm perceptions reported in the WBES. In the 2016 survey, non-exporters were twice as likely as exporters to list taxes as the main business obstacle (12 percent compared to 6 percent). Taxes were the 3rd most common response among non-exporters, while it was the 8th most common response among export-

ers. In addition to tax benefits, many special regimes (like SEZs and certain touristic developments) do not face problems in the provision of electricity, since they rely on distribution by private companies or buy electricity from public distribution companies at internationally competitive prices.<sup>60</sup> Tax exemptions have a long history in the DR and have been an important instrument in the country's industrialization and development strategy. In recent decades, the country has established clearer procedures to grant these exemptions. However, this has not prevented private actors

60 For example, the Consorcio Energético Punta Cana-Macao (CEPM) is a privately-owned utility company that generates, transmits, distributes and commercializes energy in the touristic areas of Punta Cana, Bávaro and Bayahíbe. Many SEZs are located in industrial parks labeled as energy non-regulated users (usuarios no regulados) and can have direct power-purchase agreements (PPA contracts) with energy generating companies to satisfy their electricity demands at lower prices and better reliability than when purchasing electricity from EDES (government energy distribution companies).



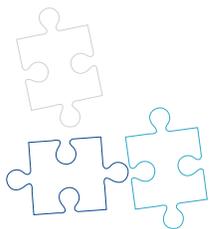
from taking advantage of special tax regimes to sustain an advantage over other sectors of the economy (Daude, Gutiérrez, and Melguizo 2014). For example, the end of export quotas without modifying tax incentives has increased the number of Dominican firms into SEZs, which in 2016 accounted for approximately 35 percent of the total of firms operating in SEZs, and leads to some domestic firms enjoyed benefits that others do not.<sup>61</sup>

**Special tax regimes also create a bias towards imports, which is amplified by the poor quality of Dominican inputs, discouraging backward linkages and limiting the scope for knowledge spillovers.** The Central Bank of the Dominican Republic published in 2014 the results of a census of SEZ firms that shows that these firms import 81 percent of their inputs. The study also found significant variation between the sourcing patterns of traditional zone industries like textile and clothing, and footwear (which source 28 percent and 22 percent of their inputs domestically, respectively) and newer industries like medical and surgical equipment, and electrical equipment (which source less than 3 percent of their inputs domestically). These results show that the challenges of creating backward linkages will likely increase as the structure of SEZs changes. Tariff exemptions could be a force behind these patterns—the reliance on imported inputs is three times as large for SEZ firms compared to non-SEZ firms (World Bank, 2017). Another factor deterring higher levels of backward linkages could be the quality of Dominican inputs, an issue that was discussed earlier in the chapter. A similar bias towards imports is observed in the tourism sector, where all-inclusive hotels import a large share of their inputs. In addition, the all-inclusive nature of tourism in the country limits the potential for tourists to consume domestic goods and services. More broadly, the enclave nature of SEZs and other special regimes, limits their positive spillover effects to the local economy.

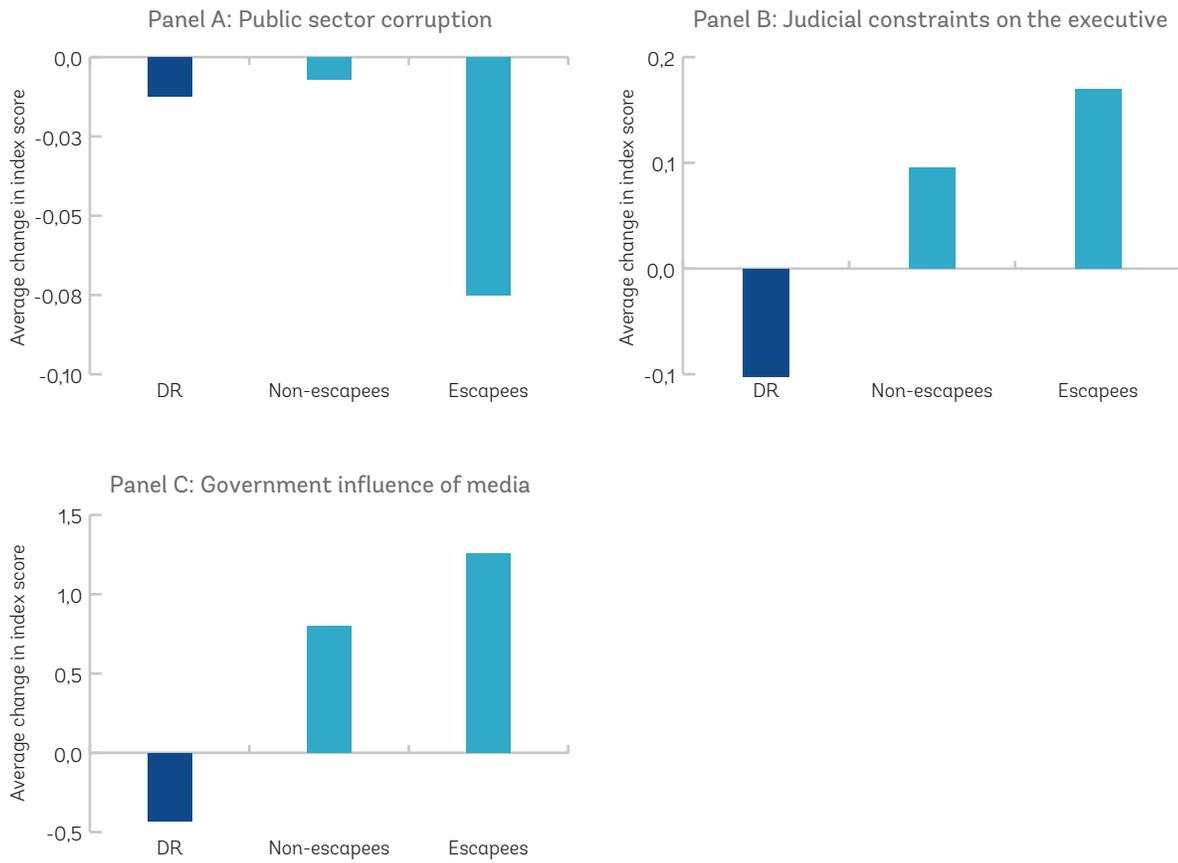
**The creation of a level playing field for firms, one of the requirements to make growth more inclusive in the country, emphasizes the importance of hav-**

**ing accountable institutions.** The WDR 2017 Governance and the Law poses that the challenges that middle-income countries face to leave the middle-income trap go beyond policy choice to the challenge of power imbalances. The World Bank's World Development Report (WDR) finds that at upper-middle-income levels, legislative, judicial, media, and civil society checks become increasingly important, with much larger improvement for countries that escaped the middle-income trap ("escapees") than for countries that stay in the trap. According to the data used in the WDR, the country has made less progress on improving judicial checks on the executive and guaranteeing a media free of influence than non-"escapees" (Figure 15, panels B-C). Consistent with the hypothesis that bigger markets and more complex business networks require a rules-based approach, the WDR finds that "escapees" lower their levels of corruption significantly before becoming high-income economies, whereas "non-escapees" do not see an improvement. The DR has been less effective in reducing corruption than the set of countries that remain stuck in the trap (Figure 15, panel A). This suggest that improvements in the control of corruption and accountability of institutions the country aims to reach high-income status by 2030, as stated in its national development strategy (Estrategia Nacional de Desarrollo - END).

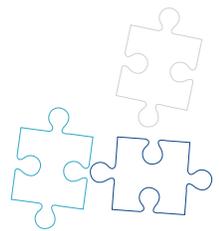
61 The expiration of the deadline to make the SEZ program in the DR compatible with the WTO Agreement on Subsidies and Countervailing Measures led to the elimination of the export share requirements (ESR) to access to SEZs— firstly for producers of leather, textiles and apparel and leather, sectors designated as 'national priority' in 2007, and afterwards for all SEZs producers in 2011.



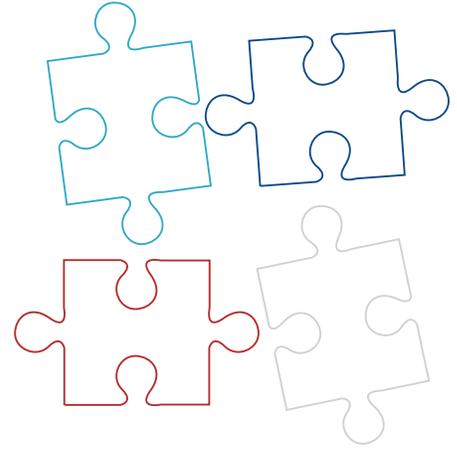
**FIGURE 15: Checks on corruption and accountability institutions for middle-income countries and the DR**



Source: WDR 2017 and own calculations using data from V-Dem 2015.







## CHAPTER 3

# Drivers of inclusion

**T**his chapter describes recent progress in poverty reduction, shared prosperity, and equality of opportunities in the DR, followed by an analysis of the two main drivers of inclusion: labor markets and social policy. Due to the importance of both emigration and immigration, the issue is covered in one of the sections. The country has recently made important progress in poverty reduction and gains in the size of the middle class. However, there are large and persistent spatial and urban/rural disparities in terms of poverty, access to services, and equality of opportunities. Limited fiscal space, clientelistic practices, and low internal and external accountability for service delivery have sustained low levels of public investment and shortcomings in human capital formation and the provision of public goods. Low productivity and human capital levels, added to high migration flows contribute to shaping labor markets that do not connect the labor force, especially women and youth, to more and better jobs. Despite overall improvement in most human development outcomes, deficits in human capital formation throughout the life cycle perpetuate poverty and reduce income earning potential. These challenges are important barriers for the country to achieve more inclusive growth and to sustain a high growth trajectory.

To assess a country's performance in terms of translating its economic growth into monetary poverty reduction, it is important to cross-check relevant comparable aggregates for households from national accounts and household surveys. Box 3 below describes the results of these checks.

### Recent progress on poverty reduction, shared prosperity and equality of opportunities

**The country has recently made important progress in poverty reduction, especially since 2014.** Using

national poverty lines, moderate poverty was reduced from 43.2 percent in 2008 to 28.9 percent in 2016, while extreme poverty was reduced from 12.8 percent in 2008 to 6 percent in 2016.<sup>62</sup> Poverty has been persistently higher in rural areas but the gap with urban areas is shrinking (Figure 17). Moderate poverty in rural areas was 16 percentage points (pp) higher than in urban areas in 2008 (55 vs 39 percent), and the difference was reduced to 11 pp in 2016 (38 vs 27 percent). For extreme poverty the gap between the two areas decreased from 11 pp in 2008 (21 vs 10 percent) to 4 percent in 2016 (9 vs 5 percent). Using decomposition techniques, only 9 percent of the reduction in moderate

62 Despite the reduction on extreme poverty, the country missed its MDG goal to bring it to 5.4 percent in 2015.

### BOX 3. How do national accounts and household surveys compare in the DR?

When linking economic growth and poverty, it is important to check the consistency of these two data sources. The household survey used to measure poverty in the country is the labor force survey (Encuesta Nacional de Fuerza de Trabajo – ENFT), and poverty is measured using an income aggregate. Conceptually, the concept that is closest to household income in national accounts is private consumption given that i) financial penetration in the country is low, limiting the ability of households to smooth consumption; and ii) the ENFT fails to capture returns to capital. Private consumption includes final consumption by households and by non-profit institutions serving households. According to the supply-use tables for the period 2007-2012 (latest available), households account for more than 99 percent of private consumption.

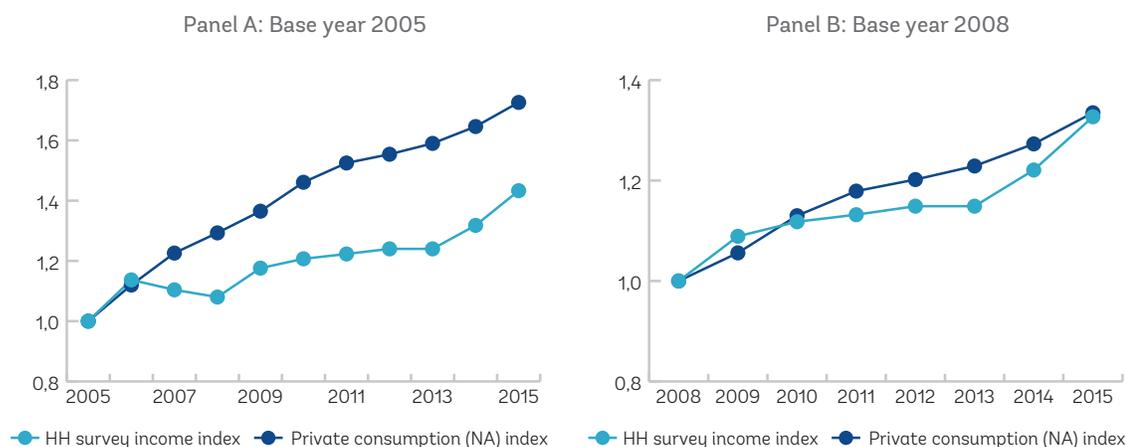
The base year for the national accounts in the country was changed to 2007. The new year better reflects the structure of the Dominican economy and uses inputs that were not available in the construction of previous National Accounts series. As part of the project, the country collected for the first time a national census of economic activity and a directory of formal establishments, and it started the systematic production of a SEZs census and a survey of the tourism sector.

The labor force survey has also seen improvements over time. Its sampling frame was updated in 2003 and 2008 to reflect population figures from the 2002 Census and a more accurate cartography for the capital city Santo Domingo. In 2005 questions were added and changed to better capture household income.

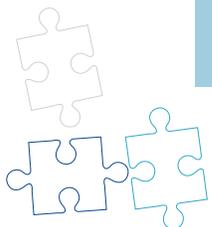
Improvements in both data sources seem to have resulted in a better alignment between private consumption from national accounts and household income from the household survey. To illustrate this point, indices for these two variables are constructed using different base years. For instance, using 2002 as base year, the private consumption index in 2015 is 70 percent higher than the household income index. This difference declines with the base year and it becomes negligible when 2008 is used as base year (see Figure B3.16 for indices using 2005 and 2008 as base years).

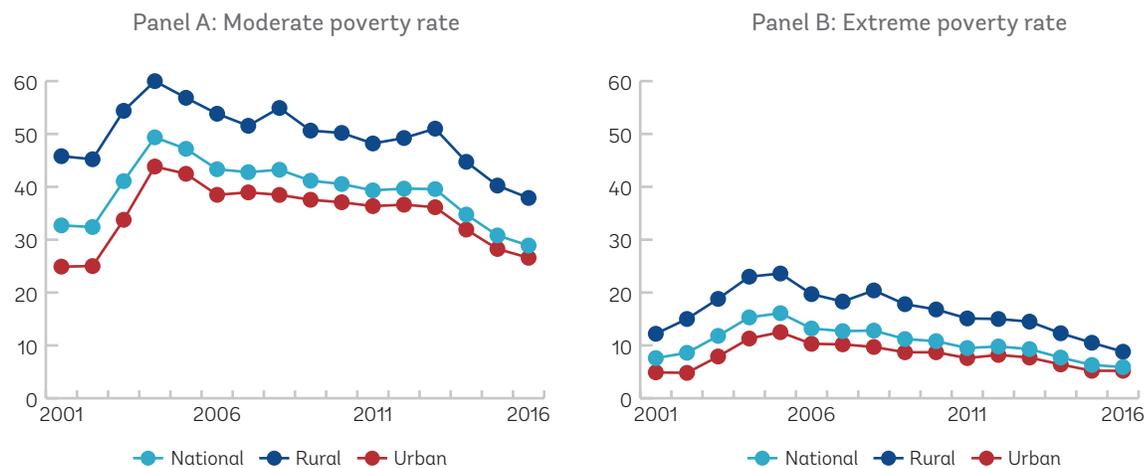
Due to a better alignment between the household aggregates from national accounts and the labor force survey we limit the analysis linking economic growth and monetary poverty to the period starting in 2008.

**FIGURE B3.16: Indices for private consumption (from national accounts) and household income (from household survey) in real terms**



Source: Authors' calculations using data from national accounts (Central Bank of the DR) and ENFT.



**Figure 17: Monetary poverty rates by area of residence**

Source: Authors' calculations using ENFT.

poverty and 13 percent of the reduction in extreme poverty are explained by rural-urban migration.

**Access to services and most human development indicators have improved, but with persistent inequalities.** Non-monetary poverty, measured as the share of the population with no access to key basic services, steadily decreased from 44 percent with no access to two services in 2000 to 25 percent in 2016, while the share lacking access to four services declined from 16 percent to 6 percent in the same period.<sup>63</sup> Between 2000 and 2016 there was a notable expansion in sanitation, especially in rural areas, where the share of the population with no access to sanitation was reduced by 30 percentage points.<sup>64</sup> Most human development indicators also improved for the population as a whole, and for the poor, although inequalities remain. Chronic malnutrition among children (under age 5) declined from 11 percent in 2002 to 7 percent in 2013, yet 11 percent of the poorest quintile were chronically malnourished in 2013.<sup>65</sup> Child mortality declined modestly in the past decade (31 deaths of children under age five in 2013 per 1,000 births, compared to about 42 per

1,000 a decade earlier). But child mortality remains three times higher for the poorest quintile (42 deaths per 1,000 births) compared to the wealthiest quintile (17 deaths per 1,000 births). In addition, performance in math and language in 3rd grade national assessments is substantially lower for children from poorer households.<sup>66</sup>

**Growth over the 2008-2016 period was slightly pro-poor according to incidence analysis.** Per-capita income for individuals in the bottom 40 percent grew at an average annual rate of 4.2 percent, compared to 3.8 percent per year for the top 60 percent (Figure 18, panel A). Changes in labor income explain most of the growth in total income. In regional context the growth of per capita income for the bottom 40 percent in the DR ranks tenth among 17 countries in Latin America for the 2008-2016 period, despite having the fourth highest average GDP growth rate (Figure 18, panel B).

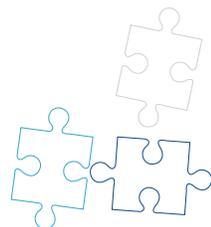
**The country also shows improvements in terms of having a slightly less unequal income distribution.**

63 Indicators of access to services include school attendance, level of schooling, drinking water, sanitation, quality of housing, overcrowding, and ownership of assets.

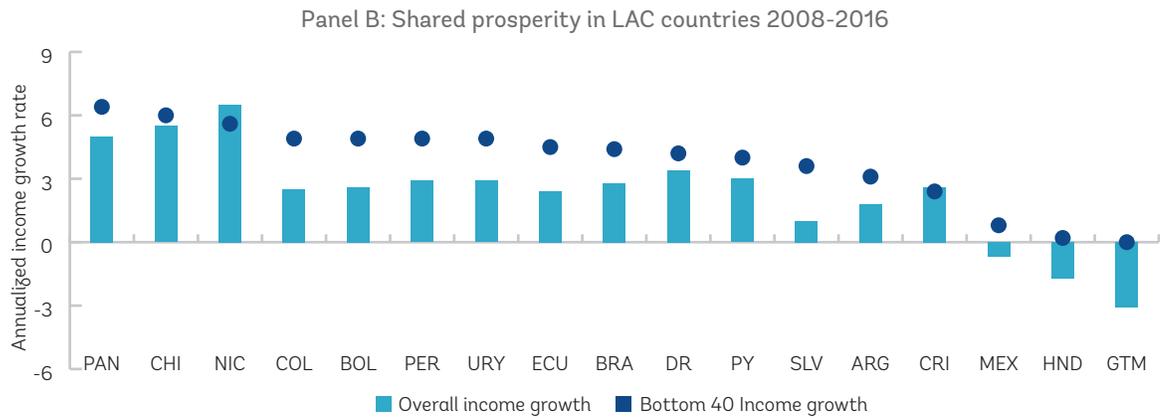
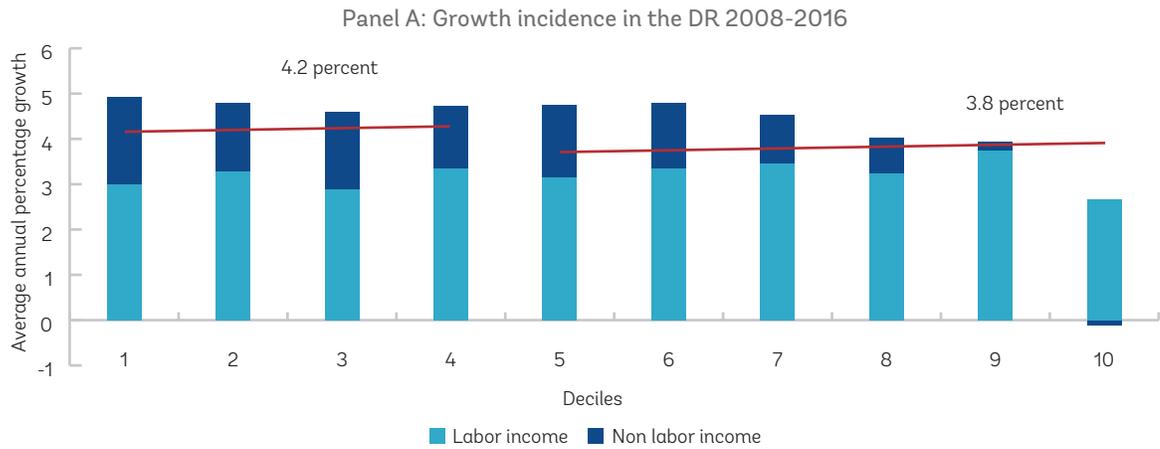
64 Access to sanitation is defined as connection to the public sewage system or septic tanks.

65 On the other hand, there are more overweight children (11 percent) in the highest income quintile compared to 3.6 percent in the lowest income quintile. Being overweight also presents health risks for noncommunicable diseases such as cardiovascular disease and diabetes.

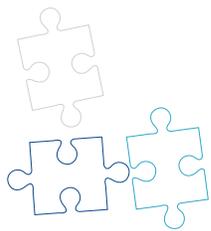
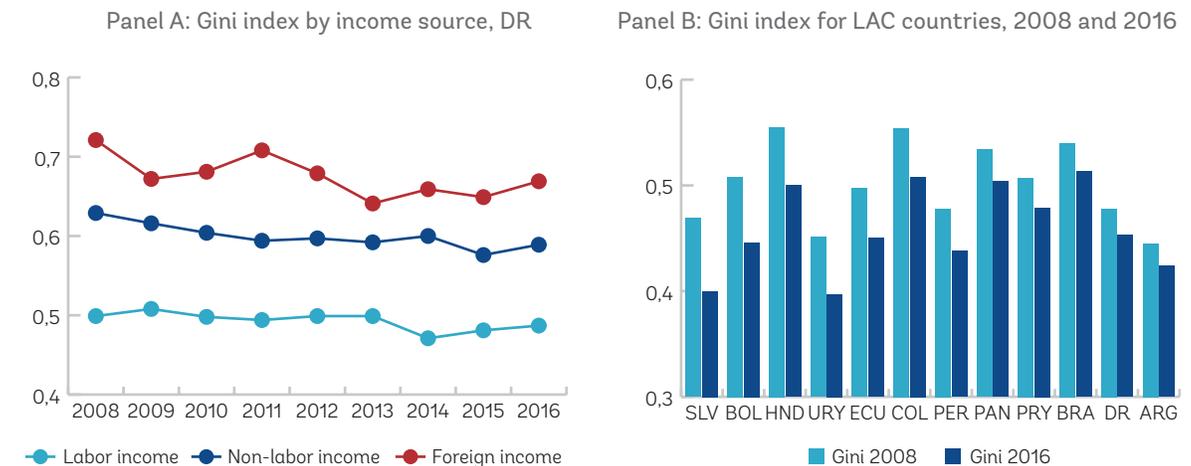
66 MINERD (2018). Resultados de la evaluación diagnóstica nacional de tercer grado de primaria: informe nacional. Santo Domingo, República Dominicana.

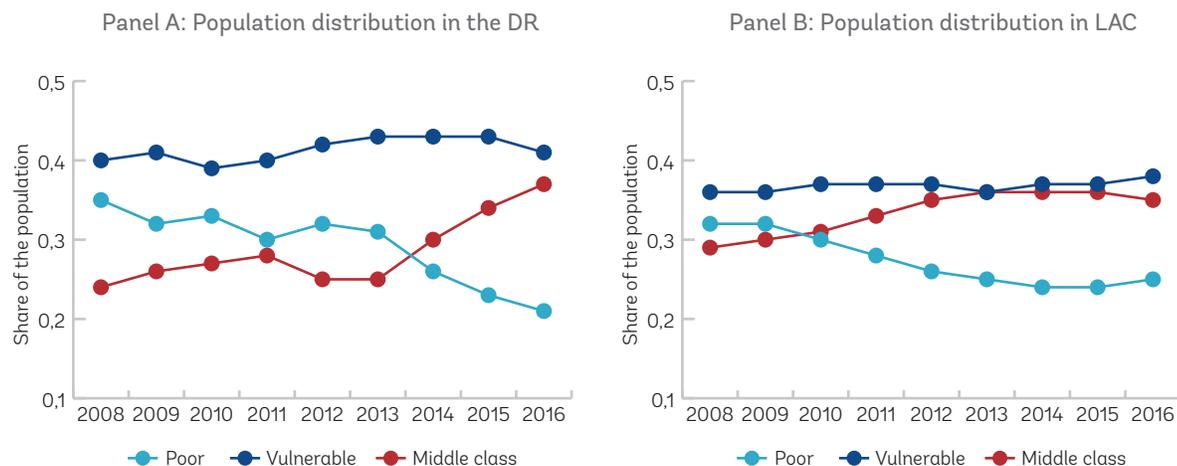


**Figure 18: Growth incidence and shared prosperity**



**Figure 19: Gini index by income source in the DR and for LAC countries, 2008-2016**



**Figure 20: Poor, vulnerable and middle-class distribution in LAC and DR (2008-2016)**

Source: Authors' calculations using SEDLAC.

The Gini coefficient decreased by 2 points from 49.6 in 2008 to 47.1 in 2016, below regional inequality levels throughout the period. Inequality in the distribution of all income sources declined in this period, with labor income being more equally distributed than non-labor income and income from abroad (Figure 19, panel A). Among 12 countries with Gini coefficients for 2008 and 2016, the DR ranks second to last in terms of inequality reduction during that period (Figure 19, panel B).<sup>67</sup>

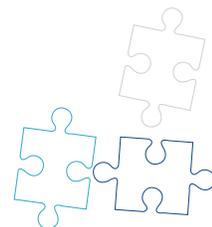
**Between 2008 and 2016, the middle class increased as poverty was reduced.**<sup>68</sup> This not only made the middle class outnumber the poor for the first time in 2014, but also brought the size of the country's middle class (as a share of the population) to exceed regional levels in 2016 (Figure 20). The difference between the vulnerable population and the middle class decreased from 16 percent in 2008 to 4 percentage points in 2016, while in the LAC region it went down from 7 to 2 percentage points. Nevertheless, at 40.8 percent, the share of vulnerable population in the DR in 2016 is relatively high compared to other countries in the region, and constitutes the largest income group in the country.

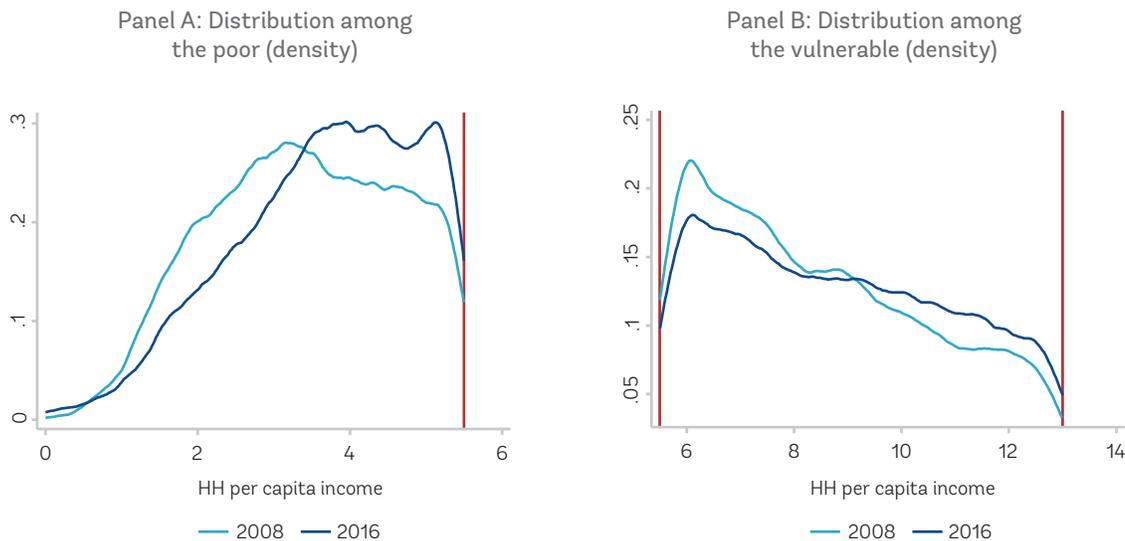
**Mobility across income groups between 2008 and 2016 was accompanied by the poor shifting closer to the poverty line and the vulnerable shifting further away from it.** As seen in Figure 21, panel A, a higher share of the poor (area under the density curve) is close to the poverty line of US\$5.5 a day in 2016 compared to 2008, which reduces the income gains needed to leave poverty. Something similar is observed for the group of vulnerable, with a lower share being close to the poverty line in 2016, and consequently, a higher share closer to the vulnerability line of US\$13 a day (Figure 21, panel B).

**The profiles of households and individuals classified as poor, vulnerable, or middle-class show progress along different dimensions since 2008.** The average years of education for the heads of poor households increased by 0.8 years between 2008 and 2016, reducing the gap with better-off households; and the share of poor heads of household with complete secondary education or higher increased from 12.3 to 18 percent in that period. There are a few notable changes in the labor market. Female labor force participation in poor households increased by 5 percentage points since 2008, closing the gap with men. The share of jobs with

67 These countries have harmonized household survey data in the LAC Equity Lab.

68 To compare income distributions and socioeconomic groups across LAC countries, we use the SEDLAC harmonized datasets, with income expressed in US dollars PPP 2011. These income groups are defined using the LAC regional lines as follows: an individual is poor if her income is lower than US\$5.5 a day; vulnerable if her income is between US\$5.5 and US\$13 a day, middle class if her income is between US\$13 and US\$70 a day, and upper class if her income is higher than US\$70 a day. These values are expressed in PPP 2011.



**Figure 21: Income distribution among poor and vulnerable populations, 2008 and 2016**

Source: Authors' calculations using data from SEDLAC.

a signed contract increased by 9, 10 and 15 percentage points for individuals in poor, vulnerable and middle-class households, as did the share of salaried jobs in all groups, hinting at increased formalization of jobs. Finally, the share of middle-class individuals with a job in the public sector increased from 12 to 18 percent in the period (Table 2). This increase in public sector employment tracks the increase in size of the middle-class in the country.

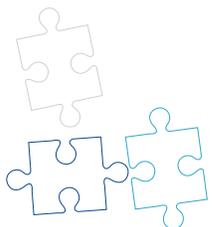
**Poverty rates for women are higher than for men across several dimensions.** For the entire population, poverty rates for women (30.4 percent) exceed those for men (27.4 percent). Once the population is split by sex and dimensions like age, area of residence (urban/rural), occupation, education, and marital status, women have higher poverty rates than men in almost every subgroup. The only exceptions are self-employed and unpaid workers (see Annex 6). Box 4 below describes some of the differences.

**Since 2008, the share of the population moving to a higher income group in the DR is one of the highest in LAC; but when compared to its high economic growth rates, it is lower than expected.**<sup>69</sup> Between 2008 and 2016, more than 31 percent of the popula-

tion in both Chile and the DR moved to a higher income group, the highest among 13 LAC countries with comparable data for the period (Figure 23). For each point of average annual GDP growth, 6.4 percent of the population in the country moved to a higher income group compared to 9.8 percent in Chile, and the fifth lowest among the same group of LAC countries.

**Despite the rapid reduction in poverty, there are large and persistent inequalities between rural and urban areas and between the different regions of the country.** Monetary poverty in rural areas was 25 percentage points higher than in urban areas in 2000. This difference fell to 15 points during the banking crisis when urban poverty increased more than rural poverty, and has hovered between 10 and 15 points since then. The greatest concentration of poverty in the border areas with Haiti has not changed in the last 15 years, nor has the fact that the National District and North Central regions have the lowest poverty rates (Figure 24). The high concentration of public investment does not contribute to reducing these inequalities, with 75 percent of the investment in the period 2012-2015 concentrated in nine provinces that represent 54 percent of the country's population. Investment is also concentrated in provinces with relatively low poverty rates and in only a few sectors.

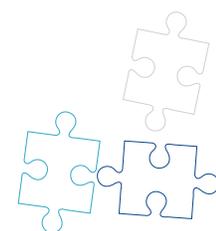
<sup>69</sup> Upward mobility is defined as the sum of the shares of the population that moved to a higher income group in the period, from poor to



**TABLE 2. Profile by income groups, 2008 and 2016**

	2008			2016		
	Poor	Vulnerable	Middle class	Poor	Vulnerable	Middle class
<b>Household profile</b>						
Share of households	28.7	39.0	30.6	16.0	38.1	43.4
Female head	32.1	37.1	28.8	19.2	39.2	39.3
Male head	27.1	39.9	31.4	14.1	37.4	45.9
Average household size	4.4	3.7	2.9	4.3	3.5	2.8
Demographic dependency	1.1	0.6	0.4	1.1	0.6	0.4
Economic dependency	2.2	1.2	0.7	2.0	1.0	0.5
<b>Household head characteristics</b>						
Years of education head	5.5	6.8	9.6	6.3	6.9	9.3
Share with complete secondary education or higher	12.3	21.6	42.1	18.0	23.5	41.2
Head cohabitation	17.8	26.6	44.5	15.4	23.0	39.2
<b>Shares of household total income</b>						
Labor income	62.5	70.9	72.0	57.7	66.4	74.0
Non-labor income	19.3	13.2	10.2	21.6	15.1	10.5
Government transfers	2.9	0.8	0.2	5.7	2.9	0.9
Remittances	2.8	4.6	6.4	3.0	4.4	4.7
<b>Individual profile</b>						
Share of individuals	35.2	39.9	24.1	21.0	40.8	36.8
Ages 0-14	41.0	28.4	18.0	41.4	26.3	15.2
<b>Labor Force</b>						
Labor force participation	43.9	56.6	66.9	44.7	40.8	36.8
Female labor force participation	39.5	48.2	59.4	44.6	48.5	61.6
<b>Employment</b>						
Labor Contract	40.5	47.8	58.6	49.9	61.0	73.2
Informal employment	68.5	56.2	42.5	66.9	56.3	41.7
Part time work (<30 hours)	23.7	18.1	14.6	22.4	16.8	10.9
Salaried worker	44.1	52.4	55.5	49.0	54.3	60.3
Large firm	20.3	29.5	37.6	20.2	29.7	33.1
Small firm	69.9	59.6	50.3	68.6	59.6	48.6
Public sector employment	9.8	10.9	12.1	11.2	10.8	18.3

Source: Authors' calculations using data from SEDLAC.



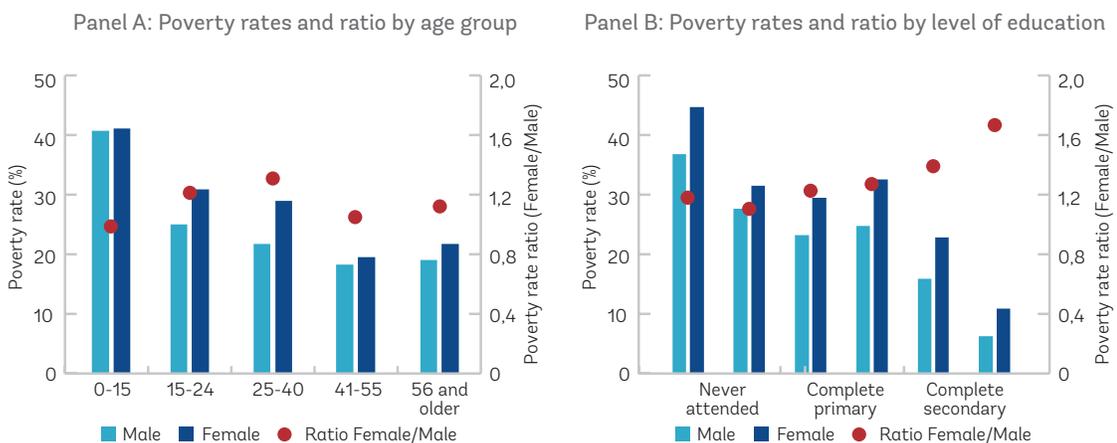
### BOX 4. Gender and poverty in the DR

**Incidence of poverty status across the life cycle in the DR has similar trends for both women and men.** For the entire population and for all age groups (0-14, 15-24, 25-40, 41-55, and 56+ in Annex 6), female poverty rates are higher than male's. Poverty rates decrease with age but at different speeds for men and women. Starting at a similar level during childhood (0-14 years) poverty decreases sharply, especially for men, and by age 15-24 the share of poor men is six percentage points lower than the share of poor women. The gap increases slightly for the age group 25-40, and shrinks to under three percentage points for older groups (see Figure B4.22, panel A).

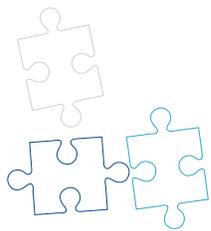
**As expected, female and male poverty rates decline as education increases, but differences in poverty rates between women and men increase with education** (Figure 2X). Poverty rates are higher for women than for men at all education levels, and the share of women among the poor also increases with education. Women account for the largest share among individuals with complete secondary education or higher, but are also overrepresented among the poor individuals with those levels of education. For instance, women account for 52.5 percent of the individuals with complete secondary education, and for 61.3 percent among the poor with that level of education (see Figure B4.22, panel B). In terms of escaping poverty, the returns to education are lower for women than for men.

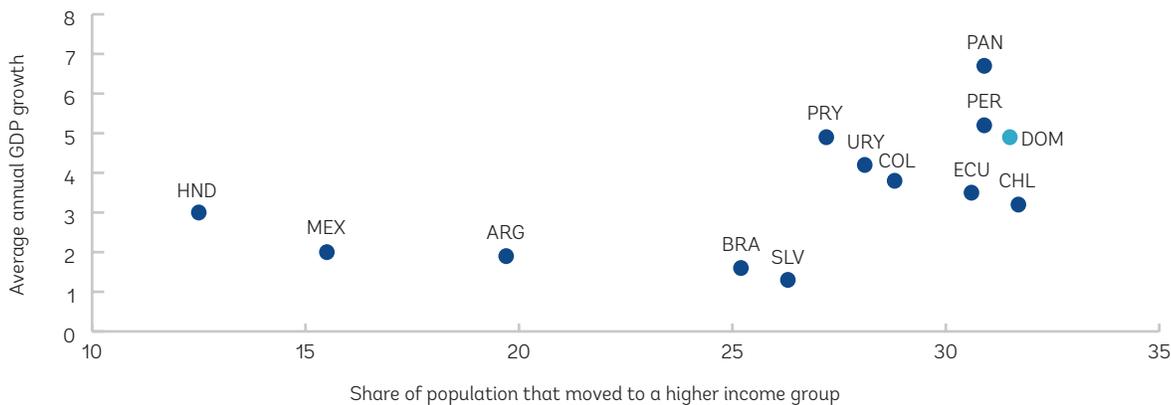
**Marital status is correlated with poverty rates for women in the DR.** Around 38 percent of households in DR has a woman as head of household, 84 percent of whom does not cohabit with a partner (44 percent are divorced, 22 percent are widowed and 18 are married with no husband present). Divorce/separation is the main route to household headship for women, with 44 percent of female heads in that status. Furthermore, women are overrepresented among the divorced household heads (with 71 percent) and among the divorced household heads that are poor (with 90 percent). While the poverty rate for women heads in other marital statuses is around 20-25 percent, it is 31.5 percent for divorced female heads (see Annex 6). More research is needed on the gender aspects of poverty in the country.

**Figure B4.22: Poverty rates by age group and level of education, by sex in 2016, and ratio of female and male poverty rates**



Source: Authors' calculations using ENFT.



**FIGURE 23: Upward mobility and average annual GDP growth, 2008-2016**

Source: Authors' calculations using LAC Equity Lab.

**Despite progress in coverage and equality across population groups, large differences between urban and rural areas are also observed in terms of opportunities for children.** To measure equality of opportunities we use a Human Opportunity Index (HOI) that combines: i) the level of coverage of basic opportunities necessary for human development, including primary education, water, sanitation, asset ownership, and good housing;<sup>70</sup> and ii) the degree to which the distribution of those opportunities depends on circumstances not under the children's control such as gender, household income, or household characteristics (known as D-index or dissimilarity index).<sup>71</sup>

A higher value of the HOI denotes a higher equality of opportunities. The HOI increases with coverage rates and decreases with the dissimilarity index. The large differences in the equality of opportunities between urban and rural areas are the result of differences in coverage rates -higher in urban areas for all dimensions- and the dissimilarity in access rates for groups defined by circumstance characteristics (e.g., gender, parental education, household composition) lower for all dimensions in urban areas. Consequently, the value of the HOI is consistently higher in urban areas (see Figure 25).

**Both average coverage rates and the similarity of coverage rates across groups have increased in urban and rural areas, with room to improve coverage in rural areas.** Coverage of sanitation in rural areas is only 50 percent, 58 percent in water and 67 percent in assets ownership (Table 3). The dissimilarity of coverage rates for groups defined by circumstance characteristics, or D-index, is more than twice as high in rural areas for asset ownership and more than three times as high for sanitation. The value of this index can be understood as the share of opportunities of children achieving each dimension that would have to be reallocated to eliminate the difference across circumstance groups. For instance, a value for the D-index of 16.4 in sanitation in rural areas in 2016 means that 16.4 percent of the opportunities of children having access to sanitation need to be reallocated to eliminate the differences in coverage rates across groups defined by gender, parental education, household income, etc.

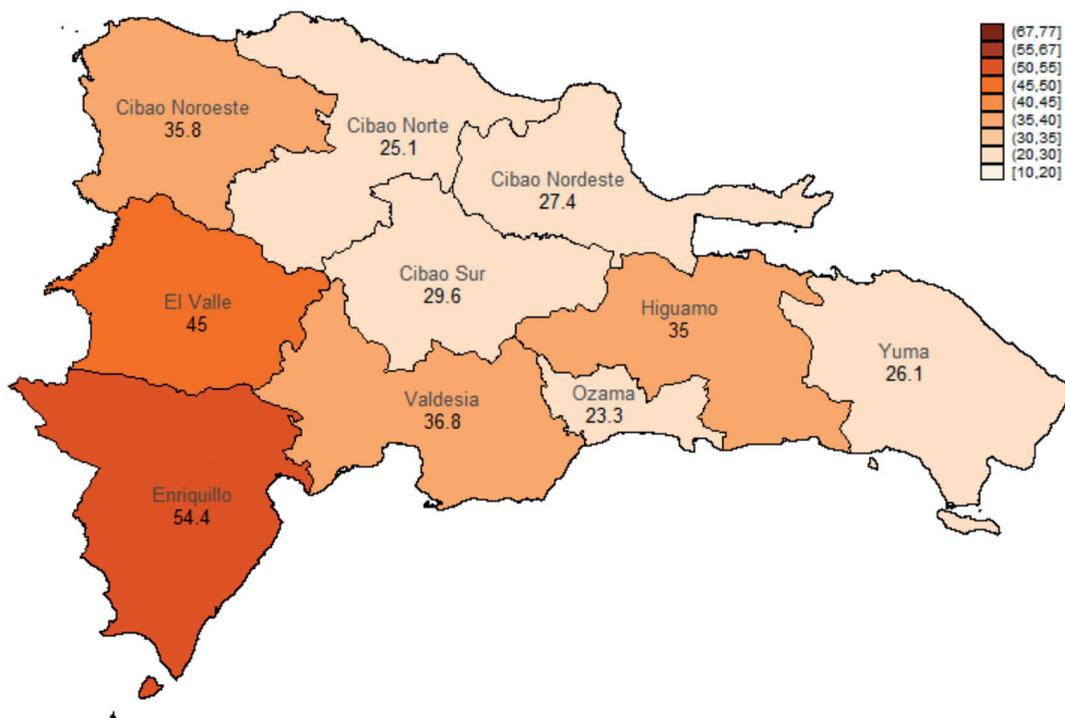
**Despite significant improvements in service coverage and similarity in coverage rates, a few characteristics (education of parents, living in urban areas, and household income) explain a large share of the inequality of opportunities for children at birth.**

vulnerable, from vulnerable to middle class, or from middle class to upper class, using the LAC regional lines. In the absence of panel datasets for most countries in the period, we use synthetic panels to estimate mobility at the household level using the non-parametric method proposed by Lucchetti (2017).

70 Asset ownership is defined as lacking no more than one of the following assets: refrigerator, telephone, and electricity. Good housing (solid floor in the figure) is defined as having floor material in the dwelling different from dirt. School attendance is measured for children ages 10-14.

71 Paes de Barros et al. (2009).



**FIGURE 24: Moderate poverty rate by region, 2016**

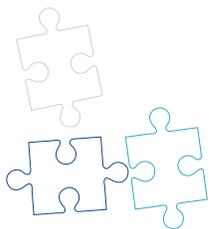
Source: Authors' calculations using ENFT.

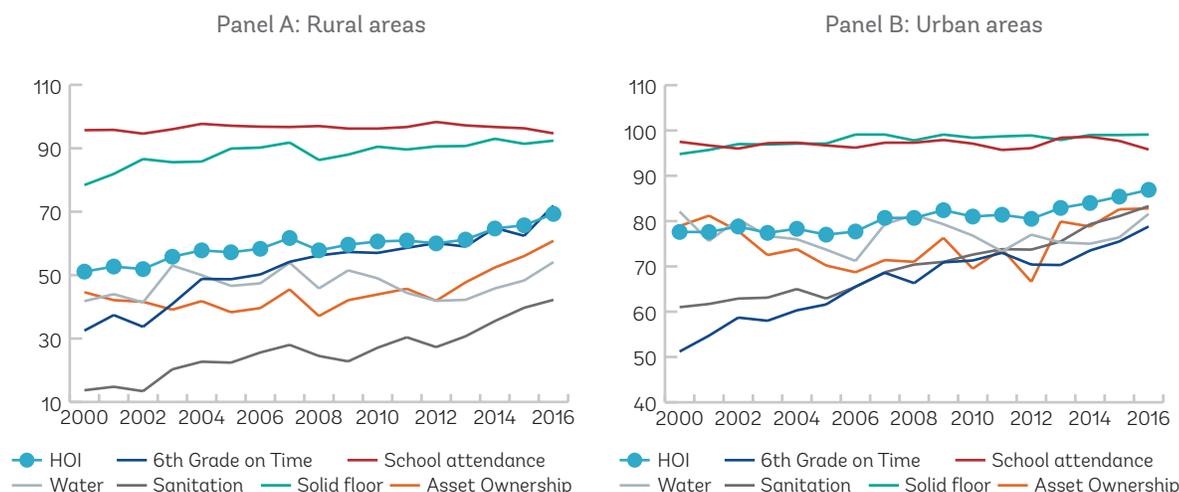
For instance, these three characteristics account for 93 percent of the remaining inequality of opportunities in asset ownership, for more than 85 percent in sanitation and water, and 70 percent in completion of 6th grade on time, with the education of parents alone accounting for more than 40 percent of the inequalities in completion of 6th grade (Figure 26). The prominent role of these circumstances in explaining the inequality of opportunities for children at birth hamper intergenerational mobility. For instance, the education of mothers is particularly important for the nutritional status of young children: under-five children of mothers with less than 5 years of education have more than double the stunting rates (10 and 9 percent respectively) of under-five children of mothers who attended university (4.3 percent).<sup>72</sup> According to Galasso and Wagstaff (2016), the per capita income penalty a country incurs for not having eliminated stunting when today's workers were children, ranges from 7 to 10 percent of GDP per capita.

**Growth has been the main driver behind the reductions in moderate and extreme poverty, especially in rural areas.** Between 2008 and 2016, income growth accounts for 86 percent of the reduction in moderate poverty (76 percent in urban areas and 100 percent in rural areas) and for 75 percent of the reduction in extreme poverty (72 percent in urban and 88 percent in rural areas). Consequently, redistribution (changes in income distribution) plays a more important role in urban areas.

**The bulk of the reduction in moderate poverty after 2008 was achieved after 2013, with labor income as the most important channel connecting growth and poverty reduction.** Moderate poverty was reduced by 3.5 percentage points (pp) in 2008-2013, and by 10.5 pp in 2013-2016. According to decomposition analysis, labor income explained only 10 percent of the poverty reduction in 2008-2013 compared to 62 percent of the poverty reduction in 2013-2016, consis-

<sup>72</sup> Stunting rates between under-five children in rural (16.9 percent) and urban (16.3 percent) areas were not significantly different.



**Figure 25: Human Opportunity Index**


Source: Authors' calculations using ENFT.

**TABLE 3. Coverage rates and D-index in urban and rural areas**

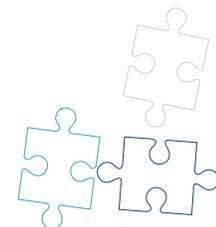
	6th grade on time	Asset ownership	School attendance	Solid floor	Sanitation	Water
Urban coverage rates						
2000	59.1	83.9	98.2	96.9	69.8	84.9
2016	83.4	86.8	96.8	99.4	87.6	85.0
Urban D-index						
2000	13.4	5.9	0.7	2.1	12.6	3.3
2016	5.5	4.5	1.1	0.4	4.9	3.9
Rural coverage rates						
2000	40.6	51.3	96.6	83.9	19.7	47.2
2016	77.3	67.1	96.0	94.6	50.4	57.8
Rural D-index						
2000	20.0	12.9	0.9	6.5	30.4	11.4
2016	7.1	9.4	1.4	2.4	16.4	6.4

Source: Authors' calculations using ENFT.

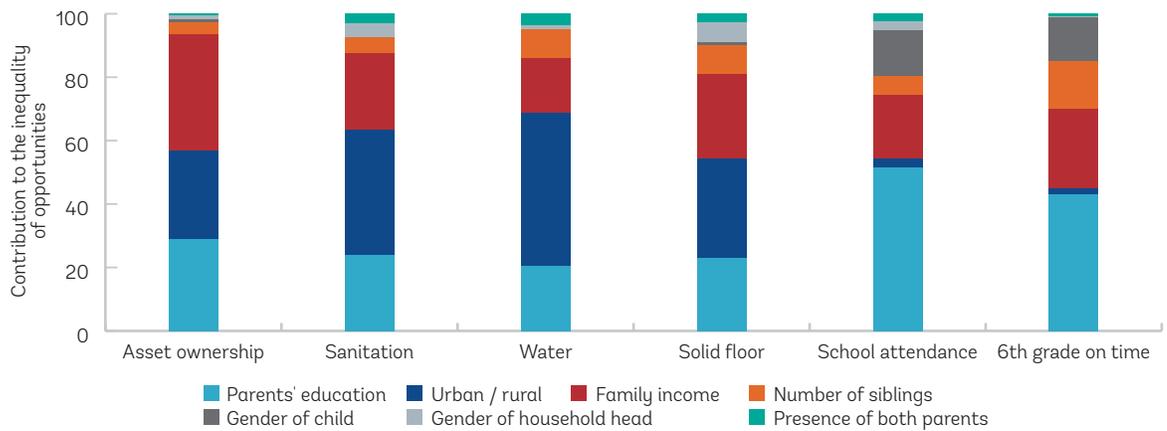
tent with a higher growth of job creation and increases in real wages in the latter subperiod. The contribution of women's occupation rates and labor earnings was similar across the two subperiods at around 30 percent, while men's labor contributed to an increase in poverty of 0.7 pp in 2008-2013, and to a decrease in poverty of 4.1 pp in 2013-2016 (Figure 27, panel A). The contribution of women's occupation rate is higher than the contribution of men's and is consistent with

the observed increases in both participation and employment rates for women.

**The reduction in extreme poverty was similar in 2008-2013 and 2013-2016, with labor income almost tripling its contribution in 2013-2016 compared to 2008-2013.** Labor income contributed 20 percent of the reduction in extreme poverty in 2008-2013 compared to 61 percent in 2013-2016, with labor

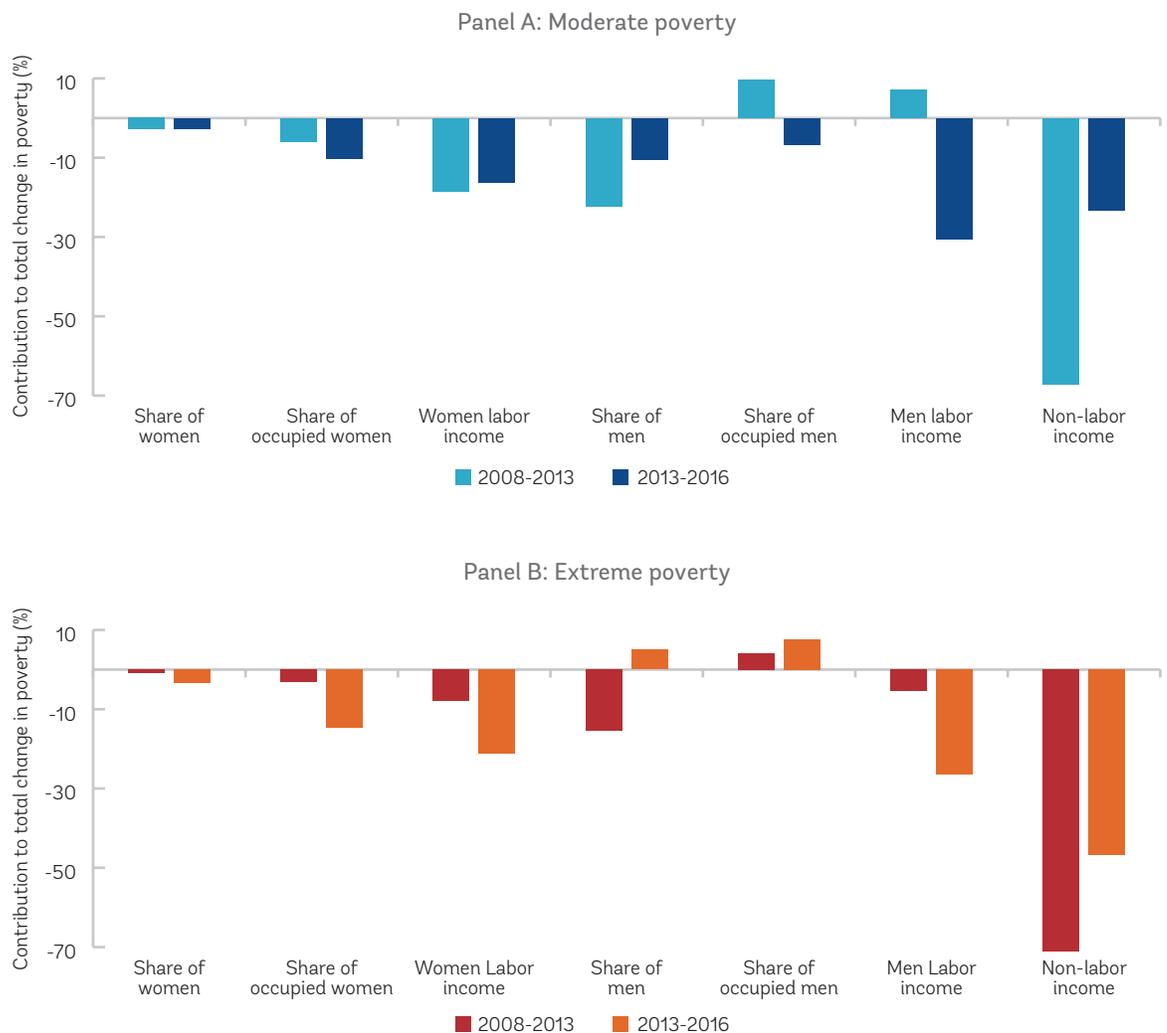


**Figure 26: Contribution to the inequality of opportunities**

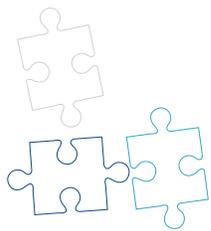


Source: Authors' calculations using ENFT.

**Figure 27: Contributions to moderate and extreme poverty reduction, 2008-2013 and 2013-2016**



Source: Authors' calculations using ENFT.



earnings for both women and men accounting for 50 of the 61 percentage points (Figure 27, panel B). This finding is consistent with the increase in real wages documented later in this chapter.

**The contribution of non-labor income to the reduction in both moderate and extreme poverty decreased between 2008-2013 and 2013-2016.** The way information on non-labor income is collected in the ENFT does not allow us to distinguish between government and private transfers (which we refer to as domestic transfers), but only between transfers, and income from abroad (remittances, pensions, interest payments) and rent income. The contribution of income from abroad and rent income to the reduction in moderate poverty remained around 14 percent across subperiods, while the contribution of domestic transfers was decreased from 52 percent in 2008-2013 to 9 percent in 2013-2016. In the case of extreme poverty the contribution of income from abroad and rents more than doubled from 11 percent in 2008-2013 to 23 percent in 2013-2016, while the contribution of domestic transfers was reduced from 55 to 15 percent across subperiods.

## Labor markets as links between economic growth and households' welfare

**Labor markets in the country are characterized by persistent unemployment rates, high levels of informality, and low wages.** Unemployment rates have had a muted response to the high rates of economic growth, increasing from 4.8 percent in 2008 to 5.5 percent in 2016, thus signaling the limited ability of the economy to link the labor force to jobs, and that of workers to convert their skills into income.<sup>73</sup> In those 8 years the working-age population has increased by 148,000 people per year, with 109,000 being added to the labor force every year. The economy created an average of 99,000 new jobs per year, while adding around 10,000 people to the number of unemployed every year. Unem-

ployment affects women and youths disproportionately. The unemployment rate for women, at 20.6 percent, is more than twice that for men at 8.6 percent, with higher rates for youth (ages 15-24) of both sexes, at 41 and 21 percent for females and males, respectively. There are big differences in unemployment rates per education levels and sex. The unemployment rate for women with no education is 7.7 times higher in 2016 than the rate for comparable men (23.7 vs 3.1 percent), 3.3 times higher in the case of women with primary education, and 2.2 times higher for women with secondary education. Unemployment is highest for people with secondary education or incomplete tertiary (between 17 and 19 percent) -despite similar participation rates- compared to people with lower levels of education (9 percent for people with no education and around 12 percent for people with some primary education). This hints at segmentation in the labor market with higher demand for jobs that require either low or high levels of education (and skills), and can be related to the high dropout rates in the first years of secondary education.

**Half of the jobs in the Dominican economy in 2016 were in the informal sector, with the informality rate rising after 2000 and decreasing in the last 5 years.**<sup>74</sup>

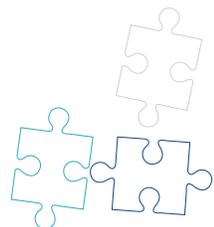
This decrease was driven by the growth of formal jobs in commerce and public sector employment, especially in education and health. The relatively high level of informality pushes workers outside the social security system, strips the government of potential tax resources, and limits the participation of workers in organized unions.<sup>75</sup> The historical weakness of labor unions in the Dominican Republic may partly explain the observed decrease in the real return to labor, despite the rising productivity, as they do not enjoy a strong bargaining position vis-à-vis entrepreneurs when negotiating minimum wages.

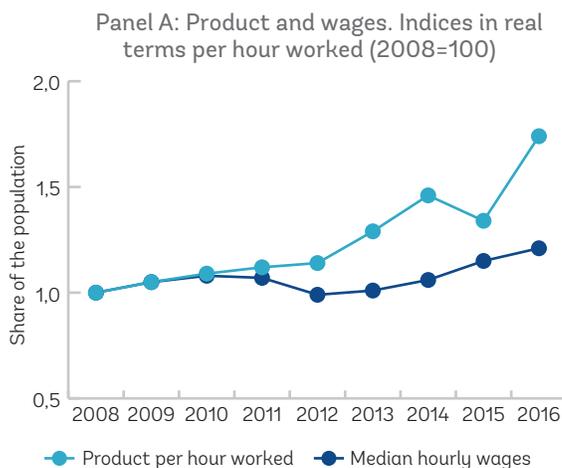
**Real wages are persistently low in the DR while labor productivity has grown strongly. Non-wage labor costs in the country are below regional levels.** Wages lost over 30 percent of their purchasing power in the wake of the 2003 banking crisis and despite rebound-

73 World Bank (2017b).

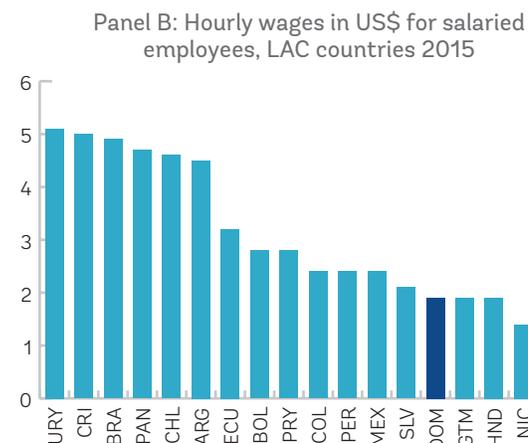
74 The official definition of informality in the DR using the ENFT includes: salaried workers in firms with 5 or fewer employees, own account workers and employers in the following occupational groups: agricultural workers and farmers, clerical support workers, drivers, craftsmen, sales workers, and unskilled workers. Domestic and unpaid workers are also included.

75 Carneiro and Sirtaine (2017).



**Figure 28: Productivity and wages**

Source: Authors' calculations based on national accounts and ENFT.



Source: SEDLAC and World Development Indicators.

ing in its aftermath, have not reached pre-crisis levels in terms of real purchasing power. Productivity per hour worked in real terms grew by 74 percent between 2008 and 2016, while real hourly wages increased by 21 percent (Figure 28, panel A). Average hourly wages in the country are among the lowest in the LAC region (Figure 28, panel B). Non-wage labor costs in the DR, at 45 percent, are slightly below LAC regional levels, with 20 of the 45 points coming from mandatory contributions.<sup>76</sup> When measuring the actual cost for a firm should it want to formalize an informal salaried worker, the cost in the DR increases to 59 percent, still below the LAC regional level of 76 percent. If the components of the average non-wage cost of salaried labor are combined with the nominal restriction that wages cannot be lower than the minimum wage, and this is expressed as a share of GDP per worker, the country has the second lowest cost in the region at 18 percent.

**Labor force participation is around the regional average, with large differences across income groups, education levels, and sex.**<sup>77</sup> Despite small increases in the participation of both groups since 2006, participation of the bottom 40 percent is lower than for

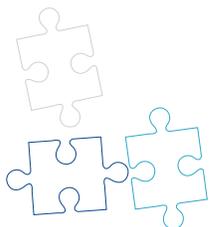
the top 60 (62.1 vs. 75.5 percent in 2016). There are also differences by education level, with participation increasing with education. In 2016, 63.5 percent of the working-age population with no education participated in the labor force, compared to 67.2 percent of people with complete primary, 76.7 percent for those with complete secondary, and 87.7 percent of those with complete tertiary.

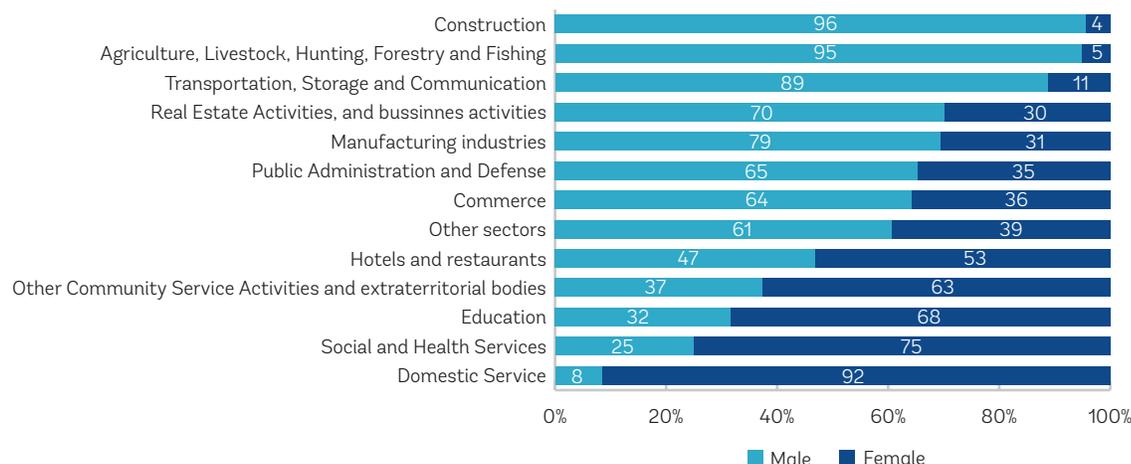
**The largest differences in labor force participation are observed between men and women.** Although women account for 65 percent of university enrollment and 80 percent of those who graduate with honors, only 59 percent of working-age women participate in the labor market while 82 percent of men do. Participation of men has remained practically constant since 2006 while female participation increased by 4 percentage points.<sup>78</sup> There are big differences between the participation rates of men and women by education level. For people with no education, the participation rate for men is 2.3 times that of women, around 1.6 times for people with incomplete or complete primary, 1.4 times for people with complete or incomplete secondary and 1.1 times for people with tertiary.

<sup>76</sup> The estimates of non-wage labor costs come from Alaimo et al. (2017), and include three components; (i) the additional mandated benefits (such as bonuses and paid leave) that a salaried worker is entitled to receive according to the legislation, (ii) the mandatory contributions to finance social insurance systems and other benefits (such as training, housing, among others), and (iii) a monetized version of job security provisions.

<sup>77</sup> Labor force participation is computed using population between ages 15-65.

<sup>78</sup> The increase in female participation rates was accompanied by an increase in unemployment rates from 16.6 percent in 2008 to 20.3 percent in 2016. Female occupation rates only increased from 22.9 to 24.3 during the period.



**Figure 29: Share of total employment by sector and sex, 2016**

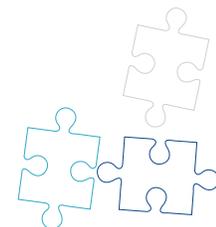
Source: Authors' calculations using ENFT.

**In 2016, women accounted for 83 percent of the inactive population, and 3 in 10 women between the ages of 25-60 were inactive.** The latter share decreases sharply with the level of education, with 54 percent of women ages 25-60 with no education in 2016 being inactive, compared to 12 percent for women with university education. The main reasons for inactivity in women are household responsibilities (76 percent)—a responsibility which is almost exclusively on women—. The importance of household responsibilities to explain inactivity might hint at challenges which women face to balance work and family in the DR. More generally, the lower participation and high inactivity rates for women might suggest the existence of barriers of access to the labor market or the lack of opportunities and incentives. On the other hand, 10 percent of the total inactive population over 15 years of age reports temporary or permanent disabilities as their main reasons of inactivity. When focusing on men between the ages 25-60, this share rises to 47 percent. Seventeen percent reported to be inactive due to temporary disabilities which could be associated with transitory health problems that directly affect not only the participation rate but potentially productivity in the labor market. The other 30 percent were inactive due to a permanent disability, indicating challenges of productive inclusion for this group.

**Sectoral gender segregation is a strong feature of the Dominican labor market.** Sectors like construction, agriculture, and transportation are heavily dominated by men, while domestic service, as well as social and health services are dominated by women (Figure 29). Given that specific innate talents for most sectors (if any) are unlikely to differ across men and women, this sectoral segregation suggests that many workers are not pursuing their comparative advantage.

**Average hourly wages for women are around 15 percent lower than for men between 2008 and 2016, and the difference is twice as high for women in the bottom 40 percent of the income distribution.** These differences are not explained by observable characteristics.<sup>79</sup> We use a matching technique developed by N'opo (2008) to compare hourly wages of women and men who share the same observable characteristics including age, education, area of residence, presence of children in the household, industry of employment, occupational category, and job tenure. As an example, the earnings of a female worker, 30 years old, with complete secondary education, living in an urban area, no children in her household, and who has worked as an employee in manufacturing for 6 months, will be compared to the earnings of a male worker with the exact same characteristics (30 years old, complete secondary education, living in an urban area, no children in his household,

79 The gap was computed using workers ages 20-55, and working more than 30 hours a week.



who has worked as an employee in manufacturing for 6 months). We then estimate to which extent the gap is explained by the observable characteristics, and find that it is negligible, meaning that the explanation of the gender wage gap in the country is beyond the set of observables that typically influence differences in pay across sexes.

**Youth also face high unemployment rates.** While unemployment rate for adults ages 25-54 decreased from 13.5 to 10.6 percent between 2001 and 2016, the rate for youth ages 15-28 remained around 30 percent during the period, the second highest in LAC and only comparable to Jamaica's (32.8 percent in 2015). Young women's unemployment rate is twice as high as men's (43.3 vs. 21.6 percent) despite a much lower participation rate (41 percent for women vs. 61 percent for men).

**Some of the inferior labor market and educational outcomes for women might be partly explained by one of the highest rates of adolescent fertility in the world and by high rates of violence against women.**

These phenomena usually constraint women's ability to make their own choices and reach their goals. For instance, different studies find a significant correlation between teenage pregnancy and childbearing, lower educational achievement, and poorer labor market outcomes for women.<sup>80</sup> At 97.3 births per 1,000 women ages 15-19, adolescent fertility rate in the DR is the highest in LAC and the third highest among upper middle-income countries, surpassed only by Equatorial Guinea and Gabon. Many teenagers are forced to drop their studies to attend the pregnancy, with consequent lower levels of education reducing labor income in adulthood by an estimated 17 percent.<sup>81</sup> Gender-based violence is one of the main mortality causes in the country for women ages 15-49, and around 30 percent of women in this age group that have ever been in a

relationship have experienced some form of violence perpetrated by their partners in the last 5 years. The country has the third highest rate of female homicides in LAC, and around a quarter of all women ages 15-49 have experienced physical violence.<sup>82</sup>

**Women are underrepresented among entrepreneurs.**

Only 14 percent of small and medium-sized enterprises are fully owned by women.<sup>83</sup> When considering firms of all sizes with at least some female ownership, this measure increases to 30 percent, below the 40 percent average across LAC. The percentage of firms in the country with a female top manager is half the LAC average (Enterprise Surveys). Data on microenterprises reflect the tendency of women-owned firms to be engaged in lower-productivity retail and other service activities.<sup>84</sup> Only 5.4 percent of firms managed by women in the manufacturing and services sectors in the Dominican Republic engage in export sales, significantly below the 14.7 percent average for firms managed by women across LAC and less than the 13.4 percent of male-managed Dominican firms that export. Analyses at the regional level have found access to finance to be one key constraint to female entrepreneurship – 70 percent of women-owned SMEs in LAC are unserved or underserved financially.<sup>85</sup> Other constraints identified at the regional level include lack of access to information, e.g., about market or investment opportunities, and less access to business advisory services and other capacity building activities such as coaching and mentoring.<sup>86</sup>

**As in other immigrant-receiving countries, challenges in the Dominican labor market have resulted in concerns that immigration may be leading to decreased employment opportunities for local workers—and thus contributing to stagnant wages and low poverty reduction.**<sup>87</sup> Given the country's unique combination of high inflow and outflow of migrants (for its population size - see Figure 30, panel B), the

80 World Bank (2012).

81 Strictly speaking this effect is attributable to child marriage, which is probably the cause of 3 out of 4 births from mothers younger than 18 in the DR. See Wodon et al. (2017).

82 Observatorio de igualdad de género CEPAL, and ENDESA 2013.

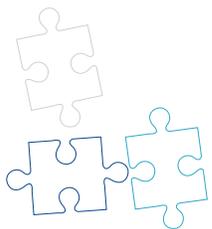
83 ONE (2015).

84 Ibid.

85 World Bank (2016). LAC Regional Gender Action Plan FY2016-19.

86 infoDev (2015).

87 World Bank (2017b).



next section analyzes the potential effects of both immigration and emigration on the labor markets, and more broadly, of migration on inclusion.

## Migration and inclusion

**For a country of its size, the DR has a unique combination of high emigration and immigration rates.**

Close to 1.1 million Dominicans lived in the US in 2016, and more than 400,000 in other countries, i.e., 15 percent of the total population residing in the country. Large-scale migration to the US began in the 1960s after the economic and political turbulence that followed the assassination of dictator Rafael Trujillo (Figure 30, panel A). The country also has a relatively large immigration rate. According to the latest survey of immigrants, more than 570,000 foreigners, equivalent to 5.6 percent of the country’s population, lived in the country in 2017.<sup>88</sup> As with emigration, immigration into the country comes mainly from one source, Haiti, with 87 percent of the 570,000 immigrants. The large flow of migrants from Haiti is unsurprising given the large gaps in terms of levels of development between

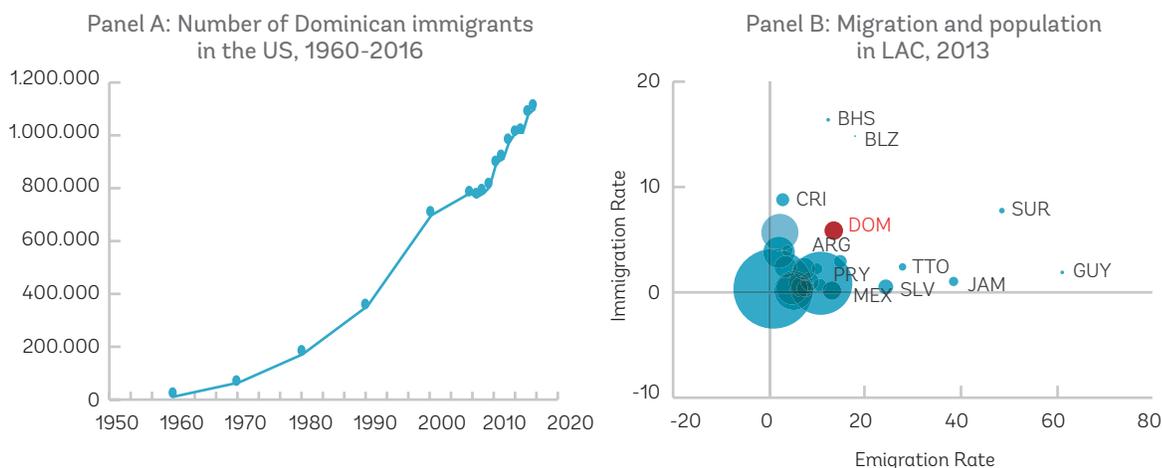
both countries (for instance, the DR’s GNI is 8 times higher than Haiti’s), the fact that they share a porous land border (each country’s only land border) and historical ties. Dominican emigration is much more concentrated in destinations relative to other Caribbean countries (the Dominican diaspora is the seventh most concentrated diaspora in LAC and the second most concentrated in the Caribbean).

**Remittances have grown over time with the stock of migrants, and represent 7.7 percent of GDP in 2016.**

Around 18 percent of households receive remittances from abroad, with a very similar incidence of remittances across deciles (constructed using income before remittances), except for households in the lowest decile, a third of which are recipients (Figure 31). Remittances can affect household level decisions such as labor force participation and education choices.

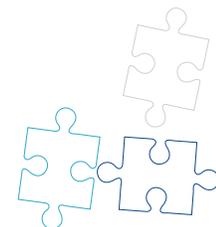
**Moderate poverty would increase by around 2-3 percentage points and extreme poverty by 1-2 pp in the absence of remittances to households.** These estimates for the 2008-2016 period account for the potential income that the migrant may have made at home,

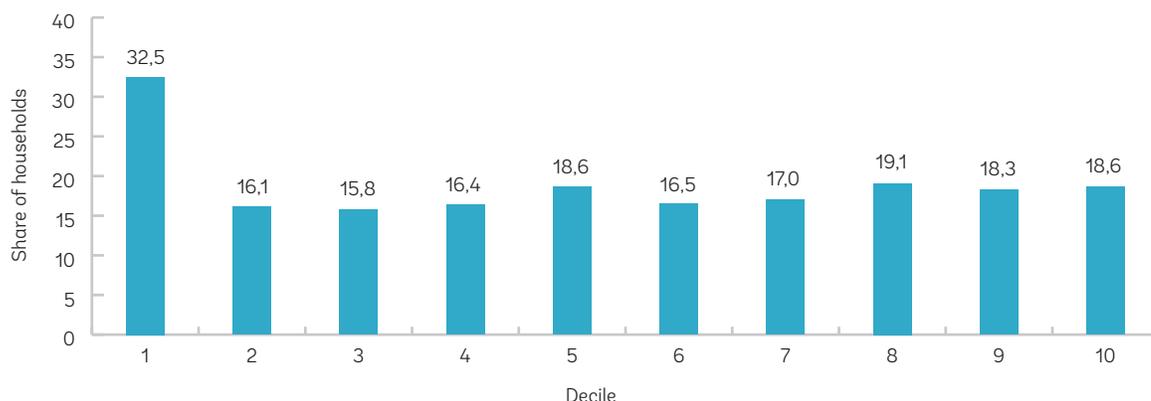
**Figure 30: Dominican immigrants in the US and migration rates in LAC**



Source: Migration Policy Institute (MPI) tabulation of data from US Census Bureau, 2010 and 2016 American Community Surveys (ACS), and 2000 Decennial Census. Data for 1960 to 1990 are from Campbell J. Gibson and Emily Lennon, "Historical Census Statistics on the Foreign-Born Population of the United States: 1850 to 1990" (Working Paper No. 29, US Census Bureau, Washington, DC, 1999).

Source: Migration and Remittances Factbook, 2016  
Notes: The immigration rate is calculated as the ratio of immigrants over total residents in the host country. Emigration is defined as the ratio between emigrants and the number of residents in the home country. The size of the bubble is proportional to the country's population



**Figure 31: Incidence of remittances by decile, 2016**

Source: Authors' calculations using ENFT.

and take into account that households with migrants may not be randomly selected from the population.<sup>89</sup> Among household receiving remittances, around 50 percent have female heads, compared to 35 percent with female heads among households that do not receive them. Something similar is observed on remittances and the inactivity of the household head in the labor market.<sup>90</sup> Among recipient households, 37 percent of households have an inactive head, while among non-recipient households, the share with inactive heads is only 20 percent.

**Access to alternative sources of income, such as remittances, has the effect of decreasing labor force participation by increasing reservation wages.**<sup>91</sup> On average, adults in households that received remittances in 2012 were 6 percentage points less likely to be in the labor force than similar adults without remittances, and the relationship between remittances and participation is about the same in households in the bottom 40 percent and those in the top 60 percent. However, it is significantly greater for women than for men (7.5 percentage points for women and 1.3 for men), and par-

ticularly strong for adults with less schooling. Among adults who did not complete primary school, participation is 7.3 percentage points lower if remittances are received, 2.5 percentage points for adults who finished secondary school or have some tertiary schooling, and 2 percentage points for adults with complete tertiary education. While receipt of other transfers (including public transfers) is also associated with lower participation, this effect is smaller than that associated with remittances. This difference may be due to how remittances and public transfers are allocated across households: while public transfers are targeted at poor households, typically with children or retirees, remittances are often the result of joint household decisions wherein a household member migrates specifically to increase household income, and at times, to decrease the need for other members to work.<sup>92</sup>

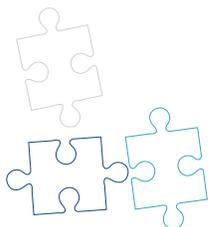
**High unemployment and emigration rates of workers with more schooling imply insufficient demand for skilled labor, and firm surveys suggest this is due to skills mismatch.** As of 2016, 66 percent of Dominican immigrants in the US, 25 or older, had complete

89 These estimations use the method proposed by Acosta, Fajnzylber, and Lopez (2007) as well as data from the ENFT to construct a counterfactual situation without migration and correcting for the potential income which migrants might have had, had they not left their country.

90 A person is considered inactive in the labor market if she does not belong to the economically active population, which includes people who are working, and those unemployed who are looking for jobs.

91 These results come from World Bank (2017b) and do not address the potential endogeneity of receipt of remittances and labor force participation. Migration may have been planned around the labor supply decisions of non-migrating household members. For instance, individuals may migrate to compensate for other household members not being able to work – or may have a direct effect on other members' decision to work.

92 World Bank (2017b).

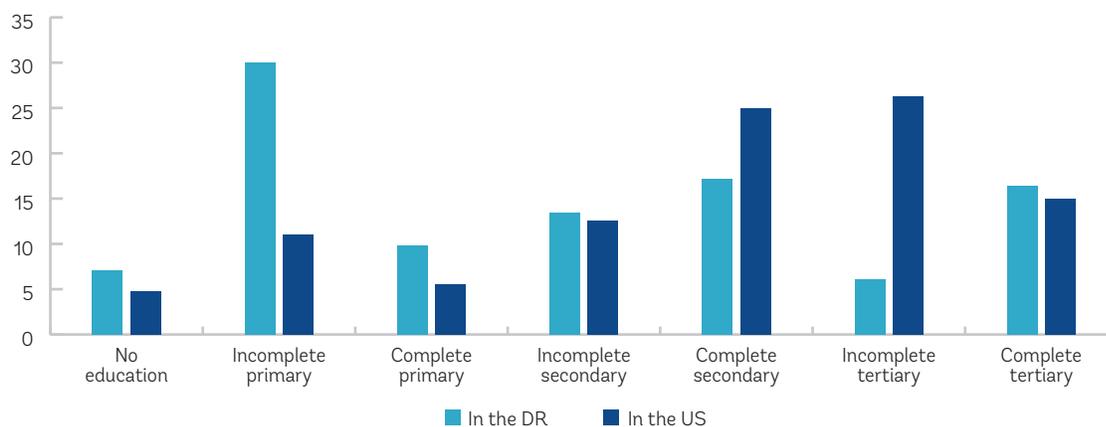


secondary education or higher, compared to only 40 percent of Dominicans living in the DR (Figure 32).<sup>93</sup> Along with high unemployment rates for skilled labor, the relatively high emigration of skilled labor further supports the possibility that the local labor market has insufficient demand for it. In meantime, 31 percent of firms in 2016 identified an inadequately educated workforce as a major constraint for business in Dominican Republic,<sup>94</sup> suggesting the presence of skills mismatch, with educated workers not possessing the skills that firms require.<sup>95</sup> In addition, the economy does not generate the number of full-time jobs that workers would be willing to take. One in six workers in the country was willing to work additional hours in 2016, the highest rate among 16 countries in LAC.<sup>96</sup> The rate is higher for workers in the bottom 40 percent of the income distribution with more than one in five workers willing to work additional hours.

**The vast majority of Haitian immigrants in the Dominican Republic are escaping poverty and looking for better work opportunities.**<sup>97</sup> The first large-scale migratory waves of Haitians started back in the 1920s, to work in government-owned sugar cane fields.<sup>98</sup> Around 70 percent of Haitian migrants have at most primary education with an average of 4.1 years of schooling (compared to 9 years for Dominican-born), and are highly clustered in unskilled work, especially in agriculture, construction, and commerce.<sup>99</sup>

**There are concerns that Haitian immigration may be contributing to the stagnant wages in the country, but the evidence is mixed.** The extent to which immigration affects wages in local labor markets is in large part determined by whether the immigrants' skills are substitutes or complements to that of the local workers. If they are substitutes, this can result in increased

**Figure 32: Share of population by highest level of education achieved - Dominicans ages 25+ living in the DR or in the US, 2016**



Source: Authors' calculations using ENFT and US Census Bureau ACS 2016. Notes: The calculation using the ACS includes only people who report being born in the DR. The number of years of education in the ACS were used to determine the equivalent highest level achieved according to the DR education system.

93 ACS 2016 data obtained from the IPUMS database version 7.0. See Ruggles et al. (2017).

94 Enterprise Surveys (<http://www.enterprisesurveys.org>), The World Bank.

95 World Bank (2017b).

96 Source: ILOSTAT. Persons in time-related underemployment comprise all persons in employment, who satisfy the following three criteria during the reference period: a) are willing to work additional hours; b) are available to work additional hours i.e., are ready, within a specified subsequent period, to work additional hours, given opportunities for additional work; and c) worked less than a threshold relating to working time i.e., persons whose hours actually worked in all jobs during the reference period were below a threshold, to be chosen according to national circumstances. The time-related underemployment rate is calculated by dividing the number of persons in time-related underemployment by the total number of persons in employment.

97 According to the most recent survey of migrants. See ONE (2018).

98 See Ferguson (2003).

99 ONE (2018).



competition for jobs while complementary skills can lead to increased productivity for local workers. The evidence suggests that there is no negative relationship between the proportion of the local labor force that is Haitian-born and the wages of local labor once individual characteristics are taken into account, and that since Haitian immigrant labor is largely limited to unskilled and informal employment in agriculture, construction, and commerce, Haitian immigrants are more likely to be complements than substitutes to both capital as well as to the relatively more skilled Dominican workers.<sup>100</sup>

## Social policy and inclusion

Social policy has potentially important roles in sustaining the recent gains in poverty reduction, closing spatial gaps in poverty and access to services, and in increasing equality of opportunities. This section covers social insurance programs, education, and health, and how they are related to poverty reduction and to the country's ability to sustain high rates of economic growth. It also identifies where social policies could better address key human development and inclusion challenges throughout the lifecycle including pregnancy and birth; early child development; childhood and adolescence; transition to labor market and adulthood; and retirement/aging.

### Social insurance

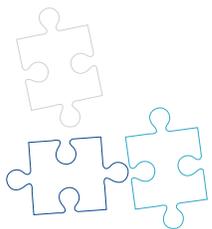
**Social protection programs have contributed to the reduction of poverty, specifically through public transfers.** The Dominican Republic has made substantial progress in the establishment of a social protection system in the past 10 years, including rationalizing of spending in social welfare by reducing the dispersion of and strengthening the design of programs such as Progresando con Solidaridad (PROSOLI). Cash transfers in the country are generally well focused and proportionally do more to help the poor and at-risk population. According to an IDB study, without public cash transfers poverty would have been 2.3 percentage points higher (or 6 percent) in 2014, and the Gini coefficient would have been 1 point higher. The evaluation also

showed that CCT households were positively associated with lower risk of catastrophic expenditures in health, increased height-for-age of children 4 or older, lower risk of adolescent pregnancy, and lower risk of repeating grades in secondary school.<sup>101</sup> Responding to the 2003 macroeconomic and banking crisis, monetary transfers started being provided to incentivize the formation of human capital through education, health and nutrition. To increase efficiency and transparency of the sector, two separate institutions were created for the targeting (SIUBEN, Sistema Único de Beneficiarios) and payment of social subsidies (ADESS, Administradora de Subsidios Sociales). In the past decade, noncontributory programs have expanded coverage significantly, with a particular focus on reaching the poorest in the last five years. Despite the increased pro-poor coverage using the SIUBEN targeting mechanism, there are gaps (particularly those related to lack of documentation) that need to be addressed to reach the entire population. To respond to the multidimensional nature of extreme poverty, the Government recently launched the 'Progresando Unidos' strategy, aimed at extreme poor households using geographical targeting prioritizing 14 among the poorest provinces. This initiative would provide the poorest with a combination of services including technical-vocational training, entrepreneurship opportunities, financial inclusion services and housing improvements.

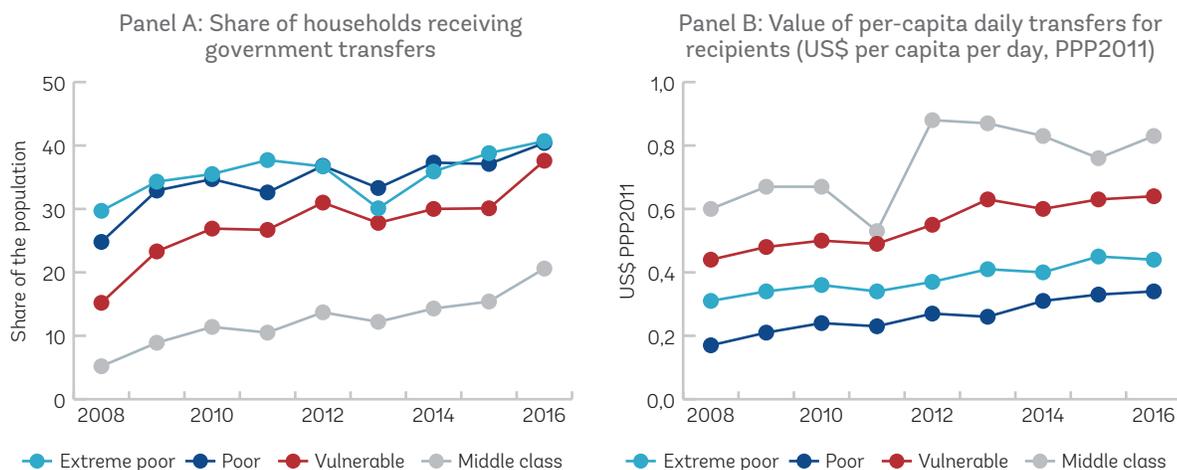
**Social accountability mechanisms have been key tools to improve service delivery to CCT recipients in education, health care and other social services at the local level.** Starting as a pilot in 2010, the CCT 'Reportes Comunitarios' (community scorecards) is a community monitoring scheme for both beneficiaries and providers, aimed at identifying problems in the delivery of services to CCT households by allowing those problems to be addressed at the community level. The baseline survey of an impact evaluation showed that the scorecards helped solve problems in the community pertaining to public service delivery, by encouraging beneficiaries to express their opinions and suggest solutions. The scorecards were scaled up at national level since 2014 and particularly adapted to the 14 poorest provinces in the country since 2016. In 2013, comple-

100 See Sousa, Sánchez, and Baez (2017).

101 Carrasco et al. (2014). The study assumes that households' behavior and other sources of income would be unchanged in the absence of the cash transfers, potentially overestimating the effect of the transfers on poverty and inequality.



**Figure 33: Share of households receiving government transfers and the value of the transfers for recipient households, by income group 2008-2016**



Source: Authors' calculations using LAC Equity Lab.

menting the scorecards, the program implemented the 'Puntos Solidarios', one-stop direct service points where beneficiaries can present grievances regarding administrative aspects handled by either the program, ADESS and/or SIUBEN. The use of these strategies ensures greater inclusion and accessibility of the poor to social protection services.

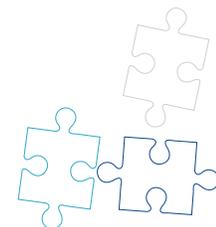
**The incidence of government transfers has increased for all socioeconomic groups (defined using the LAC regional lines) since 2008.**<sup>102</sup> The share of extreme poor households receiving government transfers increased from 30 to 41 percent between 2008 and 2016; for poor households, the share increased from 25 to 40 percent; for vulnerable households, from 15 to 38 percent; and the share for middle class households rose from 5 to 21 percent in the period (Figure 33, panel A). This increase in incidence has been accompanied by an increase in amounts for recipients, with the average value of the transfers increasing with the income of the socioeconomic group under study. The per capita average transfers to extreme poor recipients increased from US\$0.31 to US\$0.44 a day between 2008 and 2016 (and from 4.1 to 7.6 percent of total household

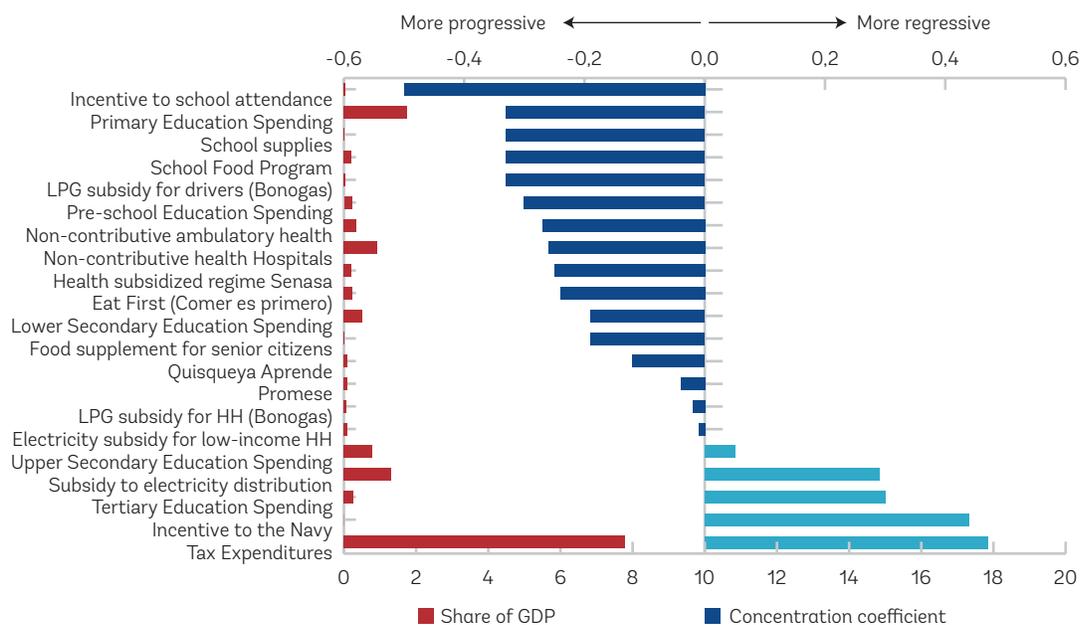
income); for poor recipients, it increased from US\$0.17 to US\$0.34 a day (and from 2.5 to 5 percent of total income); for vulnerable recipients, from US\$0.44 to US\$0.64 a day; and for middle-class households, from US\$0.6 to US\$0.83 a day, all expressed in PPP 2011 (Figure 33, panel B). The fact that increasing shares of both vulnerable and middle-class households receive government transfers, and that average values increase with the income of the socioeconomic group in question suggest the need to revise the targeting of beneficiaries to maximize poverty reduction and the transfers' redistributive potential.

**Moreover, the largest fiscal expenditures are poorly targeted.** While many government expenditure items (e.g., education and public health) are estimated to be progressive in absolute terms, i.e., per capita benefits decline with pre-benefit income, their incidence as a share of GDP is relatively small. By contrast, items that are regressive in absolute terms, i.e., per capita benefits increase with pre-benefit income, such as subsidies to electricity distribution or tax expenditures,<sup>103</sup> account for a large share of government expenses (Figure 34).

102 A household is considered extreme poor if its per capita income is under US\$3.2 a day, poor if its per capita income is under US\$5.5 a day, vulnerable if the per capita household income is between US\$5.5 and US\$13 a day, middle class if the per capita household income is between US\$13 and US\$70 a day, and high income if the per capita household income is higher than US\$70 a day, all expressed in PPP 2011.

103 Cabrera et al. (2015) show that the bulk of total tax expenditures derived from ITBIS exemptions benefits non-poor households (88 percent).



**Figure 34: Concentration coefficients and budget shares by program, 2013**

Source: Authors' calculations using Cabrera et al. 2016a.

**A low share of workers actively contributing to the pension system means that only 30 percent of the labor force can expect to receive contributory pensions, one of the lowest shares in Latin America.** Like in other Latin American countries, a public defined-benefit system was replaced with a private defined-contribution scheme (Social Security Law 87–01). The same legislation also introduced a semi-contributory minimum pension scheme (subsidized-contributive regime) and foresaw a noncontributory social assistance scheme (subsidized regime), which has not yet been implemented.<sup>104</sup> Participation in the contributory pension system is mandatory for all public and private sector employees, as well as for self-employed persons. About 2.9 million participants are registered in the defined-contribution system and only about 200,000 individuals remain in the old defined-benefit system or in special regimes for some public-sector employees, out of 4.2 million working individuals and an economically active population of 4.9 million. Less than half of the participants (1.4 million) are actively contributing to the system -and

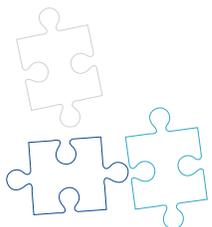
can expect to receive an old-age pension, less than 30 percent of the labor force.<sup>105</sup>

**The low density of contributions and the parameters of the pension system will result in inadequate benefits at retirement and potentially high levels of poverty among the elderly.** The adequacy ratio, measured as the starting pension relative to average wages in the economy, is projected to reach a maximum of less than 20 percent of earnings when the defined-contribution system matures in 2045 for an average wage earner with a contribution density of 75 percent. In addition, the subsidized regime should provide a pension of 60 percent of the public sector minimum wage to all needy residents ages 60 and older, but this system has not come into effect.<sup>106</sup> Consequently, high shares of the population must continue to work well beyond the official pension age of 60–65 years. The labor market participation rates in 2016 are estimated to be 42 percent in the 65–69 age group, 30 percent in the 70–74 age group, and almost 20 percent in the 75–79 age group.

104 Figlioli (2018). Only three other countries in LAC do not have non-contributory pensions as part of their pension systems: Nicaragua, Haiti, and Honduras (CEPAL, 2018).

105 Figlioli (2018).

106 CEPAL (2018).



**The lack of identification documents is an important issue to close the inequality gap in Dominican Republic.** Undocumented individuals<sup>107</sup> are not only prevented from participating in social protection programs, but also cannot open a bank account, hold land titles, marry, work in the formal sector, vote, obtain a driver's license or passport, or attend school beyond 7th grade. These individuals are not included in the group of legal and illegal Haitians residing in the country, but rather are poor Dominicans who never obtained their birth certificates or let their old "cédulas" expire. Government policies have been designed and implemented in the last 10 years to document poor individuals. Between 2011 and 2015, the Social Cabinet and the Central Electoral Committee (*Junta Central Electoral - JCE*) provided identification documents to more than 255,000 poor individuals registered in SIUBEN, and the JCE provided documents to an additional 1,165,725 individuals not registered in SIUBEN. By 2015, out of the total number of individuals registered in the SIUBEN database, 3.3 percent were undocumented (285,646 individuals). The SIUBEN database is currently under update and by the end of 2018 will produce more recent figures of undocumented individuals.

## Education

**The country has also made significant gains in access to education at all levels in the last 15 years, including closing the gap in educational achievement between the bottom 40 percent and the top 60 percent.** The average number of years of schooling for individuals 25 years and older in the bottom 40 percent of the population increased by 43 percent, from 4.9 years in 2001 to 7 years in 2016, while for the top 60 percent it increased by 24 percent, from 7.8 to 9.7 years in the period. For both groups the increase was higher for women, whose average years of schooling was identical to the men's in 2001, and was 0.6 years higher in 2016.

**Despite progress, equitable access to early childhood education services is still low compared to basic ed-**

**ucation.** The net enrollment rate in initial education, which support children ages 5-6 was 47.2 percent in 2015/16 (up from 35.5 percent in 2007/08). This compares sharply with rates of over 95 percent in basic education.<sup>108</sup> In 2014, children ages 3-5 in households from the top income quintile almost doubled the enrollment rate of children in the lowest quintile (25.4 vs. 48.2 percent, respectively). International evidence has shown that quality preschool and early child development programs can have a significant impact on future school performance and earnings, with the highest impact on children from low-income families. There is a gap of information in the country on the measurement of the quality of these pre-school and initial level education services.<sup>109</sup>

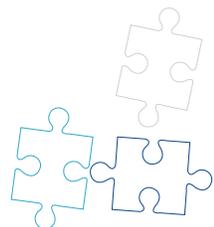
**High dropout rates and low levels of learning and skills acquisition which affect not only access to employment but also wages, are the biggest challenges facing the education system.** For the eight-year basic education program, out of every 100 students who begin school in first grade, only 75 complete the fourth grade, 63 complete the sixth grade, and 52 complete the program on time. Despite substantial progress in learning by Dominican students between 2006 and 2013 as captured by regional assessments, Dominican students still perform poorly and lag behind other LAC countries, reflecting the weakness of the system in helping students develop basic cognitive skills (e.g., reading and math), particularly in early grades. In the latest regional assessment conducted in 2013, 74 and 85 percent of third graders performed at the lowest level in reading and math, respectively.<sup>110</sup> These results are substantially worse than those of comparable countries, and represent the highest proportion of such results among 15 countries in the region. Poor performance in these assessments is observed at all socioeconomic levels, although students with higher socioeconomic levels obtained better results than those with lower socioeconomic levels. In addition, students with the lowest socioeconomic levels in the region performed better, on average, than the Dominican students with the highest

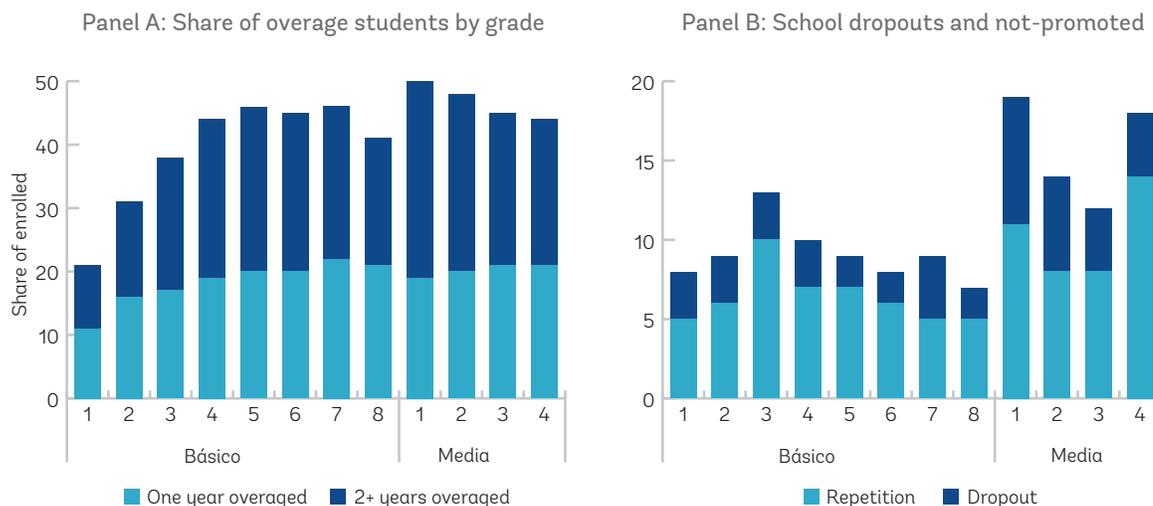
107 Undocumented means (i) an individual, 16 years or older, who does not have a national identity card or birth certificate; or a (ii) a child younger than 16 years of age who lacks a birth certificate.

108 Source: MINERD, Plan Estratégico 2017-2020, p. 39.

109 EDUCA (2015), Informe de Progreso Educativo.

110 Produced by the Latin American Laboratory for Assessment of the Quality of Education, it includes 15 countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay.



**Figure 35: Share of overage or failing school students (dropout + not promoted), 2014**

Source: Authors' calculations with information from the Sistema de Gestión de Centros Educativos, MINERD, DR.

socioeconomic levels.<sup>111</sup> In 2015, the country participated for the first time in the PISA worldwide assessment which evaluates education systems by testing the skills and knowledge of 15-year-old students, and had the worst performance among 70 countries in math and science, with the highest share of low performers in all subjects.

**Moreover, the country's own standardized assessments in 3rd and 12th grades also highlight system-level inefficiencies which affect student learning.**

In 2017, only 12 percent of all 3rd graders achieved satisfactory levels of competencies in Spanish and 27 percent in mathematics, while the largest share of students achieved only a basic level in both subjects (50 percent in Spanish and 44 percent in mathematics). A similar situation was observed in the 12th grade, where 32 of every 100 students could not finish their studies, creating an educational dead-end which is costly for students due to lower expected labor income, as well as for the education system. Young men, students in public schools, and those in rural areas tend to underperform in the 12th grade standardized assessment compared to young women, students in private schools, and in urban areas. Grade repetition increases the risk

of being overage in later grades, exacerbating an existent problem, and more importantly, of dropping out (see Figure 35). Cognitive skills and the quality of learning outcomes have potentially large implications for economic growth through higher productivity gains.<sup>112</sup> For these productivity gains to improve the livelihoods of workers, they must be translated into salary increases, a situation which has not taken place in the Dominican labor market.

## Health

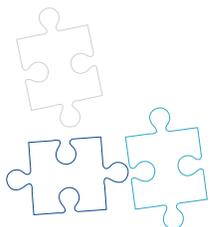
**In the field of health, the country faces a similar situation, with gains in coverage but lagging quality.**

Coverage of health services and insurance is relatively high, with significant increases since 2007. The most recent statistics show coverage of health insurance for 73 percent of total population in 2017, with full coverage of the poor enrolled in the Unique Beneficiary System (SIUBEN). At the same time, the coverage gaps by income level and residence area (urban/rural) have decreased since 2007.

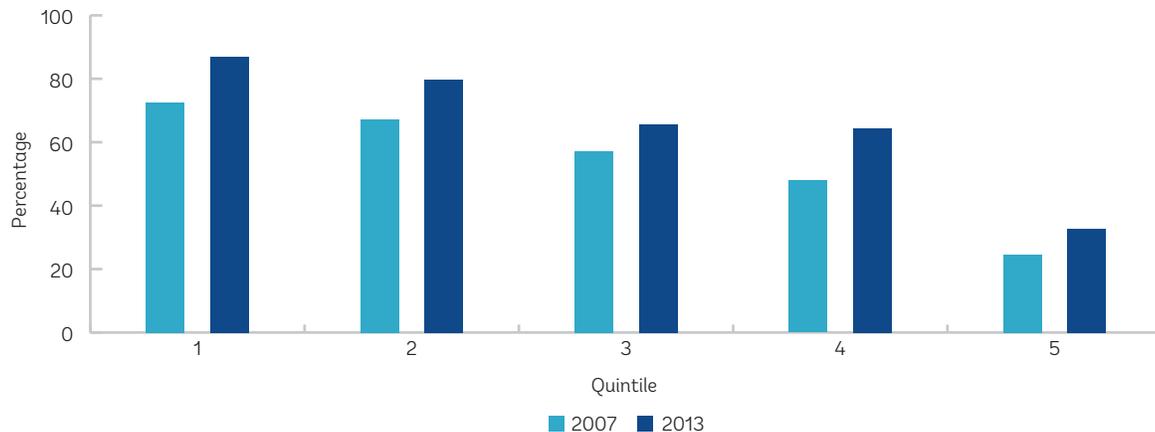
**The quality of care and health outcomes is clearly lagging. The country faces a double burden of high**

111 The index of socioeconomic level is a composite variable that includes information on education, income and labor market outcomes for parents, assets and books ownership, and characteristics of the dwelling.

112 Hanushek and Woessmann (2010).



**Figure 36: Percentage of individuals who consulted a public health facility 30 days before the survey, by year and income group**



Source: Demographic and Health Survey (DHS) 2007 and 2013 surveys, Dominican Republic. Note: For 2007, public health facilities include hospitals from the public network of the Secretaría de Estado de Salud Pública y Asistencia Social (SESPA) and rural clinics from SESPAS. For 2013, these include the public network of the Ministry of Public Health (MSP) and rural clinics and primary care centers from the MSP. SESPAS was renamed MSP.

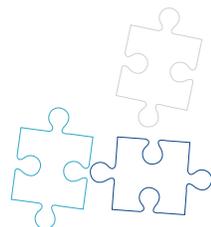
**maternal and child mortality rates, and an increasing share of noncommunicable diseases.** Health outcomes are especially poor for mothers and young children, both groups with high mortality rates, and more generally, noncommunicable diseases (NCDs) are on the rise and now account for the highest share of the burden of disease.<sup>113</sup> The poor health outcomes do not only affect worker productivity and children's learning outcomes, but cost human lives in the country. The slow improvements in outcome indicators leave the country well behind the Latin America region and the group of upper-middle-income countries (UMI). A reflection of the quality of public services is the large share of the population using private facilities, especially among the higher income quintiles (Figure 36). While the majority of the population used public facilities for outpatient consultations (59 percent) and inpatient services (51 percent), these shares are significantly lower than in other upper middle-income LAC countries such as Costa Rica (at least 80 percent) and Panama (at least 70 percent).<sup>114</sup>

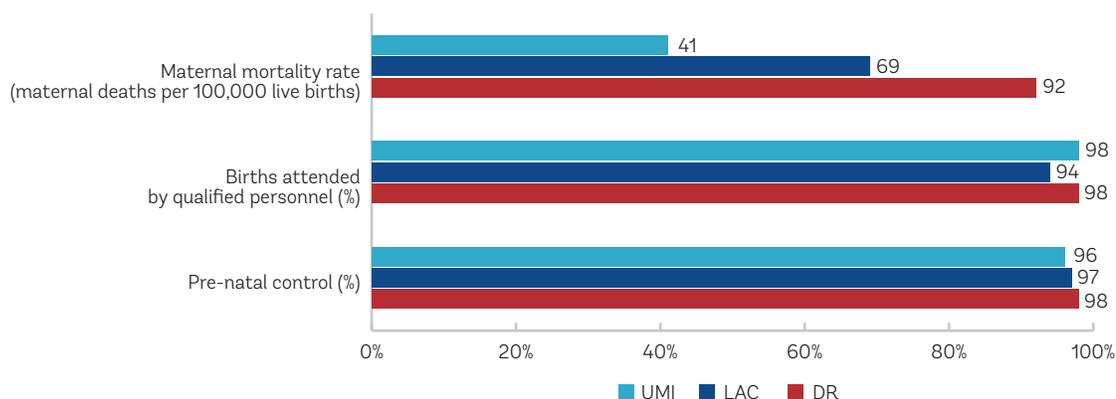
**The gap between coverage and quality of health is clearly illustrated in the case of maternal and child**

**mortality, as well as preventable deaths from non-communicable diseases such as cervical cancer.** Despite high coverage and utilization rates of pre-natal controls and attention of births by qualified personnel -comparable to those in LAC and UMI countries, the maternal mortality rate in the DR, at 92 per 100,000 births, is more than twice the rate for UMI countries (41) and 33 percent higher than in LAC (69) (Figure 37). As a result, the country did not achieve the maternal and child mortality MDGs, with infant and under-five mortality rates being the third highest in LAC after Haiti and Bolivia, and maternal mortality above the LAC and UMI averages. Various assessments indicate that the majority of maternal deaths in the country could have been prevented through a combination of factors including adherence to norms, protocols, and quality standards by properly trained personnel; ensuring access to required equipment and inputs (dependent on having sufficient funding); and enforcement of monitoring and supervision and regulatory arrangements. Moreover, neonatal mortality – which is particularly sensitive to the quality of health care – has not improved significantly in the past 15 years (21 deaths per 1,000 births in 2013, compared to 24/1,000 in

113 According to IHME (2017), the share of disability-adjusted life years (DALYs) accounted for by NCDs has increased from 40 percent in 1990 to 62 percent in 2016.

114 World Bank (2015).



**Figure 37: Maternal care and mortality, 2014: high coverage but lagging outcomes**

Source: World Development Indicators.

1999).<sup>115</sup> Another sign that the quality of care is poor is that cervical cancer is the most frequent type of cancer among women between 15 to 44 years of age, accounting for 11.8 percent of total cancer deaths among women.<sup>116</sup> Since cervical cancer is preventable and treatable when diagnosed at an early stage, the relatively high mortality rate suggests shortcomings in the screening process and a lack in continuity of care.

**Lack of sufficient funding is often cited as a major constraint to investments in health sector inputs, with total health expenditures in the country being the lowest in LAC in 2014 (Figure 38).** After falling from 5.9 percent of GDP in 2000 to 4.3 percent of GDP in 2004, total health expenditures as a share of GDP in the DR have been practically constant. Public spending's share of total health spending has increased, leading to a significant reduction in the share of out of pocket spending, but both the country's share of public spending on health relative to its GDP and per capita public spending on health remain low relative to its income level. From 2004 to 2014, the public share of total health spending increased from 32 percent to 69 percent while out of pocket spending's share of total health expenditures decreased from 52 percent to 21 percent.

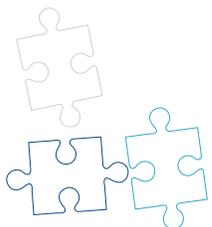
While the country's public spending on health's share of GDP increased from 1.4 percent in 2004 to 2.9 percent in 2014, it remained lower than UMI and LAC averages of 3.4 and 3.7 percent, respectively, and the third lowest in LAC.

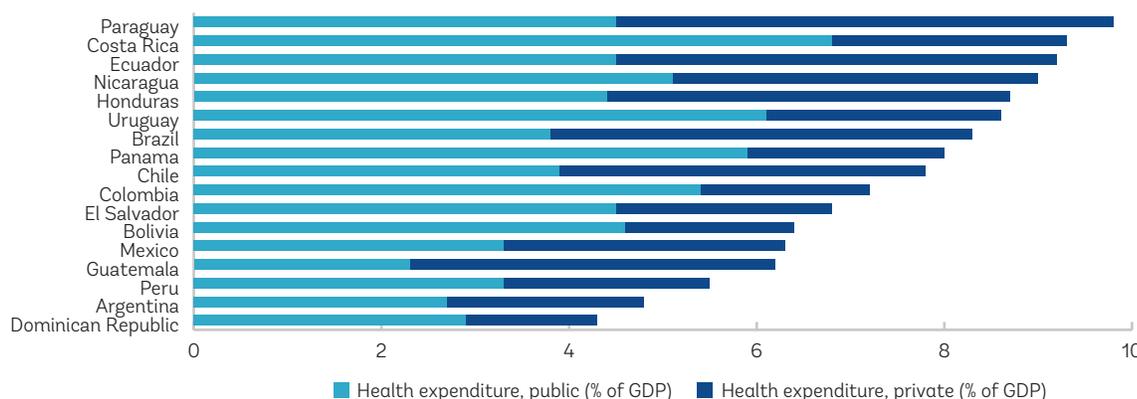
**While more public resources are needed in the health sector to keep on improving the quality of services and expand financial protection, there is room to improve efficiency and cost-effectiveness of sector spending.** One major rigidity in the sector is the criteria for budget allocation. Despite expanding Results-based financing (RBF) pilots in primary level care<sup>117</sup> in more regions, health sector financing remains largely based on historical budgeting, and provides no incentives for quality or efficiency. Other inefficiencies result from patients tending to bypass primary care centers and use hospitals for basic care. Bypassing could also result from weaknesses in the referral and counter-referral system, and from the organization of services which emphasize curative care, resulting in insufficient resources at the primary level to adequately respond to patients' needs without going to hospitals. For instance, a study estimates that the Ministry of Health spent 62 percent of its recurrent budget on curative services and only 6 percent

115 Ministerio de Salud Pública, 2017. Situación de la Mortalidad Materna en la República Dominicana.

116 ICO Information Centre on HPV and Cancer. 2016 Dominican Republic: HPV and Related Cancers Fact Sheet.

117 A results-based adjusted capitation payment mechanism for primary health care facilities that was first piloted in regions VI, VII, and VIII has been expanded to pilots in at least five other regions. In this pilot, a portion of the capitation payments to private health care facilities is based on catchment population and a portion is based on attainment of targets in terms of coverage and adherence to care protocols for selected indicators. Financing of secondary and tertiary levels of care is based on fee for service.



**Figure 38: Public and private health expenditures (as percent of GDP), 2014**

Source: World Development Indicators.

on primary care and health promotion in 2014.<sup>118</sup> Large disparities in the allocation of human resources have a negative effect on the quality of services. Although the country's overall health-worker-to-population<sup>119</sup> ratio increased from 19 in 2011 to 25 in 2015, exceeding the minimum of 23 recommended by the WHO, there is a large and persistent gap in health-worker-to-population ratios between urban and rural areas. The ratio in rural areas increased from 17 percent of the ratio in urban areas in 2011 to 23 percent in 2015, far from its 2015 goal of 50 percent.

## Governance issues in the provision of public services

**More broadly, in a setting of low quality of public services, households have increasingly (with income and over time) opted out by adopting private solutions to collective problems.** For instance, almost 8 percent of the poorest households had an electrical inverter in 2016, with the share increasing with income to reach 48 percent of households in the richest decile. In the case of education, those shares are 20 and 70 percent, respectively (Figure 39). In turn, opting out

of the public system might weaken the incentives for individuals to pay taxes to contribute to the provision of public goods.<sup>120</sup>

**The 2012 National development strategy (END) mentions clientelism as a behavior pattern that hampers the country's development and that can be a contributing factor to sustaining a low provision of public goods over time by weakening social accountability mechanisms.**<sup>121</sup> When this practice is prevalent, voters pursue individual benefits rather than demand provision of goods with collective benefits. A number of studies emphasize the negative impact of this practice on the provision of public goods.<sup>122</sup> This practice has been widely studied and is considered to be one relevant challenge in the country (see World Bank 2013, Lozano 2013, Benito and Lozano 2012, Benito 2017, Keefer and Vlaicu 2008, Keefer 2002, Mitchell 2009, Morgan, Hartlyn and Espinal 2011, and Moya Pons 2013). International observers and local NGOs have documented its practice in their reports of national elections.<sup>123</sup> Even though the extent of this strategy is difficult to measure, the perceptions of its use are high in the country.<sup>124</sup>

118 Rathe and Hernandez (2015).

119 Health workers per 10,000 population.

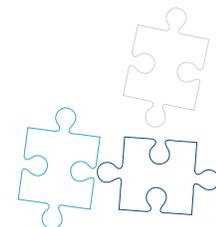
120 See Sánchez and Senderowitsch (2012).

121 See Ministerio de Economía, Planificación y Desarrollo (2016), page 15.

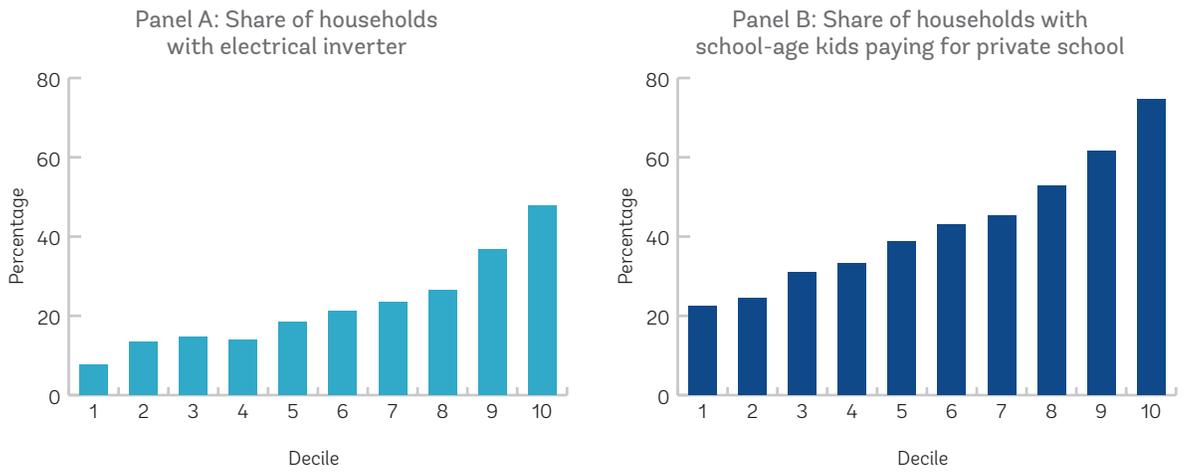
122 World Development Report 2017: Governance and the Law.

123 See reports from the Organization of American States for most elections in the DR dating back to 1962 (<http://www.oas.org/EOMDatabase>).

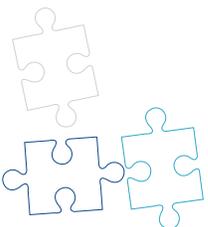
124 See results from the LAPOP survey in Morgan, Espinal, and Zechmeister (2015).

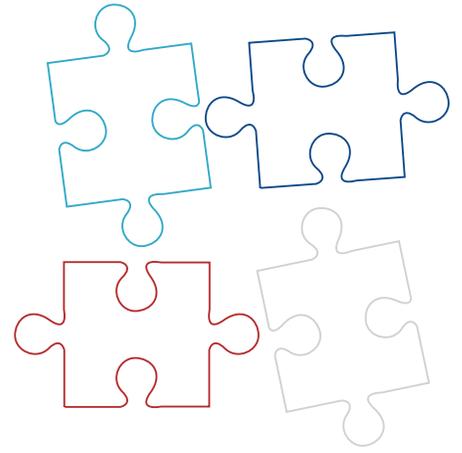


**Figure 39: Share of students overage or failing school (dropout + not promoted), 2014**



Source: Authors' calculations using ENFT.





## CHAPTER 4

# Challenges to sustainability

**T**here are signs of unsustainability in the country's current development path. These include pressure on the management of natural resources from rapid urbanization that is creating problems of access to services; high vulnerability to disasters and climate-related risks with negative impacts on growth, fiscal accounts, and poverty. Agriculture expansion and the rapid growth of extractive industries could put additional pressure on the country's renewable natural capital assets. Preservation of these assets is critical to sustain the dynamism of pivotal sectors like tourism, more broadly, exports and to mitigate negative impacts from climate change. Tax incentives to attract FDI have limited the country's ability to mobilize fiscal revenue and spend on human capital and other inclusion policies. More recently, growing social demands have led to narrowing fiscal space and renewed concerns about debt build-up. Broad governance concerns have led to mounting social discontent and might constraint the ability of the country to become a high-income economy by 2030.

### Raising fiscal revenue to meet social demands and strengthen fiscal balance

Despite robust growth over the past 25 years, the country has struggled to maintain fiscal balance, especially over the past 15 years. Over the 1990-2016 period, the country averaged an overall fiscal deficit of 2.4 percent of GDP. Fiscal deficits have become more prominent since the banking crisis of 2003—increasing from an average 1.3 percent of GDP prior to 2003, to an average 2.8 percent of GDP after 2003. Beyond averages, the overall fiscal deficit has varied widely, going from 1.3 to 8.0 percent of GDP.

On the expenditure side, growing demands for increased social spending and the fiscal costs of inefficiencies in the provision of public services have led to rising government expenditure. The country has been historically characterized by the relative small size of its government, measured as the incidence of government expenditure as a share of GDP. For example, in 1998 the incidence of government expenditure on GDP was 12 percent, while in the median LAC country it stood at 25 percent. Since then, the country's public expenditure has risen and now stands at 17 percent of GDP. A fraction of this increase came in response to social

demands.<sup>125</sup> For instance, public protests erupted in 2010 demanding government to fulfill a decade-old promise to spend 4 percent of GDP in education. These protests resulted in a national pact (*Pacto Nacional para la Reforma Educativa*) whereby the government committed to comply with the 4 percent rule. A fragile and inefficient electricity sector is the recipient of significant transfers from government, which heightens pressures on an already tight fiscal envelope. Government has transferred on average 1.7 percent of GDP per year (12 percent of its revenue) to the electricity sector over the past 10 years to cover for its losses (see chapter 2).

**Ongoing efforts to increase revenue notwithstanding, tax exemptions and a small tax base limit the country's ability to sufficiently increase revenue.**

Over the past 10 years, government revenue has fluctuated around 15 percent of GDP, while government expenditure has averaged 17.4 percent of GDP over the same period. Ongoing efforts to fight evasion and fraud are expected to raise revenue by 0.5 pp of GDP in coming years. These efforts notwithstanding, the DR will still rank poorly in terms of revenue collection. A cross-country comparison of fiscal revenues in 2016 shows that the DR is one of the countries with the lowest levels of revenue as a share of GDP in LAC (Figure 40, panel A). Low tax revenues can be partially attributed to high tax expenditures (6.7 percent of GDP in 2016) resulting from numerous VAT and excise exemptions and other tax incentives provided to firms operating in special tax regimes, a relatively high tax threshold (only 14 percent of formal workers pays personal income taxes), and a low tax base because of informality (see World Bank 2017c).

**Policy makers have taken steps to rein in fiscal deficits, but the results so far have been limited.**

Following the 2012 tax-reform package, fiscal consolidation and a more favorable external environment (higher US growth and lower commodity prices) helped improve macroeconomic balances temporarily, by gradually reducing the consolidated overall fiscal deficit from 6.9 percent of GDP in 2012 to 0.3 percent of GDP

in 2015. Structural reforms have also supported the governments' consolidation efforts and include (i) tax administration improvements to reduce fraud and evasion; (ii) public financial management reforms covering transparency of public accounts; and (iii) tighter public debt management focused on extending the overall maturity of public debt obligations on the back of favorable external financing conditions. Since 2015, however, fiscal deficits have widened, reaching 3.2 percent of GDP, and are expected to stand above 3.5 percent over the next three years.

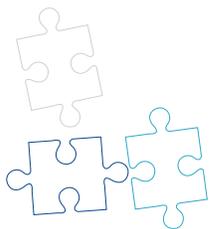
**In the face of recurrent fiscal deficits, the stock of public debt has been on the rise since 2007 and is projected to rise over the medium term.**

The non-financial public-sector debt more than doubled between 2007 and 2017, going from 17.1 percent to 35 percent of GDP (Figure 40, panel B). The gross stock of debt of the Dominican government increases to 49 percent of GDP in 2017 if one includes the outstanding stock of debt issued by the Central Bank for its recapitalization. In fact, the inclusion of the Central Bank's deficit adds approximately 1.5 percent of GDP to the government's deficit (quasi-fiscal deficit). Going forward, the gross external debt of the overall public sector (NFPS and Central Bank) is projected to continue rising in the medium-term, reaching 55 percent of GDP in the early 2020s (IMF 2017).

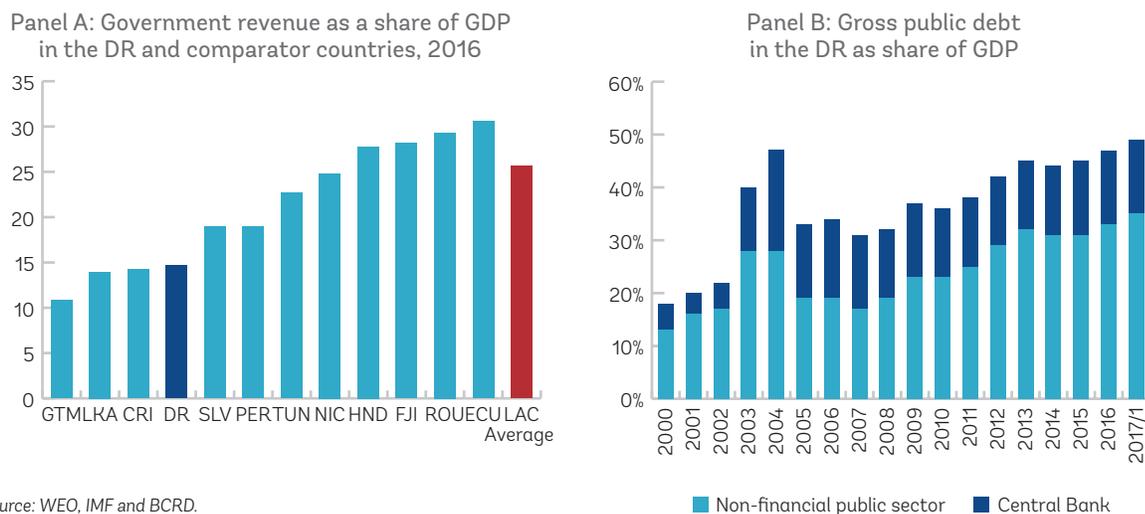
**Compared to regional peers, the country does not stand-out for its fiscal deficits or its public debt.**

In fact, other LAC countries also have a propensity to produce fiscal deficits, which are in many cases higher than those observed in the DR. The country's average deficit between 1990 and 2016 (2.4 percent of GDP) was lower than the LAC average (2.7 percent of GDP). A finer comparison with sub-groups within LAC and its structural peers reinforces this point—CAFTA-DR and Caribbean countries had an average fiscal deficit of 3.24 percent of GDP and structural peers had an average deficit of 2.9 percent of GDP (Figure 41, panel A). The only sub-region that has a lower average fiscal deficit over the 1990-2016 is South America. In terms of debt, the gross stock of debt of the Dominican non-finan-

<sup>125</sup> For example, data from the WHO and UNESCO show that between 2004 and 2014 public expenditure in education and health increased by 2.8 and 1.4 percentage points as a percentage of GDP, respectively.

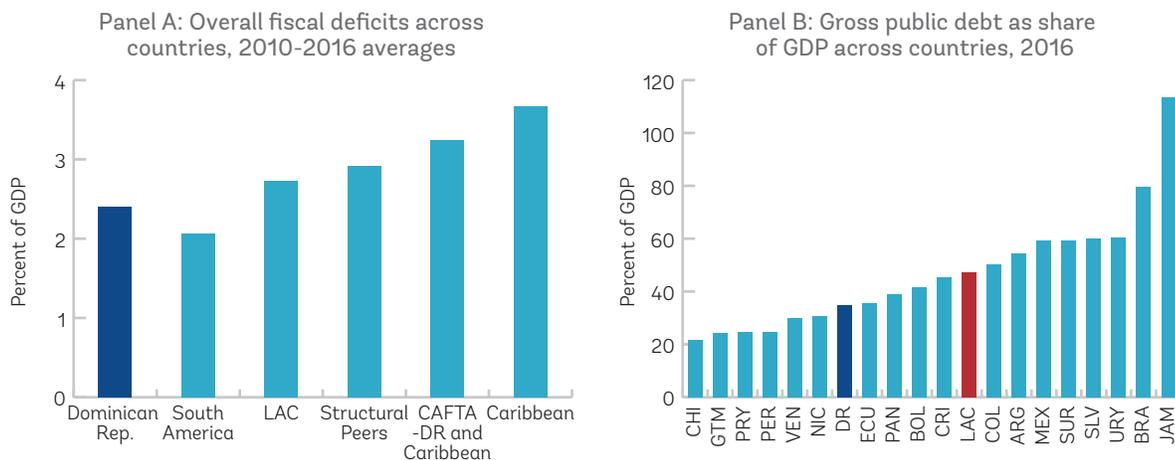


**Figure 40: The DR has low levels of fiscal revenues which has contributed to an increase in public debt**



Source: WEO, IMF and BCRD.

**Figure 41: The DR's fiscal deficits and debt levels are low compared to regional peers**

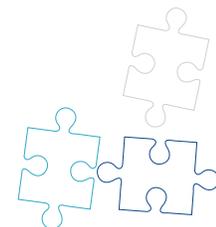


Source: WEO, IMF and BCRD. With the exception of Paraguay, Mexico and Uruguay, gross debt refers to the debt of the non-financial public sector.

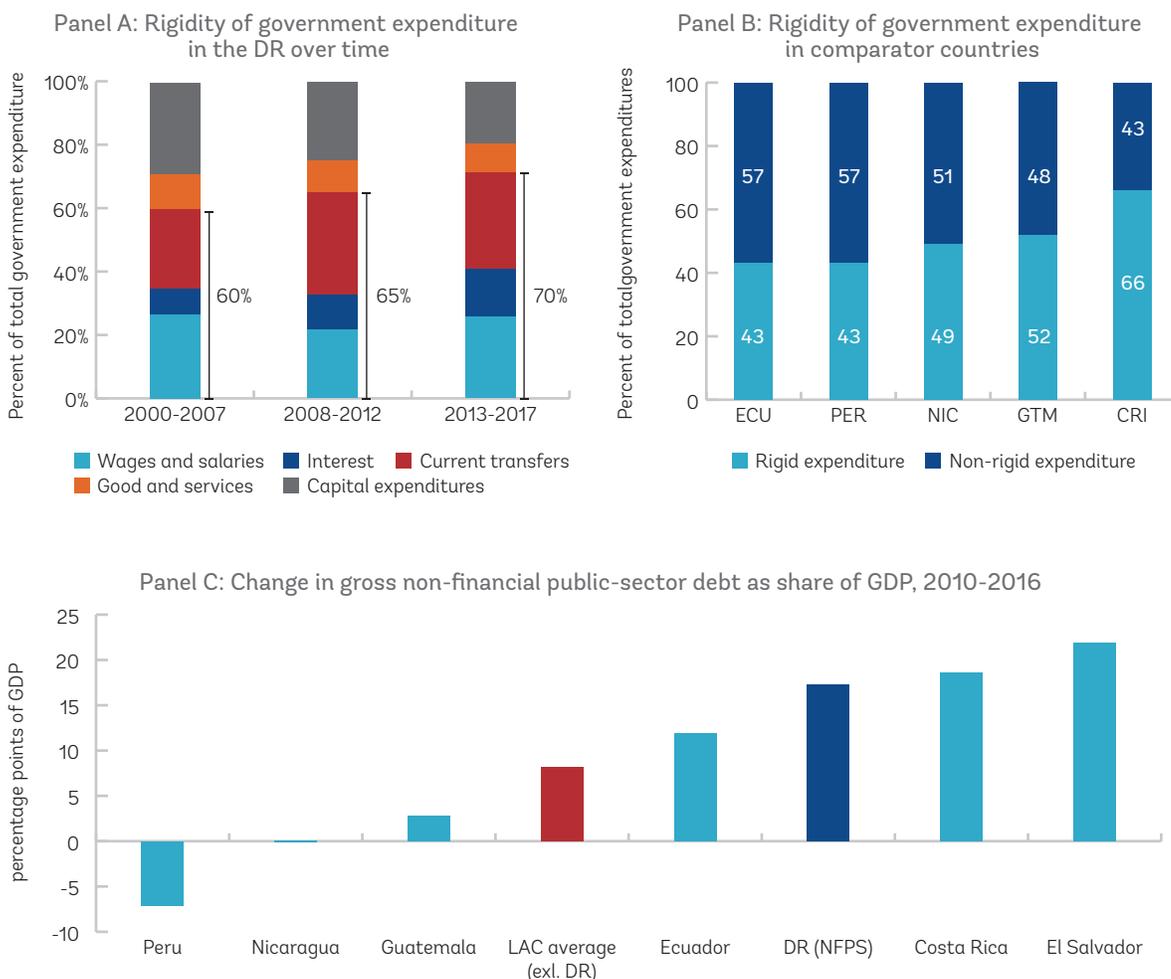
cial public sector was lower than 12 out of the 19 LAC countries with available data and compared to the LAC average (Figure 41, panel B).

**Despite comparatively low fiscal deficits and debt levels, the composition of government expenditure, featuring a growing rigidity of expenditures because of rising interest payments, and its pro-cyclical pattern, adds complexities to the country's fiscal problem.** Countries where the composition of government expenditure is more rigid have a harder time consolidat-

ing fiscal accounts because of legal or political barriers. Rigid expenditures include salaries, interest payments and social transfers. In the case of the DR, the composition of government expenditure has progressively become more rigid—this type of government expenditure accounted on average for 60 percent of total expenditure between 2000 and 2007, increased to an average 65 percent between 2008 and 2012, and reached an average 70 percent in the 2013-2017 period. The rising degree of rigidity was mostly driven by an increase in the expenses related to interest payments (Figure 42,



**Figure 42: Government expenditure in the DR is relatively rigid, which may contribute to the recent uptick in debt levels**



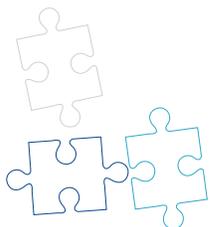
Source: WEO, IMF and BCRD. Note: rigid expenditure is composed of compensation of employees, interest and social benefits; and non-rigid expenditure is composed of net acquisition of nonfinancial assets, not elsewhere classified and purchases/use of goods and services. The figure shows comparator countries for which data for all expenditure categories were available.

panel A).<sup>126</sup> A comparative look at the composition of government expenditure also shows that the country has a more rigid structure compared to regional peers (Figure 42, panel B). In addition to a relatively rigid composition of government expenditure, the country displays a pro-cyclical government expenditure pattern—spending more in times of economic bonanza and cutting expenditure during bad times. This pattern stands in contrast with other LAC countries, such as Peru, Chile or El Salvador, which present a counter-cyclical pattern at least since 2007 (Végh, Lederman, and

Bennett 2017). The pro-cyclicality of fiscal policy in the DR increases the country’s reliance on debt and limits the country’s ability to construct buffers to respond to shocks (economic or otherwise). Finally, while falling over time, the dollar denominated debt represents more than half of public debt, constraining the country’s ability to depreciate its currency (see Annex 3).

**The underlying features of the fiscal process have led to the accumulation of public debt at a faster pace than its regional peers, raising concerns about**

126 Social spending in education (4 percent) and health (2 percent) have been the largest areas of social spending (Oxfam 2017). These numbers, however, have remained relatively stable since 2012. Up to December 2017, most of the Non-Financial Public Debt has a fixed interest rate (86.3 percent of total). Only 7.2 percent has a maturity less than one year.



**the current trajectory.** As discussed above, the public debt/GDP ratio in the country increased by approximately 17 percentage points in the last 10 years.<sup>127</sup> This period includes the aftermath of global financial crisis, when many countries relied on external funding to counteract the adverse effects of a sharp decline in global growth. However, a look at the accumulation of debt across LAC shows that the DR had one of the sharpest increases in its stock of public debt—it exceeded the LAC average and was higher than the increase observed in all its regional comparators except for Costa Rica and El Salvador (Figure 42, panel C).

**Thus, the country appears to be in a cycle whereby fiscal (and debt) dynamics put upward pressure on the country's cost of financing, making expenditure more rigid, which in turn limits fiscal space and increases the need for external financing.** As shown earlier, despite being one of the fastest growing economies in LAC, the country has one of the highest burdens of government interest payments relative to debt levels in LAC, which increases the need for external financing. Moreover, the country's sovereign debt is perceived to be riskier to what its current debt level predicts (Végh et al. 2018).<sup>128</sup> Part of the DR's relatively poor standing in terms of risk rating, and the associated relatively high cost of financing, is explained by the rapid increase in its debt levels and its exposure to external shocks. An extension of the exercise in Végh et al. 2018 shows that, conditional on debt levels, GDP per capita, and the size of an economy, countries that experience larger accumulation of debt are perceived to have riskier sovereign debt profiles compared to those that have stable debt to GDP ratios.<sup>129</sup> Similarly, countries in the Central America and the Caribbean (including the DR), which are constantly exposed to natural disasters and are highly exposed to shocks stemming from North America,<sup>130</sup> are also perceived

to have riskier debt profiles, even after controlling for other characteristics everything else equal.

## Resilience to disasters, climate-related risks, and other shocks

**While debt levels are expected to remain at manageable levels in the medium-term, the debt trajectory could be significantly affected if adverse economic or disaster and climate-related shocks materialize, as they would impact fiscal deficits and potentially increase financing costs.** IMF (2017) estimates that the country's debt trajectory is highly susceptible to adverse growth shocks—it estimates that a 2.5-percentage points slowdown in growth from baseline projections for two years could result in a 5-percentage points increase in the country's debt to GDP ratio by 2020. Public debt is also sensitive to exchange rate movements, since it is mostly dollar-denominated. Indeed, following the PetroCaribe debt buyback operation, the country increased issuance of dollar-denominated bonds in 2015 and external public debt securities are now estimated to account for more than half of the total external debt (this portion was about a quarter in 2008). This puts pressures on the Central Bank to intervene in forex markets and prevent sharp depreciations of the exchange rate. Finally, debt dynamics could also be altered by weather-related shocks, which may depress economic activity in the short-run and increase the country's cost of financing. Recent World Bank staff's calculations showed that the materialization of a counterfactual natural disaster in 2017 could have led to a 7-year long primary deficit increase of 1 to 1.5 percentage points as a share of GDP relative to baseline, depending on the intensity of the shock.<sup>131</sup> This, in turn, would have translated into a 4 to 12 percentage point increase in the debt to GDP ratio relative to the baseline level in

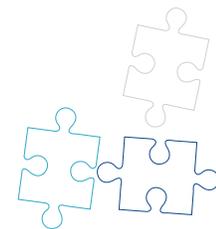
127 The increase in public debt includes a one-off issuance to recapitalize the Central Bank.

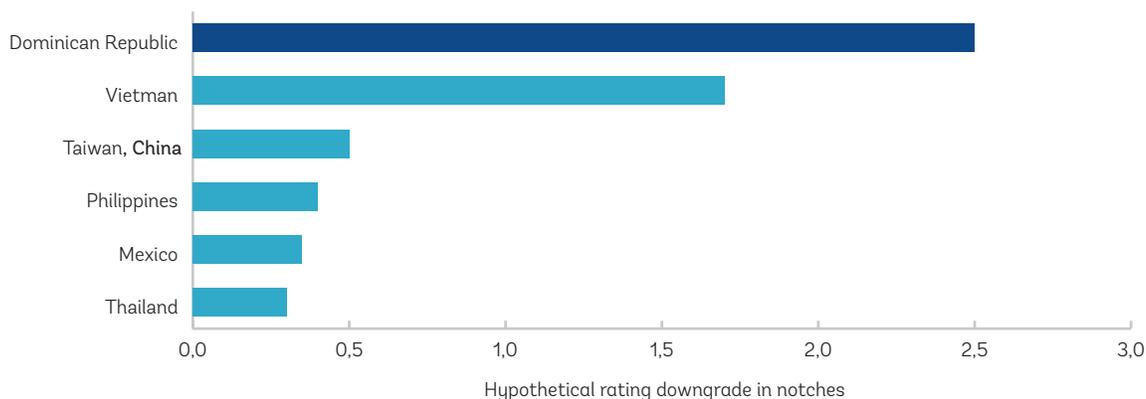
128 The analysis uses Fitch sovereign risk rating.

129 As in Végh et al. (2018), sovereign risk is proxied by Fitch ratings.

130 Estimations presented in Végh, Lederman, and Bennett (2017), show that the growth of the DR's GDP is highly elastic to the growth rate of G7 countries, of which the US represents a big part. More specifically, the authors use quarterly data to estimate the elasticity of year-on-year growth rates of different LAC countries with respect to external factors (growth of G7 countries, China's growth, commodity prices, and the US 10-year treasury rate). Their findings show that, after controlling for other external factors likely affected by US growth, the elasticity of the DR's growth (in terms of deviations from the country's average growth) with respect to G7 growth is positive and significant, and is the fourth largest among LAC countries with available data.

131 More precisely, the exercise simulates the economic impacts of natural of different magnitudes hitting the DR, one event of moderate intensity and one event of strong intensity.



**Figure 43: Natural disasters could increase sovereign borrowing costs in the DR**

Source: Calculations from Standards and Poor's.

2024. In addition, estimations by Standards and Poor's show that the country's credit rating is more sensitive to a large disaster, compared to other emerging markets (Figure 43), thus affecting its financing costs.<sup>132</sup>

**The downside to the country's geographic location is its high exposure to adverse natural events.** The country is highly exposed to rapid weather-related disasters (tropical storms, hurricanes, cyclones, floods and landslides), climate-related events (drought), climate change impacts (sea-level rise and desertification), and earthquakes. A global comparison suggests that the DR stands out as one of the countries which has been most affected by natural disasters in the last 20 years, with the country ranked 10th worldwide terms of human and economic losses suffered from weather-related events between 1997 and 2016 (Germanwatch's Global Climate Risk Index 2018).<sup>133</sup> From 1980 to 2008, 40 disaster events affected 2.65 million people, almost a quarter of the country's population. The DR's first Nationally Determined Contribution (NDC) identifies climate change adaptation as a constitutional priority of the country, with the sectors identified as most climate-vulnerable including drinking water, energy

generation, national system of protected areas, human settlements and tourism.<sup>134</sup>

**Tropical storms and floods are the most frequent climate-related hazard in the DR.** The northeastern region is exposed to floods and mudslides from severe storms, while arid parts of the northwest are experiencing increasing temperatures leading to more drought, which reduces crop yields and water supplies. Moreover, Hispaniola Island is in the center of a hurricane belt, where intense storms have a negative impact damaging hotels, coastal infrastructure and beaches, leading to significant losses in tourism revenues, and damages to fish nursery areas and coral reefs. Climate change is expected to increase the risk and intensity of excess rainfall, storm surges, and hurricanes in the Caribbean, with relatively higher impacts in the Dominican Republic. Predicted impacts include flooding in coastal zones and low-lying areas, with potential damage and economic losses projected to reach nearly 17 percent of GDP in the country.<sup>135</sup>

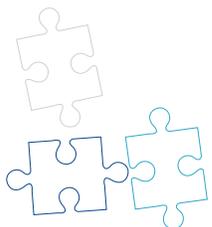
**Vulnerability to adverse natural events is exacerbated by unplanned urban growth, land degrada-**

132 So far, the DR has seen improvements in credit ratings and access to bond markets. In Dec. 2017, OECD improved the risk rating for the DR from 5 to 4. The DR has as improved access to international financial markets, evident from the latest issuance, at 8.9 percent for a 5-year bond, that was more than twice over-subscribed than the offered amount. However, as mentioned in the text, these improvements could be reversed in case a shock hits the country.

133 <https://germanwatch.org/en/download/20432.pdf>

134 [http://www4.unfccc.int/ndcregistry/PublishedDocuments/Dominican%20Republic%20First/INDC-DR%20August%202015%20\(unofficial%20translation\).pdf](http://www4.unfccc.int/ndcregistry/PublishedDocuments/Dominican%20Republic%20First/INDC-DR%20August%202015%20(unofficial%20translation).pdf)

135 <https://www.gfdr.org/en/dominican-republic>



**tion, and weak enforcement of building codes and zoning regulations.** The DR is ranked 26 out of 171 countries in the United Nations’ World Risk Index,<sup>136</sup> which covers four dimensions: i) exposure to natural hazards; ii) vulnerability as dependent on infrastructure, nutrition, living conditions and economic circumstances; iii) coping capacities as dependent on governance, preparedness and early warning measures, access to healthcare, social and material security; and iv) adapting capacities with respect to impending natural events, climate change and other challenges.

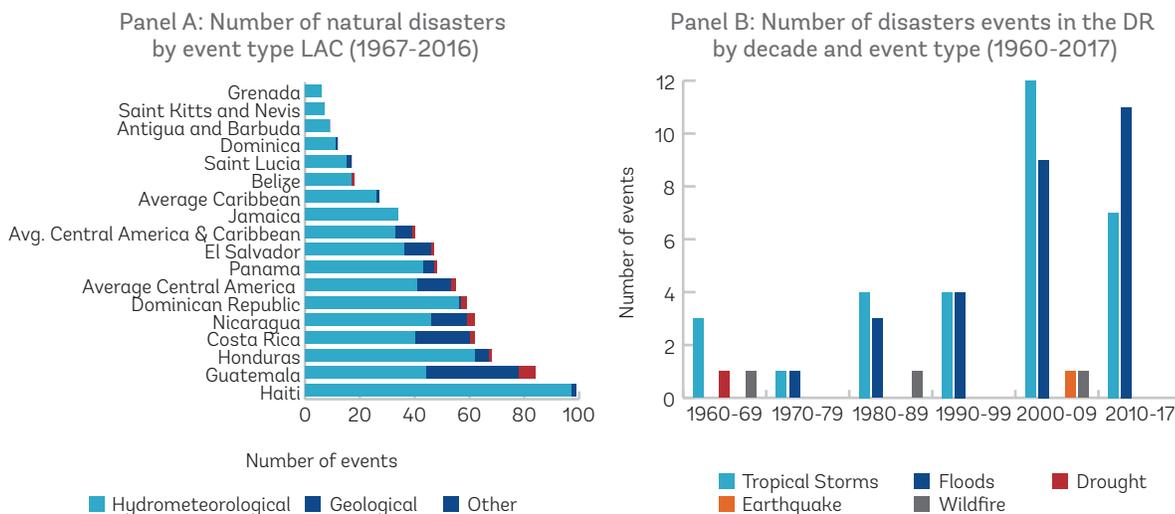
**Over the past 50 years, the country has experienced a higher number of disasters from adverse natural events per year, relative to its land surface, than the average for both Central American countries and Caribbean countries.** Out of all the disasters reported between 1967-2016, 93 percent are of hydro-meteorological origin (Figure 44, panel A). The frequency of disaster events has increased significantly in the last 5 decades, shifting from one event every two years on average in the 1960s, to almost one event per year in the 1990s, and to 2.6 events per year in the 2000s (Figure 44, panel B). Even though earthquakes are the least fre-

quently reported events during this period, the country’s territory is marked by a long history of destructive earthquakes.<sup>137</sup>

**Between 1961 and 2014, disasters in the country – mainly of hydro-meteorological origin– have caused, on average, annual economic losses around 0.69 percent of 2015 GDP.** At the sectoral level, approximately half of the direct and indirect economic losses (Figure 45, panel A) are concentrated in the agriculture (32 percent of the losses) and transport sectors (18 percent). In addition, population growth and rapid urbanization over the last 60 years have significantly increased the country’s total exposure and the value of assets at risk of adverse natural events. Recent estimates suggest that the negative impacts of storms last up to 15 months after the strike, with an average reduction in GDP of about US\$1.1 billion (4.5 percent of gross domestic product in 2000 and 1.5 percent in 2016).<sup>138</sup>

**Catastrophic events have the potential to destroy a greater share of assets in DR than the average of Central American and Caribbean countries.** The country could experience an annual average loss

**Figure 44: Frequency of natural disasters in LAC and number of disasters in the DR**

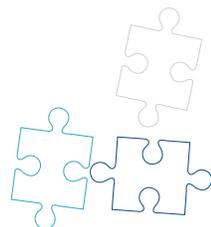


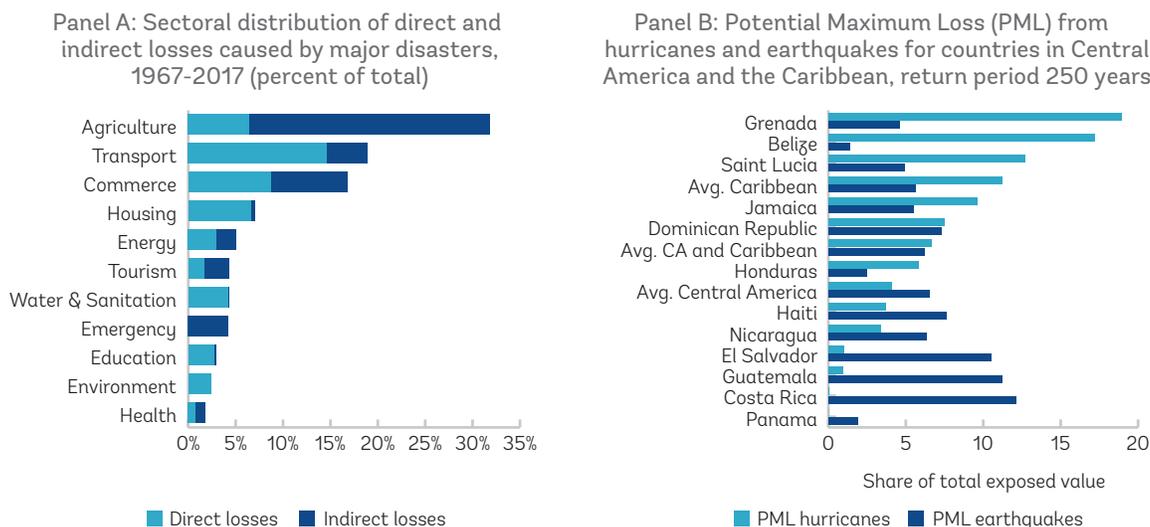
Source: EM-DAT: The Emergency Events Database.

136 <http://weltrisikobericht.de/english/>

137 Notably, the city of Santiago has been devastated twice by earthquakes in 1562 and 1783. In 1946 a 8.0-magnitude earthquake struck the Samaná peninsula resulting in a considerable loss of lives and severe damages reported across the country.

138 Ishizawa, Miranda, and Strobl (2017).



**Figure 45: Sectoral distribution of losses and potential maximum losses**

Source: Based on assessment conducted with the support of CEPAL and MEPyD's assessment.

Source: World Bank Country Disaster Risk Profiles. Note: averages for Central America and the Caribbean exclude the DR.

from earthquake and hurricanes equivalent to about 4.3 percent of the budget for 2017.<sup>139</sup> The country has a unique combination of similar and relatively high potential losses from catastrophic hurricanes and earthquakes among countries in Central American and the Caribbean (Figure 45, panel B).<sup>140</sup> For a 250-year return period the DR's Probable Maximum Loss (PML), expressed as a percentage of total building exposure, is higher than the Central America (CA) average for both hurricanes (DR 7.5 percent; CA 4.0 percent) and earthquakes (DR 7.3 percent; CA 6.6 percent).<sup>141</sup> These results highlight the multi-hazard feature of the country and the importance of addressing both hurricane and seismic risks.

**Disasters can hinder poverty reduction efforts and threaten advances in shared prosperity both through the triggered economic losses and through direct impacts.** Shocks created by adverse natural events have regressive distributional effects as vulnerability to climate shocks is higher for the poorest households.<sup>142</sup> As seen

in chapter 3, the vulnerable population is the largest income group in the DR (41 percent). Individuals in this group remain at risk of falling back into poverty if affected by shocks, including disasters, against which they cannot protect or insure themselves. High speed winds during 2000-2012 are estimated to be associated with an increase of the moderate poverty rate of 1-2 percentage points, and an increase between 0.5 and 1 pp of the extreme poverty rate. At the global scale, it is estimated that the impacts of disasters are more than twice as significant for poor people than for anyone else.<sup>143</sup> At the national scale, the climate shocks vulnerability index (IVACC, from its Spanish acronym), which measures the likelihood that a household is vulnerable to the occurrence of hurricanes, storms, and flooding given certain socioeconomic and geographical characteristics, is twice as high for the poorest households and decreases as the standard of living increases. When tropical cyclone Noel hit the country in 2007, 90 percent of the directly affected persons were below the national poverty line.<sup>144</sup>

139 World Bank Country Disaster Risk Profile.

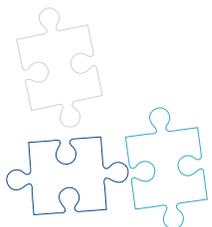
140 This set of countries includes the six countries in Central America and Belize, Grenada, Saint Lucia and Jamaica in the Caribbean, in which the World Bank has prepared Country Disaster Risk Profiles.

141 The 250-year return period PML indicates a level of losses that has a probability equal or superior to one to be exceeded in 250 years. In other words it is a level of loss that has an annual probability of 0.4 percent of being exceeded.

142 Báez, Fuchs, and Rodríguez-Castelán (2017).

143 Hallegatte et al. (2017).

144 CEPAL (2008).



## Environmental sustainability

The country is highly exposed and extremely vulnerable to disasters and climate-related shocks. Vulnerability is being exacerbated by climate change, rapid and unplanned urbanization, and natural resource degradation.

**Unplanned, rapid urbanization has created imbalances along different dimensions.** The country has urbanized faster than the LAC region and the group of upper middle income (UMI) countries in the last 25 years. With an estimated 55 percent of the population living in urban areas back in 1991 (15 pp lower than LAC and 12 pp higher than UMI), the country is now on par with the region at 80 percent (and 15 pp higher than UMI – see Figure 46). While urbanization processes generate positive agglomeration externalities for economic growth, unplanned urban expansion also generates negative externalities such as high pressure on natural resources, pollution and congestion, which affect human health and quality of life.

**The rapid urbanization has also posed a challenge in the Greater Santo Domingo (GSD) and secondary cities in terms of the location of new urban dwellers and their access to the labor markets by transit and other modes of transport, with a serious road safety aspect.** Total building exposure is estimated at US\$153 billion, which, as a percentage of GDP is 40 percent higher than the Central American average. Forty three percent of the total building exposure is concentrated in Santo Domingo, with 42 percent in secondary cities outside the capital.<sup>145</sup> Because of the rapid economic growth, personal motor vehicle ownership in the country has tripled in the last 15 years, most of them exacerbating the already congested streets of the GSD.<sup>146</sup> For the 3.5 million-habitant GSD area, several unplanned peri-urban neighborhoods are presenting se-

vere inequalities in access to economic opportunities by transport services.<sup>147</sup> The condition is critical for transit services that carry 70 percent of all trips in the city and represents most of the times the only mobility option for the bottom 40 percent of the population. Despite the introduction of a metro line (heavy rail transit) and the recent construction of a second line, the system only moves 7 percent of the total trips in the city. Data from 2007 shows that average commuting times within the National District (core urban area in the GSD) was over one hour, more than any other capital in the region, leaving expected figures for the areas outside the core urban area at worrying levels. Transit service provision is dominated by *carros concho* (unregulated car sedans that operate as a paratransit service), with six times as many vehicles as the total bus and minibus fleet in the GSD. On top of the limited access to economic opportunities by the low-income population due to congestion and poor transit service provision, road safety is a serious issue in the country. The DR is the western hemisphere's most dangerous place to drive, and 15th worst in the world, with 29 out of every 100,000 people in DR dying in road accidents every year, compared to 15.9 per 100,000 in LAC and 16.7 in upper middle-income countries.<sup>148</sup>

**Some of the imbalances that have been exacerbated by rapid urbanization relate to the access to water and sanitation.** The country lost half of its per capita water resources in the last 25 years due to population and economic growth, and poor management. Even though 80 percent of the population live in urban areas, agricultural activities use -with low levels of efficiency- 83 percent of the available volume, mostly from superficial sources.<sup>149</sup> The country has a high water scarcity index, especially in the regions of the Yaque del Sur and Yaque del Norte river basins, where water demand reaches 86 percent and 66 percent of the available supply, respectively.<sup>150</sup>

145 World Bank Country Disaster Risk Profiles. A building exposure model is a building inventory (stock) database which captures important attributes such as geographical location, urban/rural classification, type of occupancy (e.g., residential and five types of non-residential use), structural typology (e.g., wood, concrete, masonry, etc.) and economic (replacement) value. For the asset value determination in the residential sector, unit costs of construction that depend on the type of building (structural vulnerability class) were derived. Globally, international estate agency reports also provide unit cost values for the higher-end of housing and non-residential sectors.

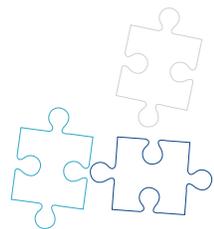
146 The national motor vehicle fleet grew from 1.2 million in 2000 to 4.1 million in 2017 (Dirección Nacional de Impuestos Internos, DGII).

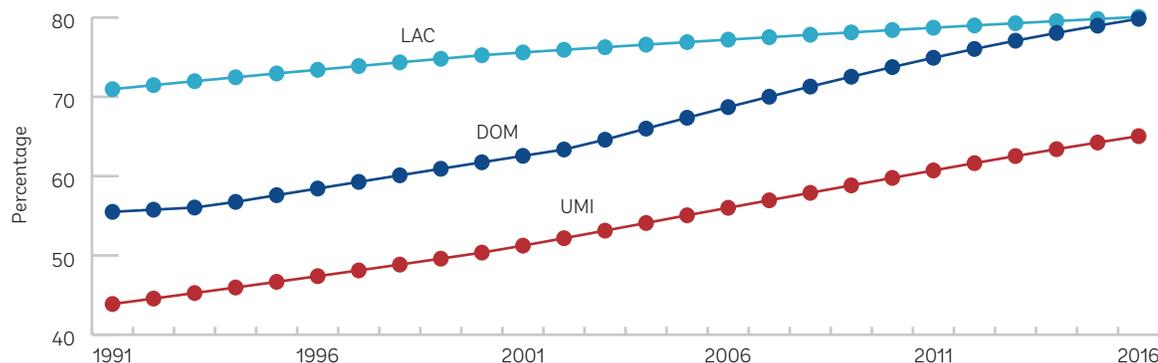
147 Observatory of social policies and development, bulletin 7 (2017).

148 According to the WHO Global Status Report on Road Safety (2015).

149 Data for 2010 from FAO, 2016. AQUASTAT website <http://www.fao.org/nr/water/aquastat/main/index.stm> [accessed on 2018/01/04].

150 Ministerio de Medio Ambiente y Recursos Naturales (2012).



**Figure 46: Urbanization rates in the DR, LAC and upper-middle income countries (UMI), 1991-2016**

Source: World Development Indicators.

**Access rates to water supply and sanitation remain relatively high, but wastewater collection and treatment continue to lag behind water supply.** Only 53 percent of the water treatment plants and 26 percent of the fully-functioning wastewater treatment plants were estimated to be at an adequate operating level, creating conditions for the proliferation of water- and sanitation-borne diseases. Untreated municipal wastewater and fecal sludge from on-site sanitation is one of the main contributors to the water resource degradation resulting from urbanization.<sup>151</sup> Approximately 38 percent of the urban population has access to sewer networks, but current trends suggest that it will drop to 25 percent, while usage of on-site septic tanks is expected to rise from 25 to 51 percent by 2030.<sup>152</sup> A small percentage (10-20 percent) of the wastewater that is collected through networks is properly treated. Treatment of fecal sludge is essentially non-existent. Estimates suggest that over 200,000 tons/year of sludge originating from treatment plants, septic tanks, and latrines goes untreated contaminating surface water and groundwater. Santo Domingo, for instance, generates 13,680 liters per second (lps) of waste water, but current sewerage infrastructures are collecting only 14 percent (1,900 lps). Excess wastewater contaminates rivers and watersheds, posing environmental risks and threats to the health of communities, and has the potential to affect touristic

activity, one of the main sources of growth and jobs in the country.<sup>153</sup>

**Increased pressure on water resources from urbanization and land use change combined with reduced precipitation under a climate change scenario, threatens the main engines of growth in the country.** Hydrogeological and climate change models predict a reduction in spatial distribution of rainfall by approximately 60 percent in the next 100 years and total runoff by 95 percent for the year 2100, affecting water availability, and aquifer recharges.<sup>154</sup> In addition, demographic growth, accelerated environmental degradation, deforestation, and lack of mitigation measures could intensify the pressure on water resources. Environmental degradation, mainly from soil erosion, has an important economic impact for the hydropower industry, as it reduces dam capacity, increases the costs related to the maintenance of irrigation and water supply infrastructure, and worsens coastal water quality.

**Inadequate resource management has led to environmental degradation and increased vulnerability to climate change.** Estimates indicate that around 64 percent of the Dominican territory is critically sensitive to desertification mainly caused by intense and inadequate land use practices,<sup>155</sup> and nearly 40 percent of

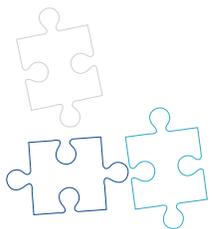
151 World Bank (2004).

152 Joint Monitor Programme UNICEF/WHO. 2017. Estimates on the use of water, sanitation, and hygiene in the Dominican Republic

153 The Environmental Performance Index (2014) ranks Dominican Republic at 113 and 99 out of 178 countries in terms of access to drinking water and sanitation, and wastewater treatment, respectively.

154 Secretaría de Estado de Medioambiente y Recursos Naturales (2004). "Primera Comunicación Nacional" (PDF). UNDP. p. 44.

155 Izzo et al. (2013).



soils are considered degraded. In the long run, soil degradation can drive desertification processes, especially under climate change scenarios. Information available on levels and sources of pollution of coastal zones is often limited, but several studies indicate that watershed degradation in coastal areas (e.g., Puerto Plata or Boca Chica) originates from inland activities and has led to a decrease in the number of tourists in the country.<sup>156</sup> For instance, livestock production is a force of land use change in the country and occupies the largest area of hillside land in the upper and middle basins of the country. It is estimated that the pasture area is currently five times larger than the optimal area for such use.<sup>157</sup> Estimates of climate change impacts indicate that total precipitation in the country could decrease by 11 percent between 2010 and 2030,<sup>158</sup> and temperature is projected to increase between 0.5 and 1 degree Celsius by 2030, which could have severe impacts on the agricultural sector if climate smart agricultural practices are not adopted. Finally, drier seasons imply more land prone to fires. During the 2003-2013 period, more than 2,000 forest fires occurred in the country, affecting over 90,000 ha.<sup>159</sup>

**The Dominican Republic is showing relatively higher water footprints, that are polluting water resources, from specific economic and consumption activities, compared to Latin American average.** Grey water footprints<sup>160</sup> from domestic water supply in Dominican Republic (9 percent) triples the average of Latin America (3 percent). This indicates the need to accelerate wastewater treatment and increase the sustained use of resources because it affects other segments of the economy and livelihoods of communities, particularly those with higher vulnerability to natural hazards.

**Marine assets, which form the country's blue economy and are a crucial ingredient for the growth and**

**upgrading of the tourism sector, are increasingly under pressure.** The continued loss of coral reefs, mangroves, and wetlands that protect its 1,600 km of beaches from storm surges are a major threat to coastal communities and the tourism industry. Virtually all of the DR's critical marine resources are at risk and 70-90 percent of coral reefs are already dead.<sup>161</sup> Drivers of change include overfishing, coastal development, pollution, and climate change. The decline of the marine assets may prevent ocean-economy sectors and industries from reaching their potential, hampering economic growth. The marine resources and ecosystems, if well managed, have the potential of helping with the development of higher-value tourism, growing the DR's blue economy,<sup>162</sup> ensuring that economic activity is in balance with the long-term capacity of these ecosystems, and increasing people's resilience to climate change. Ecosystem-based adaptation and increasing resilience to coastal and marine systems are part of the elements of the strategic planning approach identified in the NDC.

**Although the country has been successful at controlling deforestation, pressures on forests from agriculture remain.** The DR has increased its forest cover from 22 percent of the territory in 1973 to 39 percent in 2012.<sup>163</sup> In addition, World Bank wealth estimates<sup>164</sup> suggest that, between 1995 and 2014, DR's remarkable GDP growth has been paired with a positive change in forest land values (Figure 47). Despite progress in reversing deforestation trends and increases of the forest cover, the agricultural sector still drives 60 percent of deforestation, especially through the expansion of slash and burn agriculture and poor extensive livestock production practices in protected areas on the border with Haiti. Other direct causes of deforestation and forest degradation include illegal logging, natural disasters, forest fires, and infrastructure projects for mining, energy and tourism. In fact, recent unpublished estimates

156 See Page, Essex and Causevic (2014) and World Bank (2004).

157 Ministerio de Medio Ambiente y Recursos Naturales (2014).

158 Estrategia Nacional de Cambio Climático in Dominican Republic Policy Notes.

159 Forest Carbon Partnership Facility (FCPF) Carbon Fund (2015).

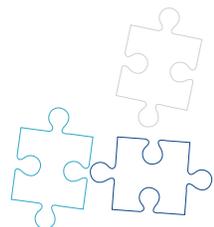
160 Grey water footprint is the amount of fresh water required to assimilate pollutants to meet specific water quality standards. The grey water footprint considers point-source pollution discharged to a freshwater resource directly through a pipe or indirectly through runoff or leaching from the soil, impervious surfaces, or other diffuse sources.

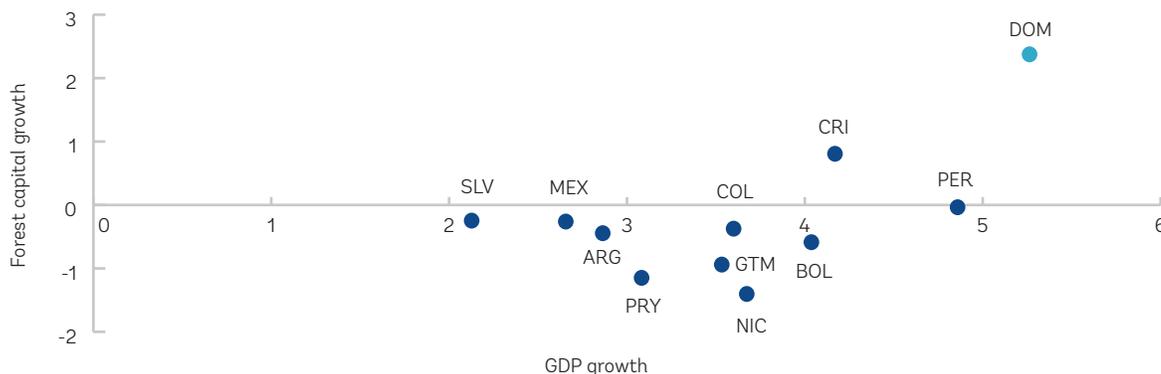
161 USAID (2013).

162 Patil et al. (2016).

163 Ministerio de Medio Ambiente y Recursos Naturales (2014) y FAO (2015).

164 See Lange, Wodon and Carey (2018).



**FIGURE 47: Growth of forest capital and GDP, 1995-2014 (average annual growth rate, percent)**

Source: World Bank (2017). *The Changing Wealth of Nations*.

of forest cover and land use change by the Ministry of Environment and Natural Resources (MARN) suggest that deforestation may have increased in recent years.

**Mangroves have paid the toll of tourism expansion, exacerbating coastal vulnerability.** The expanding area devoted to tourism infrastructure results in significant forest area losses, especially mangroves. The impact of tourism on biodiversity is considered high in the coastal forests, mangroves, and seagrass beds, which are seriously threatened ecosystems. A study of the dynamics of land use and coverage change, estimated that in the 2000-2010 period about 436 hectares of mangrove forest were lost due to tourism activities.<sup>165</sup> Mangroves are not only home to a large variety of fish, crab, shrimp and mollusk species, but also provide coastal protection through the stabilization of coastline, and prevents damages from waves and storms.

## Social accountability

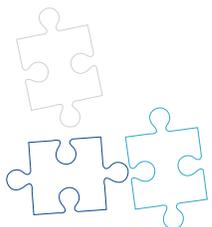
**Compared to LAC regional averages, the country fares relatively well in several dimensions of governance, with improvements since 2004.** Perceptions of governance issues in the DR are similar to the re-

gion's on political stability, policy design and implementation (regulatory quality in Figure 48, panel A), freedom of expression and participation (voice and accountability), and the quality of contract enforcement and property rights (rule of law). In addition to weaknesses in the control of corruption, perceptions of government effectiveness, which include the quality of public services, the civil service, and the credibility of the government's commitment to its policies, are lower than in LAC. However, this comparison ignores improved perceptions of governance issues in the country since 2004. The country is perceived to be more politically stable, its government more effective, with higher regulatory quality and enhanced rule of law (Figure 48, panel B).

**The National Development Strategy (END) highlights the importance to fight corruption, clientelism, and patrimonialism to achieve an effective national development.**<sup>166</sup> This is an appropriate area of focus in the END as using the World Governance Indicators, the DR is the third lowest LAC country in terms of control of corruption, and the 2017-2018 World Economic Forum ranks it 135th among 137 countries on ethics and corruption. Promising initiatives include the Participatory Anti-Corruption Initiative (IPAC, see Box 5).

165 Forest Carbon Partnership Facility (FCPF) Carbon Fund (2015).

166 "Se parte del entendimiento de que nuestro actual modelo de desarrollo presenta falencias en materia de la calidad de la acción estatal, que se manifiestan en fuertes deficiencias en los servicios públicos que deberían garantizar los derechos constitucionales de la población [...], así como patrones de actuación que entorpecen el desarrollo nacional, tales como corrupción, clientelismo y patrimonialismo." Estrategia Nacional de Desarrollo 2030 ("We begin with the understanding that our current development model has shortcomings in the quality of state action, which are manifested in strong deficiencies in public services that should guarantee the constitutional rights of the population [...], as well as patterns of action that hinder national development, such as corruption, clientelism and patrimonialism." National Development Strategy 2030).

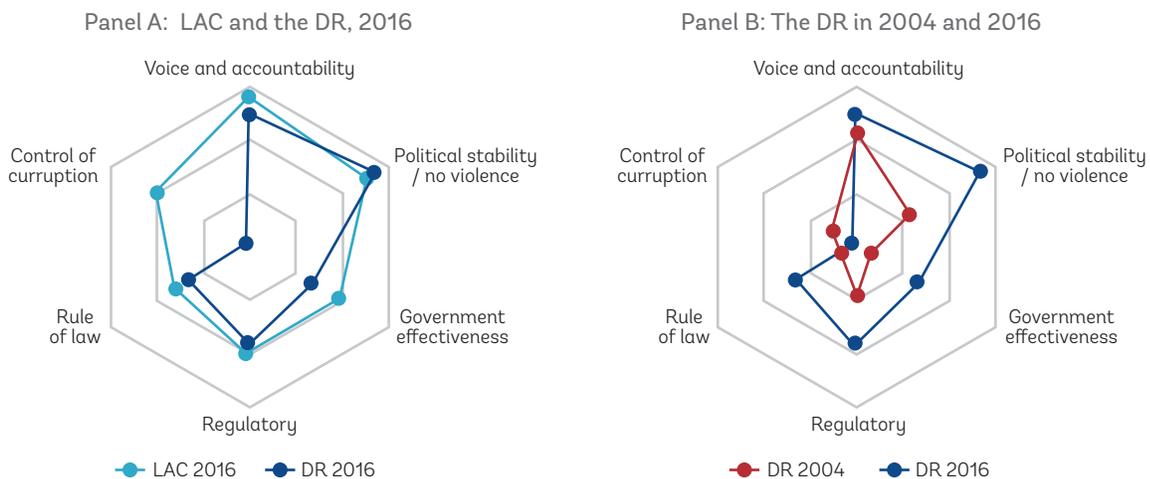


**Effective, efficient and transparent procurement of goods and services is critical to maximize the value for money and minimize risks of corruption.** Procurement is a cross-cutting government function concerning almost all government institutions. Efficient and transparent procurement practices ensure the effective use of resources with quality public services.<sup>167</sup> According to the World Bank’s Benchmarking Public Procurement Report for 2017, government providers wait about six months or more to receive payment,<sup>168</sup> which reduces the spectrum of companies that are able to do business with the government, and raises the price of contracts to offset payment delays. According to the latest PEFA report, there was a significant discrepancy in 2015 between the information reported in the government’s procurement system and the data on budget execution in the Integrated Financial Management System (SIGEF),<sup>169</sup> pointing to serious shortcomings with the registry of amounts contracted.

**Further improvements in terms of transparency are needed for the impact of citizen engagement and social accountability initiatives to fully materialize.** The country ranked lowest in the LAC region (and

101 out of 111 countries) in the 2017 Global Right to Information (RTI) ranking, which analyses the quality of Access to Public Information (API) laws. Fourteen years after the enactment of the API Law (Law 200 of 2004), the country still faces a few challenges in terms of its implementation. For example, political parties do not comply with the mandate to provide information on the origin and destination of their funds, and many institutions are yet to disclose information on public officials or procurement processes. In terms of open data, the country scored 27 percent in the Open Knowledge International’s 2016 Open Data Index, which measures the openness of government data, and ranked 57 out of 94 countries, with only 6 percent of government databases which are fully open. In addition to the weak legal and institutional framework for API, an impact evaluation of the API pilot project on empowerment of citizens in poor municipalities found no impact on the awareness and use of information under the specific API rules. Moreover, despite progress in the disclosure of budget information in recent years, the International Budget Partnership reports that the country still provides few

**Figure 48: Governance at a glance: The DR in comparative perspective and over time**

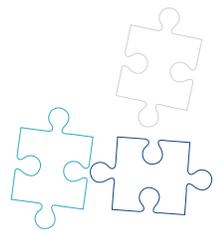


Source: Authors’ calculations using the World Governance Indicators.

167 In 2015, Central Government institutions in the DR awarded contracts for RD\$ 54,120 million, representing around 9 percent of national expenditures for that year. See PEFA 2016 (Giussani et al. 2016).

168 See more at World Bank (2017e).

169 SIGEF data on budget execution corresponding to purchase of goods and services and fixed investment expenses and purchase of capital goods totaled RD\$ 108,577 million in 2015, well above the RD\$ 54,120 million reported in HYPERLINK “http://www.comprasdominicana.gob.do” www.comprasdominicana.gob.do.



opportunities for the public to understand and question the budget process (with a score of 17 out of 100).

## Social cohesion

**An issue affecting social cohesion in the country was the discrimination against Haitian migrants and their descendants.** An estimated 130,000 individuals of Haitian ancestry born in the Dominican Republic were affected by a sentence by the Constitutional Court in 2013. The sentence 168-13 ordered the review of all births registered in the country from 1929 to 2007 to ensure that no children of foreigners in transit had mistakenly been registered as Dominican nationals. The sentence applied the current definition of transit retroactively, with the effect of revoking the citizenship rights of numerous persons born in the DR who would have had a right to citizenship under earlier regulatory definitions of transit. Law 169-14 was passed to remedy this situation by establishing a special regime for Dominican-born descendants of non-resident foreigners who were registered between 1929 and 2007, reinstating their Dominican citizenship (about 55,000, of which only 13,000 repossessed their documents), and for those descendants who are not registered, who would be registered as foreigners (fewer than 9,000 applications as of late-2017). Since mid-2014 the Dominican government has been implementing three parallel processes to: i) regularize foreigners with irregular migration status; ii) partially restore identity documents for descendants born in the DR; and iii) register persons born in the country of foreign ancestry. As part of the regularization process of foreigners with irregular migration status, around 250,000 migrants were temporarily regularized as non-residents, and are exempt from deportation, with very few having access to the social security system. Fewer than 5,000 migrants have obtained residence as part of this process. The lack of

documentation by Haitian migrants increases their vulnerability to exploitation and discrimination, and limits their access to better paid jobs.<sup>170</sup>

**Three Dominicans out of four identify crime and violence as the most important challenge the country faces, with unemployment being the second at 42 percent (Figure 50).**<sup>171</sup> The issue is very much present in the daily lives of citizens, with seven out of 10 people reporting it being a conversation topic in the last two weeks; the share is even higher in urban areas. Victimization rates have increased in the last 10 years, with 30 percent of people 12 and older reporting being a victim in 2015, up from 21 percent in 2005. Perceptions of insecurity have also increased from 40 percent in 2008 to 59 percent in 2016, the highest level since 2006, and the second highest in LAC -following Venezuela- among 29 countries.<sup>172</sup>

**Firms are also affected by crime and violence, with a higher share of firms that experienced losses due to theft or vandalism in the DR than the average for the Caribbean.** Crime and violence are costly, with a potentially larger economic impact in countries that rely on tourism, like the DR. Estimates from the IDB for 17 countries in LAC find an average cost of crime and violence of 0.5 percent of GDP. In the presence of crime and violence individuals change their behavior. Close to 60 percent of firms in the DR spent money on security (once again, higher than the average for the Caribbean),<sup>173</sup> and 85 percent of households did something to avoid burglary.<sup>174</sup> Other costs include the reduction of investment by firms, incurring productivity losses, and the allocation of resources by governments to tackle the associated problems.<sup>175</sup>

170 Wooding and Riveros (2017).

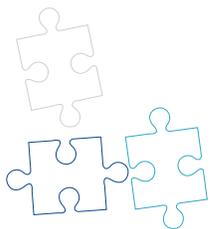
171 ONE (2017).

172 Espinal et al. (2017). The text of the question reads: "Talking about the neighborhood where you live and thinking about the possibility to be a victim of assault or theft, do you feel (a) very safe, (b) somewhat safe, (c) somewhat unsafe, or (d) very unsafe? ["Hablando del lugar o el barrio donde usted vive y pensando en la posibilidad de ser víctima de un asalto o robo, ¿usted se siente muy seguro(a), algo seguro(a), algo inseguro(a) o muy inseguro(a)?"] The variable was transformed to a scale from 0-100, where 0 means 'very safe' and 100 means 'very unsafe'.

173 Jaitman (2017).

174 ONE, op. cit. Actions include reinforcing security of doors and windows, installing steel fences, and having guard dogs.

175 Jaitman, op. cit.



## BOX 5. The Participatory Anti-Corruption Initiative (IPAC)

The IPAC was conceived as a response to a government request to the Donor Community to address the widespread perception of corruption in the Dominican Republic. It mainly focused on building a multi-stakeholder coalition comprised by civil society, government, and private sector to promote important public sector governance reforms directed to reduce the scope of corruption. Following consultations and some preparatory work, the program started in mid-2010. IPAC was supported by the donor community, particularly by USAID, IDB, UNICEF, AECID, the European Union (EU), and the World Bank—which also had a coordinating role among donors.

Following the preparatory work, the government set up ten working groups to identify potential reforms in 5 priority sectors: water, energy, health, education, and infrastructure, and 5 cross-cutting areas: civil service, financial management, procurement and acquisition, access to information, and external control. In these working groups, representatives from the government outlined concrete steps that were needed to reform each area and to monitor the implementation of the reforms. The steps were intended to be implemented in the short term (most of them within one year, though some others indicated the need for a longer timeline for their implementation) with government funding and some support from the donor community. The recommendations were approved by the Cabinet during a day-long meeting. A Government focal point was appointed to ensure the implementation and monitoring of each recommendation.

### Main achievements

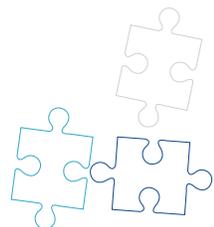
IPAC made possible to have, for the first time, different public institutions collaborating on developing a working plan to reduce the risk of corruption in Dominican Republic.

The public health working group was instrumental in accelerating a reform of the unified procurement system for drugs and medical equipment that had been stalling for years. As a result, the new procurement system led to a reduction of 65 percent of the cost of medicines and medical supplies, with a net saving for the government of US\$25 million in 2013.

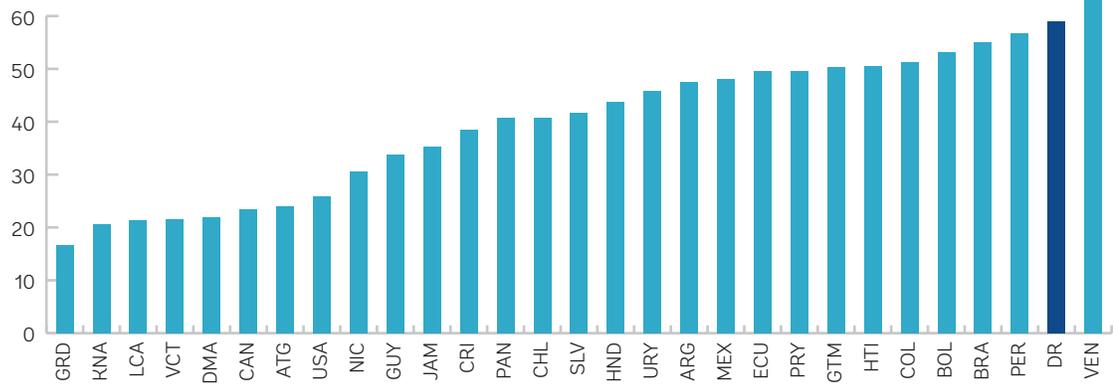
From the education working group, a new and very powerful coalition (Dominican Initiative for Quality in Education, IDEC) was formed to tackle the root causes of poor service delivery in the sector. The initiative started working in 2013, and adopted a transparent monitoring process. To this date, IDEC has published 8 monitoring reports.

Achievements in terms of transparency included the disclosure of data from the Electricity Corporation on service provision by individual circuits (this enabled users with an internet connection to check the schedules for service disruption due to network maintenance) and the online publication of the Central Government budget in a friendly format. In terms of public expenditure efficiency, the procurement and acquisition working group set the bases for the design of the transactional portal for public procurement which is now fully operational in 130 institutions.

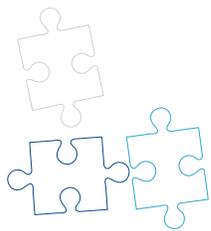
Source: Kaufmann, Gallina, and Senderowitsch (2015).

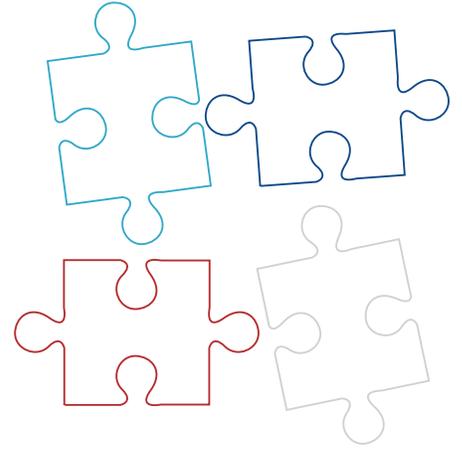


**Figure 50: Perception of insecurity in the neighborhoods**



Source: Espinal et al. 2017, using LAPOP 2016.





## CHAPTER 5

# Prioritization and knowledge gaps

### Priority areas

**T**he Dominican Republic could sustain a strong economic performance in the medium-term, but there are many pending key challenges to become a high-income and more equitable society by 2030. Although growth rates for the DR are projected to be around 5 percent for 2018-2020, the country faces structural challenges to fostering a more dynamic private sector that can create better jobs and ensure social inclusion.

**This SCD identifies five key and interrelated challenges which the DR needs to overcome to achieve a more inclusive and sustainable growth.** First, despite high rates of economic growth, firms in the DR have been unable to achieve substantial quality improvements, and linkages between export-oriented firms and local firms are weak. These productive challenges have hampered integration in international markets and prevented more inclusive growth across firms. Second, the country has not generated sufficient tax revenues to reach higher levels and quality of public services, and as a result it is jeopardizing its fiscal sustainability. Third, due to a lack of resources,

the country has been unable to afford much-needed investments in human capital. A fourth challenge stems from the degradation of the country's natural capital, mainly caused by a lack of territorial and urban planning in the face of rapid urbanization, a lack of accompanying infrastructure and a lack of planning in the management of natural resources. The aforementioned challenges are amplified by the country's exposure to natural disasters, the fifth challenge, which impacts economic growth, macroeconomic stability, and household welfare.

**The SCD identifies six priority areas to meet these challenges.** First, credibly improving fiscal balance by increasing revenue and improving the quality of fiscal expenditure. Second, enhancing the accumulation of human capital. Third, pursuing policies that create a level playing field for firms and a business environment that fosters investment in quality upgrading. Fourth, improving the management and conservation of natural resources. Fifth, improving the country's resilience to disasters and climate-related risks. Finally, increasing both transparency and accountability in the policy making process.

**These priorities were identified based on the following criteria.** i) A benchmarking exercise that compares the DR's performance with the performance of countries in LAC and the group of upper-middle income countries (UMI). The indicators used for the comparison cover a wide range of topics including growth, fiscal accounts, business environment, competitiveness, human development, natural resources, and governance. The DR's performance in each indicator is compared with the best performers in each comparison group (LAC and UMI - see Annex 2); ii) validation of the findings using existing literature and new analysis conducted for this SCD; iii) the capacity of a priority to contribute to progress in other areas; and iv) a robust consultation process with Bank staff and in-country stakeholders (see Annex 7).

**The benchmarking exercise highlighted a set of issues where the country's underperformance sets it apart from its peers.** This exercise provided a first long list of issues, that was refined using the diagnostics in the chapters to produce a shorter list of priorities. This short list was used during the consultation process with more than 200 participants in country from a wide range of stakeholders including government, civil society, academia, private sector, and development partners. At every meeting during the consultation process we asked participants to pick a few areas they considered the most critical to address the country's development challenges. The vast majority of priorities selected by participants are embedded in the six priorities identified in the SCD.

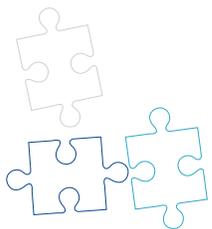
**The impact of implementing these priorities will increase to the extent that they are tackled in tandem and that they incorporate the linkages between the different challenges.** For example, direct efforts to raise fiscal revenues will probably have a limited effect if they are not accompanied by explicit efforts to improve the provision of public goods and to fight corruption. Similarly, the impact of initiatives to foster innovation or better processes of production will be muted to the extent that they do not address market power and other disincentives to innovation. Moreover, reforms will have to take into account the political economy constraints that they could face.

## Improving fiscal balance by developing a credible fiscal path that supports the provision of high-quality public services

**Growing government expenditure combined with a low revenue base, has resulted in fiscal deficits and a growing debt trajectory.** Government expenditure rose by 5 percentage points as a GDP share between 2000 and 2017, from close to 13 percent to 18 percent of GDP. Fiscal revenue, in contrast, has hovered around 13 and 15 percent of GDP throughout that period. The combination of both these patterns has led to a rapid increase of government debt and interest payments.

**A narrow fiscal space and increasing debt dynamics limit the country's ability to invest in priority programs, and erode the private sector's competitiveness.** These problems are compounded by the exposure to natural disasters, which impacts fiscal accounts by lowering tax collection and triggering emergency expenditures, and calls for fiscal buffers to respond whenever shocks materialize. Raising revenues and delineating a credible medium-term fiscal path are crucial elements to opening up fiscal space and ensuring long-term fiscal sustainability in the DR.

**Tax exemptions and informality have been important factors behind the DR's relatively low tax revenues.** There are currently 11 special tax regimes in the DR, which in addition to creating an unlevelled playing field, have considerable fiscal implications. Indeed, the foregone revenue from tax exemptions in the DR amounted to 6.6 percent of GDP in the 2014-2016 period (World Bank, 2017). Moreover, some exemptions, such as VAT exemptions, are found to be regressive (Cabrera et al., 2016). Similarly, labor informality costs the Dominican government an estimated 1 percent of the annual budget in foregone revenue. The limitations of the tax system in the DR in producing higher revenues and the importance of addressing these limitations are recognized in the DR's National Development Strategy 2030, which outlines a plan to consolidate all existing tax expenditure schemes into a single section of the tax code, and to establish a coherent and sustainable approach to tax expenditures



which will reduce their fiscal impact and minimize their distortive effect on economic incentives.

**In a context of tight fiscal space, the country needs to focus on mechanisms to improve the quality of public services and, in some cases, reduce its fiscal footprint.** The DR has increased its expenditure in key areas such as education and health. However, as discussed in chapter 3, the quality of public expenditure (measured by outcomes) in both these areas appears to be low. Similarly, the public systems of electricity distribution and water and sanitation provide an unreliable service of low quality, and have high operational costs.

**Developing a credible medium-term fiscal plan could anchor expectations, reduce interest payments, and enable the country to build buffers.** The DR needs to strengthen efforts to contain the mounting government debt and its interest payments. To achieve this objective, the country must design a credible and clearly defined fiscal plan that stabilizes debt levels and anchors market expectations. Indeed, a credible fiscal anchor could lead to lower borrowing costs, which in turn could reduce the potential economic impacts of fiscal adjustments (see IMF 2017 and Vegh et al. 2018). Beyond aiming at stabilizing debt levels, the fiscal anchor, should also seek to build fiscal buffers to respond to economic and natural shocks without affecting the trajectory of public debt.

## Enhancing the accumulation of human capital

**Improving skills acquisition and learning outcomes.** Despite modest progress in regional studies, the country ranks last in learning outcomes, by far, in both PISA and TERCE. Cognitive skills and the quality of learning outcomes have potentially large implications for economic growth as they bolster innovation, and ultimately result in higher productivity gains.<sup>176</sup> Early childhood education would improve the youth's transition from school to work and provide them with assets to be more competitive in the labor market. However, access to early childhood education is unequal in the

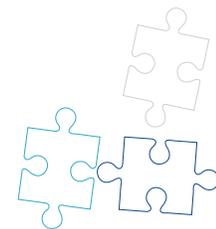
country, with only 42 percent of children (ages 4-5 years) in the poorest quintile attending pre-primary school, compared to 62 percent in the richest quintile. According to diagnostics of the sector, some of the entry points to improving skills acquisition and learning outcomes include early childhood development, improve teacher skills and recruitment, curricular reform, and improving school management. The country should also keep on strengthening the link between industry and school/university by improving technical and vocational education and expanding on-the-job training opportunities. This would reduce the skills mismatch the private sector reports as an important barrier to doing business.

**Improving health care financing and efficiency of expenditures to ensure quality of health care provision and equitable access to health services.** At 1.7 percent of GDP in 2016, the health public expenditures as a share of GDP ranks below the country's 10-year health plan target of 4 percent, and is one of the lowest in LAC. Sector budgeting and resource allocation have mainly been carried out following previous allocations and spending is heavily skewed toward curative care and hospitals compared to primary health care and public health services. The sector also exhibits inadequate accountability mechanisms which, along with the Ministry of Public Health's limited capacity to monitor, regulate and enforce, contribute to inefficiencies in spending. Improving the quality of health services can save lives, improve the quality of life, and increase workers' productivity. Not all necessary quality improvements require additional resources. For instance, the majority of maternal deaths, too many for the country's coverage of institutional birth and antenatal care, can be prevented with properly trained personnel adhering to norms, and following protocols and quality standards.<sup>177</sup>

**Enabling human capital accumulation and strengthening risk protection for the poor and vulnerable through social protection.** Sustaining the recent gains on poverty reduction and breaking the cycle of poverty and deprivation will require further efforts to build

176 Hanushek and Woessmann (2010).

177 Castro (2016).



the human capital of poor and vulnerable group, and to protect poor households from either economic risks or disasters. This can be achieved by further improving the coverage, targeting and adequacy of conditional cash transfers, connecting poor households to productive inclusion initiatives, and preparing social protection system and instruments for disaster preparedness and response. The country should continue its efforts to provide identification documents to all citizens to remove barriers of access to social programs, financial services, political participation, and secondary education.

**Addressing gender imbalances.** Women in the country not only face high rates of violence and adolescent fertility, but also lower labor force participation, much higher unemployment, and high employment segregation across sector and lower wages. Higher female labor force participation is associated with lower infant mortality rates and higher life expectancy. It also has positive effects on children’s development and well-being, increasing their future earnings capability, which may reduce the intergenerational transmission of poverty.<sup>178</sup> The analysis presented in this SCD suggests that gender equality gains that increase labor market opportunities for women and empower adolescent girls may be central to reducing poverty, addressing disadvantages faced by female-headed households. Improving women’s sexual and reproductive health and rights to achieve better maternal health outcomes and lower adolescent fertility rates would also produce better infant and child health outcomes which would in turn improve the returns to the early childhood development programs mentioned above.

### Promoting a level playing field and a business environment that fosters quality improvements and competitiveness

**Having a level and well-functioning business environment, where resources are efficiently allocated and firms have clear incentives to innovate and invest, is crucial to a country’s ability to generate inclusive growth.** Thus, to break with the cycle of low competitiveness and low levels of linkages between export-oriented firms and domestic firms the DR needs to promote a level playing field and a business environ-

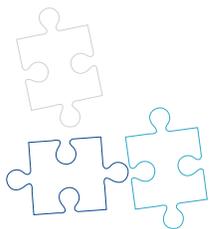
ment that fosters competitiveness, notably via enhanced competition, the promotion of quality standards, and improved access to finance.

**The country stands out in LAC and worldwide in terms of perceived market dominance.** The 2017-2018 Global Competitiveness Report ranks the country 7th in the world in terms of market dominance, making it the second highest in LAC after Haiti. Moreover, a comparison over time shows that in the past 10 years perceptions about market dominance in the country have worsened—the indicator decreased from 2.8 in the 2007-2008 report to 2.6 in the 2017-2018 one. Market dominance may be one of the reasons behind the DR’s limited quality upgrading (Lederman et al. 2014). The full implementation of the DR’s pro-competition law is a step towards generating a more competitive business environment. However, further steps need to be taken to remove distortions, such as selective tax exemptions, to generate market power.

**Reducing progressively the regulatory divide between SEZ and non-SEZ exporters is a complementary direction to foster competition and promote competitiveness by alleviating distortions and promoting economy-wide competitiveness.** The continued focus of the SEZ regime on specific industries, especially textiles, footwear and leather goods, could entrench economic distortions and perpetuate the country’s dual export structure. The country already phased out export performance-based subsidies in SEZs, which is a positive first step. Over the medium-to-long term, harmonizing the regulatory system will require a progressive reduction of the number of “strategic sectors” and their eventual elimination. Overall, exporters outside and inside SEZs should be receiving support from the Export Promotion Agency in the form of commercial actions, technical assistance, and the identification of export opportunities.

**Policies aimed at homogenizing regulations, coupled with explicit policies, could foster stronger linkages between fast-growing, export-oriented firms, and domestic firms.** The DR’s large presence of foreign firms and, more generally, export-oriented firms cre-

178 Mateo Díaz and Rodríguez-Chamussy (2016).



ates a great growth potential which can only be seized, however, to the extent that domestic firms can connect to, and learn from these firms. To fully reap the growth benefits of FDI attraction and global integration, the DR could promote policies that foster linkages between export-oriented firms and domestic firms. Achieving this goal would require creating an appropriate environment that leads domestic firms to meet the quality and reliability standards required by foreign firms. In addition, a comprehensive policy intervention aimed at reducing search costs and tackling constraints of both buyers and sellers produces more effective results than a piecemeal approach. Pursuing such a policy intervention would require a regulatory and institutional revision of the support framework to encourage consistency and coordination across public and private actors involved in promoting SEZs.

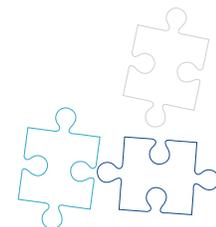
**Strengthening regulatory and institutional capacity can help improve the quality of exports and domestic inputs, which currently lag behind comparators.** As argued in World Bank (2015), there is a need to create standardization bodies, system certifications, conformity assessments, and accreditation mechanisms to create better incentives for quality improvements, and to get a better flow of information on standards to exporters. Deeper commitment to international SPS standard setting institutions, as well as to the WTO SPS committee, could ensure that the Dominican support infrastructure conforms to international norms and prompts regulation updates on SPS and pesticides. Existing institutions in charge of the surveillance of animal health and control of plant pests could also benefit from capacity building. In addition, vaccination campaigns and a wider dissemination of risk-mitigation methodologies could be organized. This could help, for example, reduce the DR's underperformance in terms of agricultural export rejections (see Chapter 2), and create opportunities for the tourism sector by reducing health risks associated with the consumption of domestic products.

**Efforts to reduce financing costs could complement efforts to boost competition in facilitating competitiveness-enhancing investments by firms.** Dominican firms face higher real interest rates than firms in most LAC countries or from comparator countries; and real

interest rates have been on the rise since 2010. The average real lending rate charged in the DR stood at around 14 percent in 2016, more than 6 percentage points higher than the regional average. Moreover, the real lending rate in the DR has been on the rise since 2010 while the LAC average has hovered around its average.

**Lowering financing costs could help deepen the DR's relatively shallow financial markets.** High real interest rates may be one factor behind the country's relatively low credit volumes. The total credit to private sector and total deposits penetration relative to GDP is one of the lowest of all LAC countries. Total credit to the private sector in the DR amounted to 28 percent of GDP, the third lowest value in LAC. Moreover, commercial loans to SMEs increased from around 12 percent of GDP in 2007 to 17 percent in 2015, but average loan amounts remain low and maturities are typically short. Capital markets are also shallow, with stock market capitalization to GDP being one of the lowest in the region. They are characterized by a crowding-out effect between public/private sectors, and financing for large businesses provided mainly by banks. Equity shares are not publicly traded, and there are only around 20 corporate debt issuers in the local stock exchange "Bolsa de Valores de la República Dominicana" (BVRD). The government is the main issuer of debt instruments, and public debt accounts for the bulk of trades. Returns on these instruments are higher than commercial rates, and will deter inter-bank-rate competition and corporate debt issuance. The fact that the government issues long-term debt through two different entities, the Central Bank and the Ministry of Finance, with a substantial rate spread for the same underlying risk and tenor, will continue to send mixed signals to the market and undermine price discovery.

**Improving the quality of public services, especially electricity, can help lower the costs of firms and boost their competitiveness.** As an island state highly dependent on trade, good infrastructure is critical for successfully creating functional domestic supply chains, to increase productivity and competitiveness, and to connect domestic SMEs into exports and global value chains. Infrastructure has improved in the DR but challenges remain. These challenges are most visibly seen in



an electricity sector characterized by constant interruptions and high tariffs. The economic impacts of the electricity sector's problems in the DR are considerable. On average, Dominican firms lose 5 percent of their sales due to power outages, the second largest value in LAC. To minimize the costs of outages, businesses must make large investments in back-up equipment. Moreover, the economic costs associated with problems in the electricity sector are disproportionately larger for small firms.

### Improving the management of natural resources

**The improving efficiency of water and sanitation providers must be improved to enhance service quality, and reduce the degradation of water resources.** Creating institutional and policy incentives for providers to improve efficiency such as increasing metering, billing and collection, and reducing non-revenue water would not only improve service quality, but also increase commercial viability (reducing dependence on central government subsidies) and reduce the degradation of water resources. Both increasing access to private sector financing and reducing subsidies will be required to finance critical investments to, on one hand, close regional disparities in access to water supply and sanitation infrastructure (contributing to human capital), and on the other hand, reduce water resource degradation stemming from urbanization through increased investments in sanitation and wastewater reuse. Slowing down watershed degradation will contribute to increase the country's resilience to climate change, reduce the spread of gastrointestinal and respiratory diseases, and prevent negative effects on touristic activity.

**Strengthening integrated water resources management (IWM) to ensure the stewardship of freshwater resources to meet growing demands.**<sup>179</sup> The DR must keep on building on recent efforts in basin level planning for municipal, industrial, and agricultural water consumption. This implies continued focus on better coordination between the water and agricultural sectors to create conditions for water reuse for industrial and agricultural activities with the aim to also reduce fresh-

water exploitation particularly in more arid parts of the country. Freshwater resources' stewardship and sustainability through better planning and allocation is critical to meet the growing competing demands from tourism, municipalities, industry, and the agriculture sector.

### Improving resilience to disasters and climate-related risks

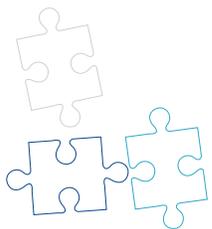
**Improving the country's resilience to disaster and climate-related risks would have positive effects on economic growth, fiscal sustainability, and household welfare.** Accelerating the design and implementation of a strategy for managing disaster and climate-related risks which is well integrated with the overall management of fiscal risks, would not only contribute to fiscal and macroeconomic sustainability, but improve the government's fiscal capacity to quickly respond and recover quickly in the aftermath of a large event. Reducing the physical vulnerability of public infrastructure and improving technical standards to ensure safety the requirements of housing and private construction will ensure the business continuity of essential public services as well as the sustainability of public spending and investments. Developing targeted social programs for poor and vulnerable households to increase resilience to disaster and climate-related risks will contribute to sustain the gains in poverty reduction. Territorial and urban planning will play a key role in increasing resilience by ensuring the safe location of population and by managing population relocation issues when required, by building disaster and climate-risk informed territorial and land use instruments, and through a comprehensive management of natural resources. This is aligned with the urgent need identified in the NDCs to build adaptive capacity among vulnerable groups, especially women and youth.<sup>180</sup>

### Increasing transparency and accountability in the policy making process

**The government should increase efforts to improve transparency and accountability, and gradually en-**

179 This is one of the elements of the strategic planning approach to climate change adaptation as articulated in NDC.

180 The NDCs also acknowledge the significance of women's participation in the transformation of society towards a low-carbon and resilient development.



**TABLE 4. Priorities and their impact on the Dominican Republic's development challenges**

Priority Area	Growth challenges	Inclusion and human development challenges	Sustainability challenges
Improving fiscal balance	Indirect effect	Indirect effect	Direct effect
Enhancing the accumulation of human capital	Indirect effect	Direct effect	Indirect effect
Promoting a level playing field and a better business environment	Direct effect	Indirect effect	Indirect effect
Improving the management of natural resources	Indirect effect	Indirect effect	Direct effect
Improving resilience to disasters and climate-related risks	Indirect effect	Indirect effect	Direct effect
Increasing transparency and accountability in the policy making process	Indirect effect	Indirect effect	Indirect effect

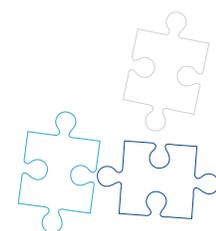
hance the effectiveness of coalitions for social dialogue such as the Pacto Eléctrico and the forthcoming Pacto Fiscal. They will also gradually help level the playing field for the private sector. This will require strengthening both supply of and demand for information. On the supply side, the implementation of the access to public information framework needs to be strengthened, as well as capacities for opening government data. On the demand side, it will be important to support efforts by civil society, media and academia to effectively use available information to monitor the government's

performance and hold it accountable, and for the private sector to identify business opportunities.

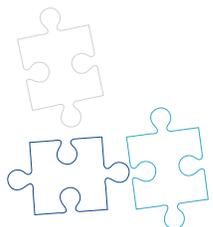
## Knowledge gaps

**This SCD identifies data/knowledge gaps as they relate to critical issues relevant to the achievement of the twin goals and other development goals, and proposed further research.**

Topic	Knowledge/data gaps and further research
Agriculture	Lack of recent data on productivity for subsistence and small farmers, land ownership, access to finance and technology. The last census of agriculture was collected in 1982.
Gender	The last comprehensive assessment of gender issues in the country by the WB was done in 2002.
Migration	Lack of information on immigration flows, a challenge to identify the impacts of immigration on labor markets.
Social protection and labor	Lack of a rigorous assessment of the impacts of social programs on poverty and livelihoods.  Jobs diagnostic with analysis of labor demand.  Analysis of the effect of labor market regulations on job creation, informal employment, and unemployment.  Analysis of the underlying causes of low female labor force participation and high sectoral segregation by sex.



Topic	Knowledge/data gaps and further research
Transport	<p>Characterize the logistics costs and their determinants. This includes the role of logistics costs in the productivity of different sectors, as well as the characterization of the trucking sector regulatory framework and performance in relation with domestic transport costs, connectivity to ports and airports, and CO2 emissions. Producing a reliable national GHG inventory in transport sector will play a vital role in supporting the country's NDC implementation as transport is one of the priority sectors for reaching its conditional economy-wide mitigation target (25 percent reduction in GHG emission by 2030 compared to 2010 baseline).</p> <hr/> <p>Urban accessibility analysis.</p>
Urban	<p>Urbanization review covering topics like spatial patterns of urbanization and determinants of spatial growth patterns; implications of the existing spatial distribution; dynamics of agglomeration economies and productivity growth in urban areas; land use and territorial development.</p>
Environment	<p>Information on greenhouse gas emissions in the agriculture sector to produce reliable national inventories of GHG is lacking. A national inventory has started in a small area of the country which needs to be scaled up and work towards Tier 3 information system. Establishing GHG inventories for agriculture as well as land use, land use change and forestry sectors will significantly contribute to supporting the country's NDC conditional economy-wide mitigation target.</p> <hr/> <p>Lack of reliable data and knowledge on air quality (emissions) and water effluents.</p>
Water	<p>Better understand the fiscal impacts of recent Government's reductions of subsidies and transfers to CORAAS (water and sanitation providers). Making CORAAS commercially viable can spur water and sanitation investments. With better evidence about the impacts of subsidy reduction to CORAAS, the country could explore better targeting mechanisms to apply other subsidies in areas with lowest coverage and highest poverty rates with the aim to improve efficiency of public spending in reaching the poorest.</p>
Factor allocation across firms	<p>Lack of any rigorous assessment of factor allocation across firms. Hsieh and Klenow (2008) and Pages et al. (2010) show that factor misallocation is one of the key factors explaining low TFP in developing countries, including LAC countries. Thus, efforts to collect data and assess factor allocation across firms in the DR would be a crucial input to understand the country's growth prospects.</p>
Cost and benefits of FDI and SEZ	<p>Lack of rigorous analysis of the costs and benefits of FDI and SEZs. Given the relatively large presence of foreign firms in the DR, it would be desirable to assess the economic impact of these firms in the local economy. Unfortunately, the country does not have the available data to tackle these empirical exercises. For example, they would require labor flows in and out of foreign firms (see Poole 2013) and TFP estimates of all firms in the DR.</p>
Trade	<p>Lack of an updated study of the impacts of CAFTA-DR on the Dominican economy. Jaramillo and Lederman (2006) provided an initial assessment of the potential trade and labor market impacts of CAFTA-DR on Central American economies and the DR at the time when the agreement was signed. Assessing these impacts is particularly important for an economy with such a substantial trade dependence with the US and with labor markets which do not appear to deliver social outcomes with sufficient vigor.</p>
Competition policy	<p>Lack of comprehensive, international comparable, data on concentration at the sectoral level.</p>



## ANNEX 1

# Economic and Social indicators

**TABLE A1. Dominican Republic - Basic Statistics**

	2002	2010	2016
Population, million	8,8	9,9	10,6
GDP, current US\$ billion	26,6	54,0	71,6
Real GDP growth (annual %)	5,8	8,3	6,6
GDP per capita, current US\$	3008	5451	6722
International poverty rate (\$1.9 day/2011 PPP)	6,0	2,6	1,6
Lower middle-income poverty rate (\$3.2 day/2011 PPP)	14,6	12,4	6,2
Upper middle-income poverty rate (\$5.5 day/2011 PPP)	31,6	32,5	21,0
Inflation, consumer prices (annual %)	5,2	6,3	1,6
Gini coefficient	50,0	46,9	45,3
Life expectancy at birth, years	71,0	72,7	73,9

Sources: World Bank, WDI.



TABLE A1. Dominican Republic - Basic Statistics

Real Sector*	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Agriculture (percent of GDP)	6.3	6.9	6.8	7.4	6.9	6.8	6.7	6.5	6.1	6.7	6.7	6.9	6.9	6.8	6.5	6.1	6.2
Industry (percent of GDP)	31.2	29.9	30.2	30.1	32.2	31.4	29.8	28.6	28.1	26.4	26.8	26.7	25.7	27.0	27.5	28.0	28.3
Services (percent of GDP)	55.8	57.8	57.9	59.0	58.7	58.1	56.9	56.9	58.0	58.8	58.4	58.3	59.1	58.2	57.1	56.6	56.4
Total consumption (percent of GDP)	80.4	80.2	80.0	78.4	78.9	81.0	81.0	80.1	81.6	85.3	83.8	84.2	84.0	82.2	79.3	78.0	76.7
Investment (percent of GDP)	25.4	26.6	25.3	19.1	22.5	24.8	24.8	24.1	28.4	22.1	26.4	23.3	23.4	22.0	23.8	26.5	26.5
Exports (percent of GDP)	34.7	31.4	30.3	35.1	35.7	31.5	28.4	26.8	24.7	22.4	24.0	25.0	25.7	26.7	26.7	25.4	25.4
Imports (percent of GDP)	45.2	41.5	39.8	36.3	37.5	37.2	36.1	35.2	36.0	31.9	34.9	33.9	33.5	31.2	30.2	31.4	30.8
<b>Fiscal Accounts</b>																	
Consolidated public sector debt	18.2	19.8	21.9	39.5	46.9	32.5	34.3	31.2	32.0	36.4	36.6	37.8	41.3	45.1	44.3	44.5	47.1
Non-Financial Public Sector Balance	-1.6	-2.1	-1.1	-4.8	-3.0	-0.3	-0.7	0.1	-3.6	-3.1	-2.8	-3.1	-6.9	-4.0	-3.6	-0.3	-2.8
<b>Monetary Sector</b>																	
Consumer price inflation (end of period)	9.0	4.4	10.5	42.7	28.7	7.4	5.0	8.9	4.5	5.8	6.2	7.8	3.9	3.9	1.6	2.3	1.7
Exchange rate RD\$/US\$ (end of period)	16.2	16.7	17.5	29.4	41.4	30.2	33.2	33.1	34.5	35.9	36.8	38.1	39.3	41.8	43.5	45.0	46.0
Monetary policy interest rate (end of period)	n/a	n/a	n/a	n/a	7.0	10.0	8.0	7.0	9.5	4.0	5.0	6.8	5.0	6.3	6.3	5.0	5.5

Notes: n/a Not available. \*The non-additivity of the chain-linked indices used leads to the fact that the sum of each component of GDP may not add up to 100 percent for the period. Sources: Central Bank of Dominican Republic.

## ANNEX 2

# Benchmarking the Dominican Republic

**B**orrowing from the SCDs for Colombia and Chile, a large set of indicators was used to compare the DR's performance with respect to other countries in two reference groups: the LAC region and the upper-middle income countries. For each indicator the average value in the 2012-2016 period was used to reduce the potential outlier effect of atypical years.

We used a metric for relative distance to assess the country's relative performance in each indicator. The relative distance is calculated by dividing the distance between the DR and the "best" performer in the reference group, by the distance between "best" and "worst" performers in the group. The "best" performer is defined as the country in the 95th percentile of the indicator, and the "worst" performer as the country in the 5th percentile. However, for some of the indicators a higher value denotes better performance (e.g., coverage of social insurance programs) while for others a higher value denotes worse performance (e.g., maternal mortality rates). In the latter cases, the best performer is defined as the country with the lowest value, and the worst performer as the country with the highest value of the indicator. This explains the use of absolute value in the formula below.

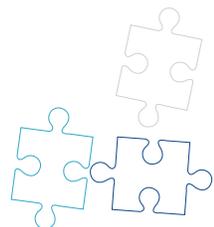
The relative distance is calculated using the formula:

$$d_i^s = \frac{|V_{i,b(i,s)} - V_{i,DOM}|}{|V_{i,b(i,s)} - V_{i,w(i,s)}|} * 100$$

Where  $s \in \{LAC, UMI\}$  denotes the reference group,  $i$  is the particular indicator for which the distance is being calculated,  $b(i,s)$  denotes the "best" performer in indicator  $i$  among countries in  $s$ ,  $w(i,s)$  denotes the "worst" performer in indicator  $i$  among countries in  $s$ , and  $V(i,c)$  denotes the value of indicator  $i$  in country  $c$ .

Note that this definition of relative distance does not use normative considerations about the optimal value for each indicator but uses instead the best achiever in the reference group as the benchmark.

We organize the results in 4 groups defined by ranges of relative distance to the "best" performer as follows: values of relative distance below 25 percent (i.e., the DR's performance is a short distance away from the "best" performer) are assigned low priority (1 ●), those between 25 and 50 percent are assigned medium-low priority (2 ●), those between 50 and 75 percent are con-



sidered medium-high priority (3 ●), and finally those higher than 75 percent are considered high priority (4 ●).

Table A5 below presents the results in descending order by level of priority.

To benchmark Dominican Republic's performance, this report uses five groups of peers: CAFTA countries, Latin American peers, upper middle-income countries, countries exposed to natural disasters, and structural

peers. The structural peers include countries that share economic traits with the DR, such as their current account deficit, educational attainment, current GDP levels, GNI per capita, labor force with basic education, total population, and poverty levels. Based on these criteria, the group of structural peers includes Sri Lanka, Tunisia, Ecuador, Peru, Guatemala, Honduras, Romania. Fiji is added as it is an island country in the Upper Middle-Income group that also issues sovereign bonds. The group of structural peers provides an appropriate benchmark for answering macro-relevant questions.

**TABLE A5. Rankings according to distance to “best” performer**

Priority Area	UMI	LAC
1st pillar: Institutions: 1.17 Ethical behavior of firms	●	●
1st pillar: Institutions: 2. Ethics and corruption	●	●
1st pillar: Institutions: 3. Undue Influence	●	●
2nd pillar: Infrastructure: 2.07 Quality of electricity supply	●	●
5th pillar: Higher Education and training: Quality of education	●	●
6th pillar: Good market efficiency: 6.03 Effectiveness of anti-monopoly policy	●	●
Adequacy of social safety net programs (% of total welfare of beneficiary households)	●	●
Coverage of social insurance programs (% of population)	●	●
Benefit incidence of social safety net programs to poorest quintile (% of total safety net benefits)	●	●
Adolescent fertility rate (births per 1,000 women ages 15-19)	●	●
Mortality rate, neonatal (per 1,000 live births)	●	●
Children in employment, wage workers (% of children in employment, ages 7-14)	●	●
General government revenue (% of GDP)	●	●
Health expenditure, total (% of GDP)	●	●
International migrant stock (% of population)	●	●
Tax revenue (% of GDP)	●	●
Domestic credit to private sector (% of GDP)	●	●
5th pillar: Higher Education and training: On-the-job training	●	●
School enrollment, secondary (% gross)	●	●
6th pillar: Good market efficiency: 6.02 Extent of market dominance	●	●
8th pillar: Financial market development: 8.05 Venture capital availability	●	●
Informal employment (% of total non-agricultural employment)	●	●
Subsidies and other transfers (% of expense)	●	●
Coverage of social safety net programs (% of population)	●	●
Mortality rate, infant (per 1,000 live births)	●	●
Mortality rate, under-5 (per 1,000 live births)	●	●

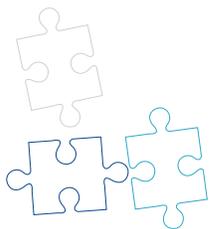
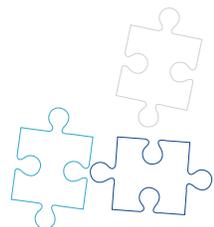


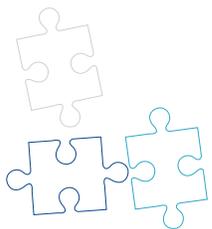
TABLE A5. Continued

Priority Area	UMI	LAC
Self-employed, total (% of total employment)	●	●
Vulnerable employment, total (% of total employment)	●	●
Wage and salaried workers, total (% of total employment)	●	●
Change in General government gross debt 2007 -2016 (% of GDP)	●	●
Foreign direct investment, net inflows (% of GDP)	●	●
Gross fixed capital formation (% of GDP)	●	●
Real interest rate (%)	●	●
3rd pillar: Macroeconomic Environment: 3.05 Country Credit Rating	●	●
8th pillar: Financial market development	●	●
11th pillar: Business sophistication: 11.05 Value chain breadth	●	●
9th pillar: Technological readiness	●	●
11th pillar: Business sophistication: 11.02 Local supplier quality	●	●
6th pillar: Good market efficiency: 6.04 Effect of taxation on incentives to invest	●	●
7th pillar: Labor market efficiency: 7.06 Pay and productivity	●	●
7th pillar: Labor market efficiency: 7.08 Country capacity to retain talent	●	●
Age dependency ratio (% of working-age population)	●	●
Improved water source (% of population with access)	●	●
Primary completion rate, total (% of relevant age group)	●	●
School enrollment, primary (% gross)	●	●
School enrollment, tertiary (% gross)	●	●
Improved water source (% of population with access)	●	●
Primary completion rate, total (% of relevant age group)	●	●
School enrollment, primary (% gross)	●	●
School enrollment, tertiary (% gross)	●	●
Electricity production from coal sources (% of total)	●	●
Prevalence of underweight, weight for age (% of children under 5)	●	●
Children out of school, primary	●	●
9th pillar: Technological readiness: 9.02 Firm-level technology absorption	●	●
1st pillar: Institutions: 4. Public-sector performance	●	●
8th pillar: Financial market development: 8.03 Financing through local equity market	●	●
11th pillar: Business sophistication: 11.03 State of cluster development	●	●
2nd pillar: Infrastructure: Transport Infrastructure	●	●
6th pillar: Good market efficiency: 1. Domestic competition	●	●
6th pillar: Good market efficiency: 2. Foreign competition	●	●
7th pillar: Labor market efficiency: 7.02 Flexibility of wage determination	●	●
7th pillar: Labor market efficiency: 7.09 Country capacity to attract talent	●	●
8th pillar: Financial market development: 8.04 Ease of access to loans	●	●



**TABLE A5. Continued**

Priority Area	UMI	LAC
8th pillar: Financial market development: 8.06 Soundness of banks	●	●
Distance to frontier score (0=lowest performance to 100=frontier)	●	●
Share of youth not in education, employment or training, total (% of youth population)	●	●
Employment in services (% of total employment)	●	●
Labor force participation rate, total (% of total population ages 15+) (modeled ILO estimate)	●	●
Net migration	●	●
Prevalence of HIV, total (% of population ages 15-49)	●	●
Urban population (% of total)	●	●
Adolescents out of school (% of lower secondary school age)	●	●
GDP growth (annual %)	●	●
Progression to secondary school (%)	●	●
6th pillar: Good market efficiency: 6.07 Time to start a business	●	●
Cost to export (US\$ per container)	●	●
Fossil fuel energy consumption (% of total)	●	●
Prevalence of overweight, weight for height (% of children under 5)	●	●
Unemployment, total (% of total labor force) (modeled ILO estimate)	●	●



## ANNEX 3

# Monetary policy in the DR

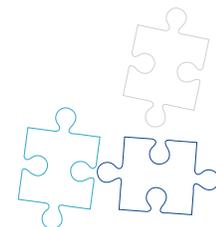
**F**ollowing a period of high inflation in the aftermath of the 2003 domestic banking crisis, the country started a transition towards an inflation targeting (IT) regime in 2005, a regime that was fully adopted in 2012. Inflation averaged 7 percent in the between 1992 and 2002, and sharply increased to 27 percent and 51 percent in 2003 and 2004, respectively. Following this, the Dominican government initiated the technical steps to adopt an inflation targeting regime with the advice of the IMF. In 2012 the Dominican Central Bank fully adopted an inflation targeting regime.

**Since the adoption of the IT regime, the country has been successful in maintaining the inflation rate low, although it has usually stayed below the Central Bank's target.** In 2012 the Central Bank established a timeline to gradually reduce the inflation target range towards its long-run goal of 4 percent (+/- 1 percent). The target was set at 5.5 percent (+/- 1 percent) in 2012 and the Central Bank decreased the target by 0.5 percentage points per year. However, except for 2013, inflation has been consistently below the Central Bank's target range.

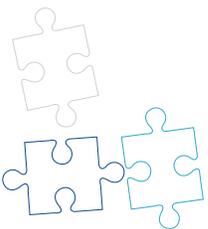
**The country's below-target inflation is partly due to the Central Bank's interventions to keep depreciations at bay.** Out of the 38 countries with inflation targeting frameworks in the world, the DR is one of the two countries that doesn't have a floating exchange rate regime (IMF 2016). The country has crawl-like arrangement (IMF 2016), that seeks to manage the volatility of the exchange rate around its long-term path.

**The choice of the exchange rate regime is partly motivated by a relatively high-pass through and by the composition of government debt.** The country's crawl-like arrangement minimizes the potential pass-through from exchange rate depreciations (the process by which exchange rate depreciations cause prices to increase in terms of local currency, thus causing inflation), which in the DR is still high.<sup>181</sup> The downside to the country's exchange rate stability is that it limits the role of the exchange rate as an external shock absorber. The composition of the public debt may create additional incentives to avoid sharp depreciations. The public external debt has increased in recent years in absolute terms and as a share of GDP. Moreover, interest payments have been

181 IMF 2016 Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER), Dominican Republic country report.



rising in tandem with external debt. Against this backdrop, exchange rate depreciations can lead to increases in the value of debt payments expressed in local currency. It is worth pointing, however, that existing evidence suggests that the DR's real exchange rates appear to be close to its long-term equilibrium level (Cruz-Rodriguez 2016).



## ANNEX 4

# Characterizing Dominican exports

**E**xplicit policy efforts, geography, and natural endowments, have bolstered Dominican exports over the past 25 years. Dominican exports have grown at an average annual rate of 4.7 percent over the period. Exports are evenly distributed between exports of goods and exports of services. The dynamism of SEZs, geographic and cultural proximity to the US and Canada, and the attractiveness of being a relatively large Caribbean country have been factors favoring the country's export growth.

**The composition of the export basket in terms of the participation of goods and services is more similar to Central American countries than to other Caribbean islands or South American countries.** On average, exports of services accounted for 67 percent of total exports in 2016 in Caribbean countries (excluding the DR). This share increases to 74 percent when considering exclusively Caribbean islands other than the DR. In contrast, South American countries and Mexico have export baskets that are dominated by merchandise exports, with exports of services accounting for 14 percent

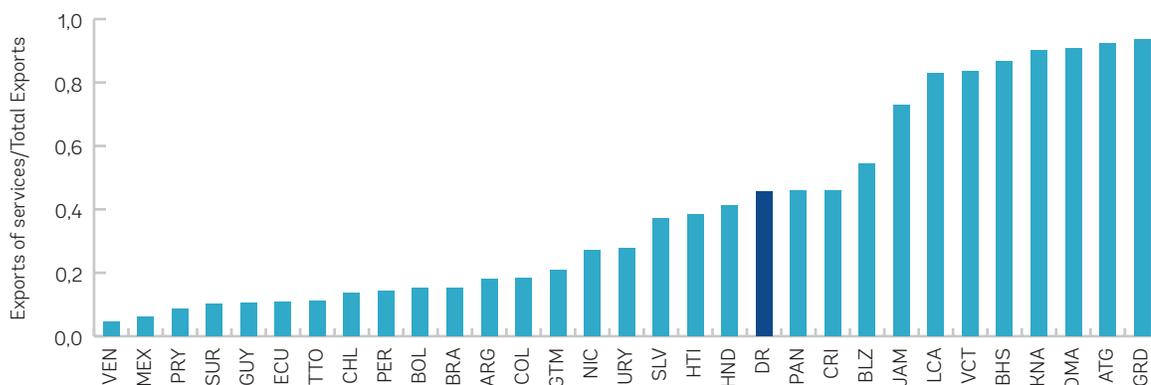
of total exports in the average South American country and 6 percent in Mexico. The DR, at 46 percent, stands closer to the Central American average (36 percent), and looks very much like countries as Panama or Costa Rica (Figure A51). The DR's export of services are mainly tied to tourism and travel (more than 80 percent of service exports according to 2013 UN estimates). The observed differences between the DR and other Caribbean countries may be explained by differences in size and labor costs, factors that can affect a country's comparative advantage in producing manufactured goods (Lederman and Lesniak 2017). Indeed, compared to other Caribbean countries, the DR is relatively large<sup>182</sup> (it is one of the three largest Caribbean countries in area and population) and has low income levels (its GDP per capita lies below both the Caribbean's average and median).

**Exports have been subject to several shocks over the past 25 years, but they have proven to be resilient.** The first shock was the domestic banking crisis of 2003, the second shock was the end of the Multifiber Agreement

182 In terms of size, the DR is closer to a Central American country than a Caribbean country (except Haiti and Cuba). The Dominican Republic has an extension that is comparable to those of Central American countries and has a larger population than all Central American countries with the exception of Guatemala.



**Figure A51: The composition of the DR's exports stands closer to Central American countries than it does to other Caribbean islands**



Source: World Bank staff's calculation based on data from WDI, data for 2016.

in 2005, and the third shock was the global financial crisis of 2009 which originated in the US, the country's main trading partner. These three shocks contributed to five years of export contractions. Since 2010, however, exports recovered strongly growing at an average annual rate of 7.3 percent (above the 5.6 average growth rate of GDP). Indeed, after the global financial crisis of 2009, exports of Dominican goods grew in both value and volumes, and growth in quantities exceeded the world average (Gualier et al. 2013). Similarly, after dipping following the global financial crisis, exports of services have grown steadily since 2010.

**Zooming into merchandise exports, the shocks that hit the country have led to important changes in the composition of its export basket.** The MFA, which imposed quotas to the exports of textiles from developing countries to high-income markets, protected Dominican exports of textiles to the US against competition from countries like China. Since the end of the MFA, the textile sector lost weight in the DR's export basket. In contrast, export goods like medical equipment, metals, and electrical appliances have gained terrain. Metals

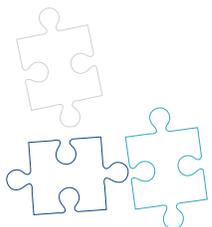
and other natural resource based products, like rolled cigars, have also gained prominence. Exports of precious metals and other metals accounted for 26 percent of merchandise exports in 2016, up from approximately 10 percent of the country's exports in 2003, and gold is the largest export product by value. The rising prominence of metals in the export basket is likely to continue as new investments in the extractive sector materialize.<sup>183</sup>

**Changes in the attributes of the merchandise export basket open opportunities for future growth.** Since the early 2000s the country's export basket has tilted towards goods of higher technological content, and of longer quality ladders, and has moved from final goods to intermediates and capital goods (Figure A52).<sup>184</sup> Longer quality ladders imply that the country's export basket has now more scope for quality upgrading compared to the past. Because of these changes, the country's export basket is more technologically biased and has a longer average ladder length than most CAFTA-DR countries, with exception of Costa Rica,<sup>185</sup> but less technologically biased than the average Caribbean country.

183 There has been an uptick in FDI from Canada in recent years, which is partly explained by the boom in the mining sector in the DR, a sector with large Canadian presence. One example of the role played by Canadian firms in the Dominican mining sector is the Pueblo Viejo Dominicana Corporation/Barrick Gold, the largest foreign investment in the history of the DR. As will be discussed in more detail below, mining is the fastest growing economic sector both in terms of value added and FDI inflows.

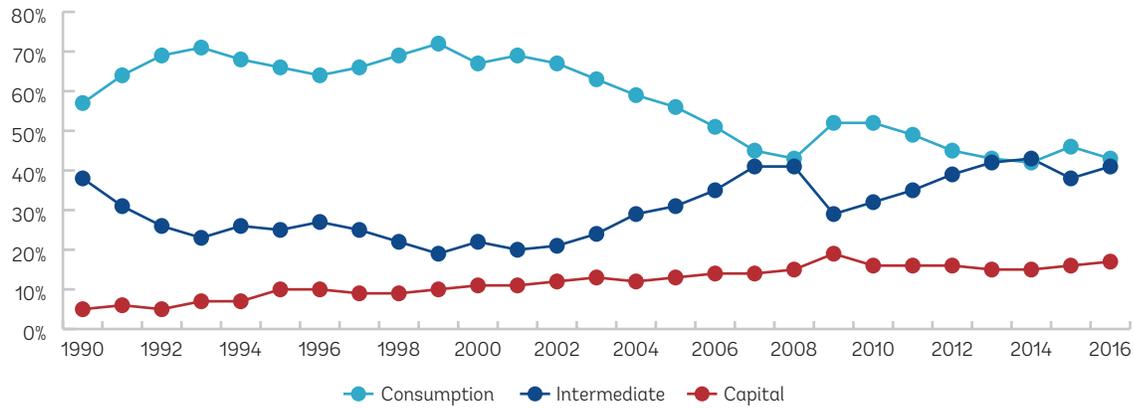
184 Technological intensity is measured according to Lall (2000). Quality ladder estimates come from Khandelwal (2010). Export classification into intermediate, capital, final goods is from the BEC classification. Importantly, the attributes mentioned above are associated with higher growth (de la Torre et al. 2015).

185 World Bank (2015) also shows that the DR has an export basket that has become more complex over time, as measured by the EXPY index, which is associated with higher GDP growth.

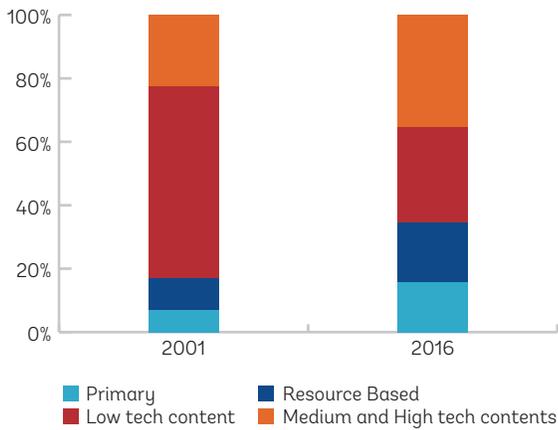


**Figure A52: The DR's export basket has moved towards intermediate goods of higher technological content and longer quality ladders**

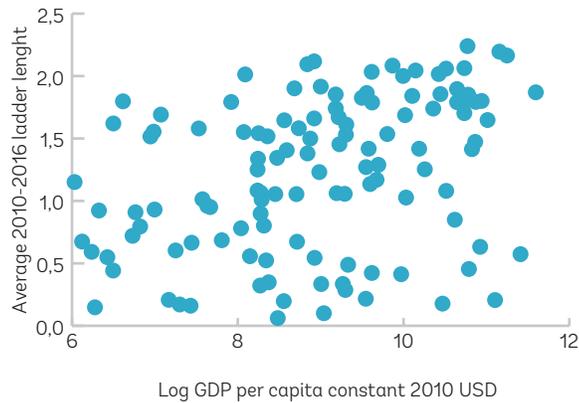
Panel A: Share of merchandise exports that are intermediates, consumption and capital goods



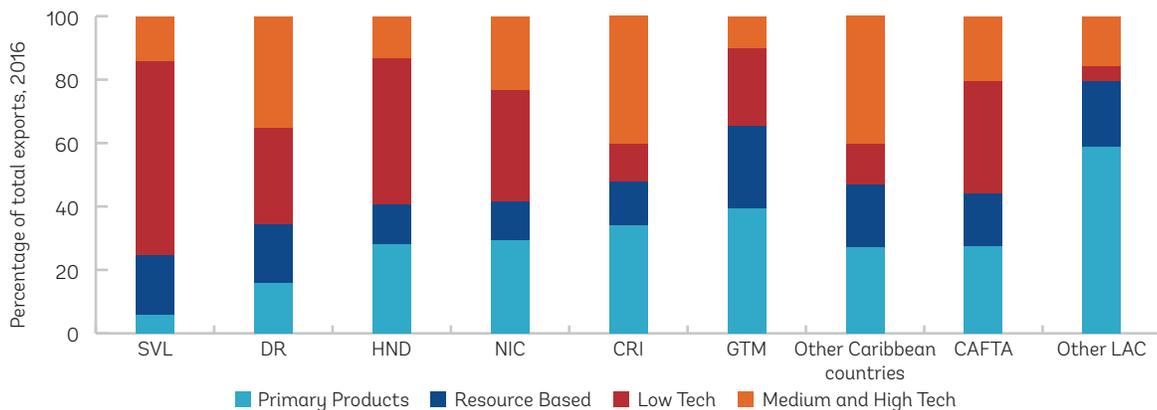
Panel B: Share of merchandise exports of different technology intensity in the DR, by year



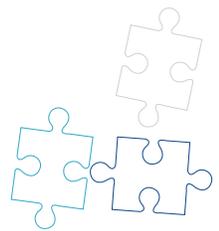
Panel C: Average quality ladder length of the DR's export basket



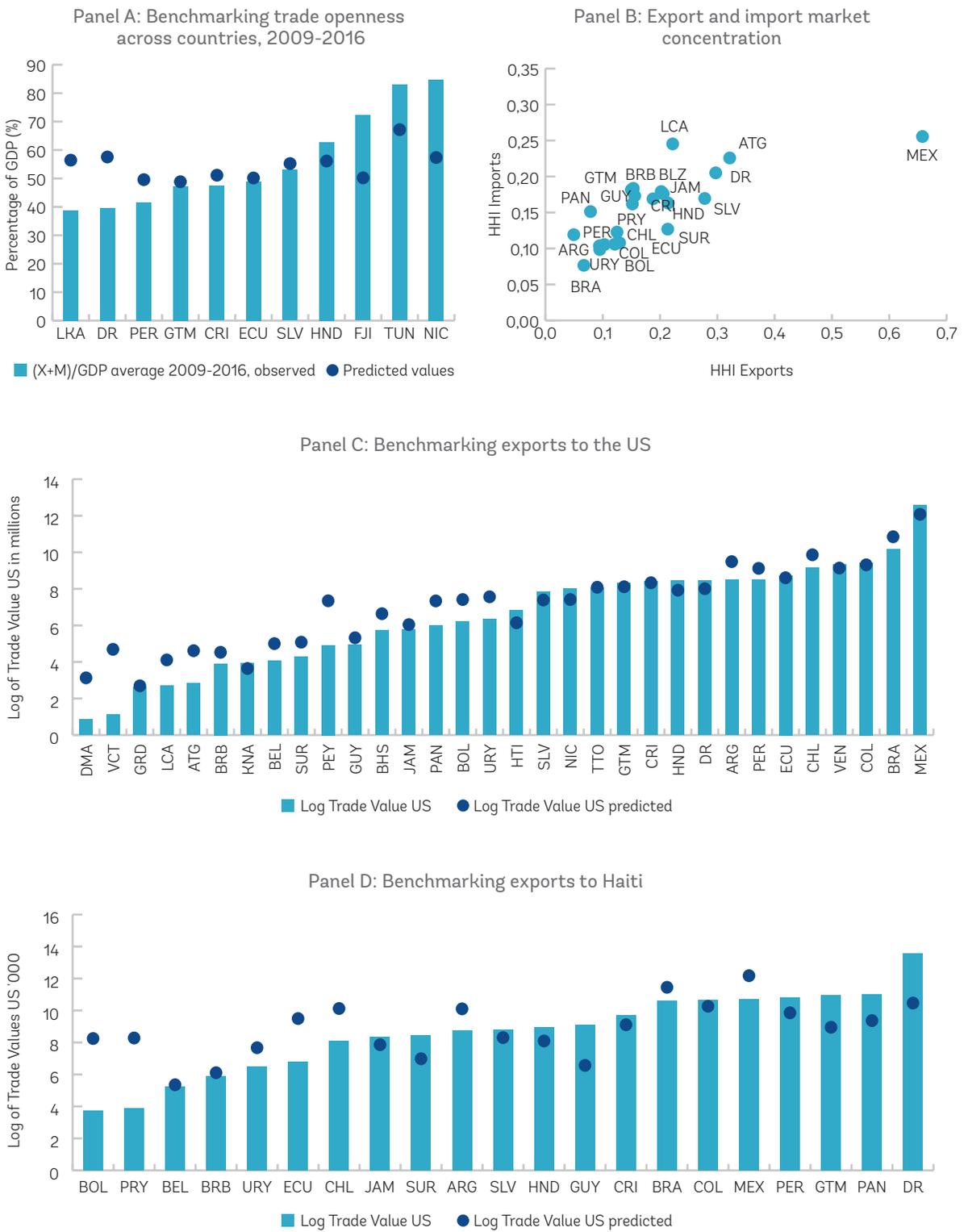
Panel D: Cross country comparison of the technological content of export baskets, 2016



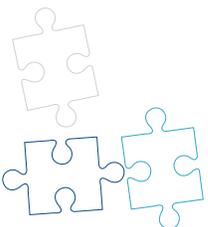
Source: World Bank staff based on Khandelwal (2010), Lall (2000), and data from UN Comtrade.



**Figure A53: The DR has a lower incidence of trade on GDP compared to regional peers and benchmarks and trade is concentrated in a few trading partners**



Source: World Bank's calculations based on UN Comtrade, WDI, and IMF BOP data. Note: the Herfindahl Hirschman index of concentration in panel B is measured as the sum of the trade shares squared. The benchmarking exercise in panel A controls for log GDP, log population and the log average distance to trading partners. The benchmarks in the lower panels come from a gravity estimation of trade flows.



**In the specific case of SEZs, the emergence of more sophisticated manufacturing processes has increased the value addition (production stages) that is generated in the country and opens the door for the country to become more robustly inserted into Global Value Chains (GVCs).** The distance between the production stages in between SEZ exports and imports has increased over time (World Bank 2016). This observation points to the fact that more stages of production are taking place in the country, particularly in the pharmaceuticals, footwear, and electrical sectors. Thus, domestic value addition embedded in Dominican exports has increased with the emergence of these medium high-skill manufactures. This, in turn, could deepen Dominican participation in GVCs, which at this point stands below most regional peers, including CAFTA-DR countries like El Salvador, Costa Rica, or Guatemala (de la Torre et al. 2015). GVC participation could foster bigger knowledge transfers and boost growth.

**The incidence of trade flows in the economy remains low.** The country ranks at the bottom of the regional distribution in terms of the incidence of trade flows on GDP. The country's trade share stands at 53 percent in 2016, a number that is lower than any other CAFTA-DR member except for Guatemala (45 percent). But a simple ranking of trade openness misses important forces that shape trade flows and affect the incidence of trade on GDP, such as the size of an economy or geographic remoteness. For example, Brazil, with a lower incidence of trade in total GDP compared to the DR, has a very large domestic market and is farther away from global growth poles. However, the DR's underperformance along this dimension persists even after controlling for factors such as GDP, population and average distance from trading partners (Figure A53, panel A).

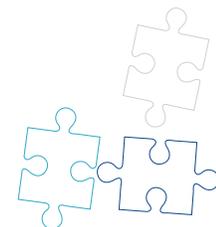
**Moreover, trade is relatively concentrated along regional lines (the US and to a lesser extent Haiti), exposing the country to shocks stemming from its main trading partners.** A similar benchmarking exercise as the one described above but at the bilateral level shows that, while the country has aggregate trade levels below what is predicted by gravity factors (size and dis-

tance), its trade with the US and Haiti, the two largest trading partners, are above the levels predicted by gravity variables (see Box A1 and Figure A53, panels C and D). In the case of trade with the US, the DR shares this pattern with most CAFTA-DR countries. The disproportionately high levels of trade with the US and Haiti result in the country having the third most concentrated export basket and the fourth most concentrated import basket in LAC (Figure A53, panel B). Export concentration is associated with larger GDP volatility (Lederman, Pienknagura and Rojas 2015 and references therein). Export market concentration is mainly driven by SEZ exporters, as they have a Herfindahl index (HHI) (a proxy for concentration) of 0.55, compared to an HHI of 0.12 for non-SEZ exporters.<sup>186</sup>

**In addition to export market concentration, there are also stark differences between SEZ exports and non-SEZ exports along several dimensions, highlighting the duality of the export basket.** The relatively good performance in terms of sophistication and ingenuity embedded in the overall Dominican export basket masks an important difference between the goods produced inside and outside SEZs. Firms operating inside SEZs tend to export goods with some level of technological transformation, whereas non-SEZ exporters focus on primary and resource-based products.<sup>187</sup> As discussed later in the chapter, SEZs operate as enclaves, which limits the potential growth benefits of the changes in the composition of exports.

186 World Bank (2015).

187 Ibid.



### BOX A1. Opportunities and challenges from stronger DR-Haiti trade relations

**The trade relationship between the Dominican Republic and its only neighboring country has always been intense, and it grew in an asymmetric way during the past decade.** Dominican shipments to Haiti have increased from 3 percent of total exports at the beginning of the 2000s to around 16 percent in 2012, with Haiti becoming the second most important destination for Dominican exports. Dominican exports to Haiti have boomed, rising 16-fold from the decade's beginning to 2012 (World Bank 2015). All exported products showed gains, although increases were relatively smaller in food products and metals, the most important sectors in the early 2000s.

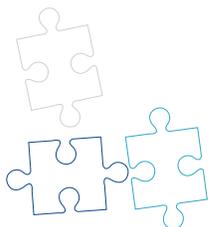
**Trade integration with Haiti offers opportunities to Dominican exporters, and to the country as a whole (World Bank 2012).** New Dominican exporters can learn-by-exporting in a market in which they have a geographic advantage due to proximity. Data from the Exporter Dynamics Dataset shows that firms that export to Haiti are more likely to survive in the market compared to firms that export similar products to other markets. They also tend to be smaller firms compared to those that export to other markets.

**The number of goods exported to Haiti has grown over time, contributing to export diversification.** Out of the 5,300 HS6 products, the DR exported 659 to Haiti in 2006. By 2016, this number had grown to 1,877, almost 3 times the number in 2006. The pattern observed for exports to Haiti contrasts to that observed for exports to the US, where the number of products has remained relatively flat.

**In contrast to exports to the US, exports to Haiti are concentrated in resource-based and low-tech products, according to the classification proposed by Lall (2000).** Exports to Haiti are mainly focused on food products, metals and textiles. Medium and high-tech goods comprised 10 percent of total exports to Haiti in 2016. By contrast, exports to the US have led the transformation of the DR's export basket, and exports of medium and high-tech goods corresponded to 34 percent of total exports to the US in 2016.

**To fully exploit the potential benefits of trade relations with Haiti, the countries would need to overcome long-standing political and economic tensions.** Haiti occupied the DR in the 19th century. Then, in October 1937, under the command of Dictator Trujillo, the Dominican government killed thousands of Haitians in what has been coined as the "parsley massacre".<sup>1</sup> More recently, increased immigration enforcement and border control imposed by DR authorities have temporarily interrupted trade flows in several occasions affecting DR's exports.

1 Estimates of the number of Haitians killed range widely from the low thousands to over 10,000.



## ANNEX 5

# A closer look at SEZs, tourism, and agricultural products

### Special Economic Zones

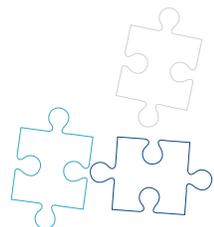
**T**he Dominican Republic is often considered an example of the successful implementation of SEZs in the Western hemisphere.

The zones fueled economic growth during the 1980s and 1990s and, while they experienced a sharp decline in export share due in part to the expiration of the Multi-Fiber Agreement and stronger international competition in the textile and apparel industry in 2005, exports from firms located in SEZs have recovered since 2009. Exports from SEZs accounted for approximately 55 percent of the country's total exports of goods in 2016. Surgical equipment, chemicals and plastics, and footwear have recently emerged as the new drivers of export dynamism in the zones (World Bank, 2015).

**As in many other countries, locating in SEZs opens the door to a variety of duty-free mechanisms and fiscal exemptions.** Exemptions include full corporate tax exemptions, full exemption from local VAT (ITBIS) or tax on assets, and exemption from any import tax, tariff or export tax. Exemptions are granted for 15 years—20 years if the company is located near the border with Haiti—but the period

can be extended by the National Free Zones Council, the free-zone regulator.

**Motivated by the end of the Multi-Fiber Arrangement (MFA) in 2005 and by the signature of the CAFTA-DR agreement, SEZs in the country experienced a structural shift from clothing manufacturing to medium-high skill manufacturing, a shift that impacted employment in the sector.** Historically, export competitiveness in the DR has largely depended on the type of preferential market access the country receives from the US. In the 1990s, the US assigned a specific import quota of clothing and textile to the DR under the MFA, which created a mushrooming of maquilas operating under the special regimen. After 2005, the CAFTA-DR provided broad preferences that, coupled with the country's special tax regime, and its dynamic policy to attract Foreign Direct Investment, created the conditions for the emergence of electrical, footwear, and medical equipment products in SEZs. Amid these changes, employment in SEZs has been uneven. Employment in SEZs remained over 170,000 until 2004, when it began falling and bottomed out in 2010 at 121,000 jobs. In 2016, SEZs employment reached 163,147 persons, accounting for 3.7 percent of total employment.



**Going forward, structural change of SEZs firms will continue to create challenges and opportunities.**

On the one hand, the potential of SEZs to continue creating jobs at the same pace as before is likely to be reduced, because emerging industries are less labor intensive (World Bank 2017). This situation may be particularly detrimental for women as they filled the bulk of jobs available in the garment sector. On the other hand, the emergence of medium high-skill manufacturing is correlated with higher wages as the demand for more skilled workers increases. More broadly, structural change in SEZs has led to more production stages taking place in the country but linkages with firms outside of SEZs remain low. The more sophisticated nature of the manufacturing production taking place in the zones (footwear, pharmaceutical, and electrical products) entails that many inputs are imported because there is not domestic availability or national products do not meet required standards. As of 2012, Dominican companies in SEZs were acquiring 81 percent of their inputs abroad (World Bank 2017).

## Tourism

**The country has natural endowments that give it an advantage for the development of tourism.** Its proximity to the US, its Caribbean location, its geographic diversity, and the relative large size and historic heritage distinguish the country from other Caribbean islands and other LAC countries. Tourism in the Dominican Republic plays a significant role in the country's economy.

**Travel and tourism's direct contribution to GDP in 2017 was 5.4 percent of GDP and the sector's total contribution (including indirect effects through backward and forward linkages) reached 17.2 percent of GDP.** In 2017, travel and tourism directly supported more than 206,000 jobs (4.8 percent of total employment in the country), and the sector's total contribu-

tion to employment, including jobs indirectly supported by the industry was 15.9 percent of total employment (678,000 jobs). In addition, visitor exports generated approximately 39 percent of total exports in 2017. The Dominican Republic ranks 45th in the world (out of 185 countries) as it relates to the relative importance of travel and tourism's total contribution to GDP.<sup>188</sup>

**Tourism in the Dominican Republic has been on a growth trend since 2010.** Tourist arrivals in the country by air grew by 25 percent between 2010 and 2014, adding more than one million visitors over the period.<sup>189</sup> Web-based travel service Expedia announced a growth of 45 percent in travel demand to the Dominican Republic in 2014 as compared to 2013.<sup>190</sup> Punta Cana alone saw over 50 percent growth in demand. In 2015, the Dominican Republic received 5.6 million tourist arrivals (non-resident air arrivals), making it the largest of any tourism destination in the Caribbean, with the next largest being Cuba, with 3.5 million. Even outside the Caribbean, the Dominican Republic's tourism performance, measured by tourism arrivals and spending, remains strong, with the country trailing Singapore and remaining ahead of destinations such as Seychelles, Fiji, Maldives and Costa Rica. The United States remained the country's single largest source market, with 2 million US arrivals, followed by Canada (with 0.7 million arrivals) and Europe (with 1.1 million). Hotel occupancy rates have been rising since bottoming out in 2009 (77 percent in 2017), even as the supply of hotel rooms increased by 17 percent over the last 9 years. Many factors have contributed to this growth trend, including government investment in tourism-related infrastructure and marketing, plus private sector investment in hospitality projects. The government has set a goal of 10 million annual visitors by 2023.

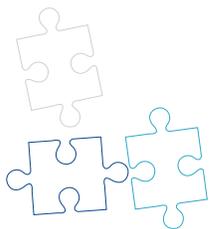
**The current competitive advantages of the Dominican Republic are the larger size of the island<sup>191</sup> and associated ability to command very low prices of**

188 World Travel Tourism and Council (2018).

189 The Dominican Republic's cruise industry has also been growing. Cruise tourism closed the year 2015 with 574,000 passengers, excluding crew, which would be over 650,000 in total. This was a 100 percent increase compared to the previous year. Furthermore, in January 2016, when compared to the same month the previous year, there was a 53 percent increase, and in February, a 63.4 percent growth compared to the previous year.

190 <http://www.godominicanrepublic.com/wp-content/uploads/2013/12/may-june-2015-media-memo-final1.pdf>

191 Within the Caribbean region, with 48,445 square kilometers, the Dominican Republic is only smaller than Cuba (with 105,806 square kilometers) and is larger than Jamaica (with 11,188 square kilometers), Puerto Rico or Trinidad and Tobago.



## BOX A2. Global trends in the tourism sector

Global trends seem to suggest a move towards the following:

- a. **Developing local and authentic:** There is a trend towards increasing demand for goods of local provenance. For example, based on a 2015 survey, only 54 percent of US international travelers shop at luxury brand stores while on vacation versus 86 percent who want to shop at stores featuring locally-made goods;<sup>1</sup>
- b. **Attracting Millennials:** 1.8 billion out of 7 billion people worldwide belong to the Millennial generation (ages 18–34). “Experiencing everyday life in another country” and “increasing their knowledge” are top travel motivations for Millennial travelers (WYSE Travel Confederation Millennial Traveller Report). For example, 53 percent of US Millennial travelers regularly or occasionally participate in athletic competitions on vacation (and 20 percent more would like to try);<sup>2</sup>
- c. **Mixing leisure and business:** 94 percent of younger travelers are “more than” or “equally” likely to take a business-leisure trip in the next five years;<sup>3</sup>
- d. **Catering to senior travelers:** World population ages 65+ will rise from 600 million in 2015 to more than 1 billion by 2030.<sup>4</sup> In the US 66 percent of Senior Travelers define retirement as a “time to travel and explore new places.”<sup>5</sup> However, while they are a good market to tap into especially during off-season, these travelers travel closer to home and access for them is critical.
- e. **Attracting adventure travelers:** Adventure travel is defined as any tourist activity that includes two of the following three components: a physical activity, a cultural exchange, or interaction and engagement with nature.<sup>6</sup> Adventure travel has grown at a 65 percent yearly rate since 2009. The value of the global outbound adventure travel sector was more than \$345 billion in 2012. Seventy one percent of US Millennials want “to participate in adventure activities that take me out of my comfort zone when on vacation.”<sup>7</sup> Engaging with nature is one of the most popular vacation activities for US Seniors (73 percent).

1 2015 Resonance Report: Portrait of the US international Leisure Traveler.

2 2015 Resonance Report: Portrait of the US Millennial Traveler.

3 Bridgestreet Global Hospitality Bleisure Report, 2014.

4 United Nations Department of Economic and Social Affairs, World Population Prospects: 2012 Revision, June 2013.

5 2015 Resonance Report: Portrait of the US Senior Traveler

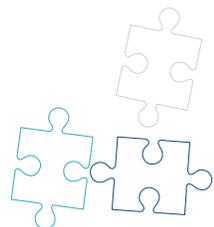
6 Adventure Travel Trade Association.

7 2015 Resonance Report: Portrait of the US Millennial Traveler.

**packaged tourism offerings.** The main offering on the island is all-inclusive tourism, offered at exceptionally low prices for both Americans and Europeans. Approximately 75 percent of the tourists visiting the Dominican Republic opt for the all-inclusive packages.<sup>192</sup> A one-week beach travel to the Dominican Republic is cheaper than destinations within the Caribbean, and even cheaper than places such as Seychelles, Spain and Mexico (Cancun). Generally, destinations that could compete with the Dominican Republic on price fall outside the Latin America and the Caribbean region and are far from the Dominican Republic’s main source market, the United States.

**Going forward, the sector faces challenges and opportunities that will be addressed in detail throughout this SCD.** As mentioned earlier the sector’s main asset is the country’s natural endowments, making the preservation of the country’s beaches and ocean crucial to the sector, a topic that will be discussed in detail in the sustainability chapter. The country could also find ways to expand the sector to complement the all-inclusive model by continuing to incentivize the non-all-inclusive tourism growth (e.g., community-based tourism, adventure tourism, etc.). For example, in 2015 the construction of the port terminal “Amber Cove” in Puerto Plata has impacted enormously the north coast

192 <https://www.traveltradecaribbean.com/tourists-dominican-republic-shorter-stays-spending>



economy with tourist arrivals expected to surpass 1 million visitors in 2017. Providing access, coupled with improving the quality of tourism assets and services offered, and implementing the right marketing strategy, could attract higher spending tourists that would leave more money behind in the local economy, thereby increasing spending by tourists and creating local employment and business opportunities. Taking steps in this direction could put the country in a position to continue to seize some of the opportunities that emerge from changes in the global demand for tourism (Box A2). The sector's vulnerability to external shocks (climate change, changes in the world economy), will require steps to mitigate the risks posed to future growth of the sector and the wider economy.

## Agricultural and foodstuff exports

**Agricultural products and foodstuffs have increased its weight in the export basket and have the potential to reduce rural poverty.** Dominican exports of vegetable products and foodstuffs increased from close to 14 percent of merchandise exports in 2000 to 20 percent in 2011. Moreover, more than 50% of the rural population is employed in the primary sector (1.2 million out of 2.2 million people).

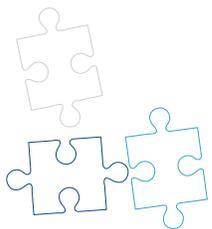
**The agricultural sector also provides a barometer of the competitiveness of Dominican exports by local firms outside SEZs.** The agricultural sector mostly operates outside tax incentive schemes, although 20 percent of vegetable exports come from firms in SEZs, and it is less likely to attract FDI. Moreover, Dominican exports of vegetable products and foodstuffs increased from close to 14 percent of merchandise exports in 2000 to 20 percent in 2016. These characteristics make agriculture a good reflection of the country's competitive strengths and weaknesses.

**The quality of some of the main exports to the US stands below that of other CAFTA-DR countries, despite some recent improvements in organic varieties (World Bank 2015).** More important, the rela-

tive quality of the agricultural export basket appears to be decreasing over time, with Dominican agricultural exports fetching lower prices than the same product exported by other countries. In addition, rejection rates at the US border are higher for Dominican fruits and vegetables than those from other CAFTA countries, due to the country's low ability to comply with US Sanitary and Phytosanitary (SPS) regulation. Evidence suggests that Dominican products may be subject to more frequent and stringent inspections due to past compliance problems (Jouanjean et al. 2012). Rejections of Dominican products are mainly due to: (i) inappropriate use of pesticides;<sup>193</sup> (ii) Salmonella contamination; and (iii) problems with permits or registrations as well as with shipments that do not comply with sanitary and phytosanitary requirements. Rejections are not limited to the US. An audit was undertaken in October 2015 in response to continued interceptions in the European Union (EU) of consignments of plants originating in the DR, due to the presence of harmful organisms on fruits and vegetables.<sup>194</sup> Another audit dated February 2015 on food of non-animal origin for pesticides also mentions that the effectiveness of the system of pesticide authorization continues to be limited by: i) the absence of a single, accurate, reliable, regularly updated and publicly available database of approved pesticides; ii) absence of pesticide quality controls and formulation analysis; iii) insufficient improvement in laboratories; and iv) lack of pre-export official and private sampling and analysis to determine compliance with maximum residue levels.

193 The products that face the highest rate of rejection at the US border are eggplants, tamarind, bitter melon, frozen vegetables, and chilled beans.

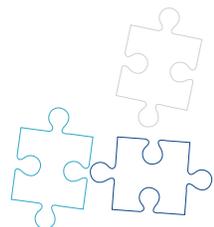
194 [http://ec.europa.eu/food/fvo/audit\\_reports/details.cfm?rep\\_id=3449](http://ec.europa.eu/food/fvo/audit_reports/details.cfm?rep_id=3449)



## ANNEX 6

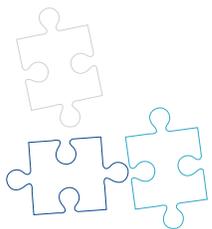
# A characterization of poverty by sex, 2016

Group	Share of population	Share of female in group	Poverty rate			Share of poor in group	
			Male	Female	Ratio Female / Male	Male	Female
Total	100	50.3	27.4	30.4	1.11	47.1	52.9
<b>Age</b>							
0 - 14	26.0	48.3	41.9	42.4	1.01	51.5	48.5
15 - 24	19.2	49.1	26.5	32.0	1.20	46.2	53.8
25 - 40	23.0	51.2	22.2	29.5	1.33	41.7	58.3
41 - 55	16.7	51.4	18.7	19.9	1.07	47.0	53.0
56 and older	15.2	52.9	19.4	22.1	1.14	43.9	56.1
<b>Area</b>							
Rural	20.5	47.9	35.6	40.4	1.14	48.9	51.1
Urban	79.5	51.0	25.2	27.9	1.11	46.4	53.6
<b>Labor market (15 years and older)</b>							
Employer	1.9	25.0	5.4	9.0	1.67	64.2	35.8
Salaried	33.5	47.2	15.2	15.5	1.02	52.3	47.7
Self-employment	20.7	25.7	21.6	19.1	0.88	76.5	23.5
Unpaid worker	0.8	56.5	27.4	26.4	0.96	44.4	55.6
Unemployed	2.2	59.8	37.9	39.9	1.05	38.9	61.1



Group	Share of population	Share of female in group	Poverty rate			Share of poor in group	
			Male	Female	Ratio Female / Male	Male	Female
<b>Education (15 years and older)</b>							
Incomplete secondary	18.1	46.8	25.5	33.5	1.31	46.5	53.5
Complete secondary	18.6	52.5	16.4	23.5	1.43	38.7	61.3
Complete or incomplete tertiary	20.9	59.2	6.6	11.3	1.72	28.6	71.4
<b>Marital status</b>							
Cohabitation (married or living together)	35.8	50.3	23.8	24.3	1.02	49.1	50.9
Divorced/Separated	11.0	65.2	13.3	31.3	2.35	18.6	81.4
Widow/widower	3.9	83.6	22.6	24.0	1.06	15.6	84.4
Single	49.2	44.4	31.8	36.0	1.13	52.6	47.4
<b>Household headship (marital status and cohabitation)</b>							
<b>Share of heads and poverty at the household level *</b>							
No cohabitation (married)	4.3 (6.7)	57.6	8.1	20.3	2.50	22.7	77.3
Cohabitation (married or living together)	53.2 (18.0)	12.7	24.8	22.2	0.89	88.5	11.5
Divorced/Separated	23.4 (43.9)	70.5	8.7	31.5	3.60	10.4	89.6
Widow/widower	10.0 (22.1)	82.9	18.0	24.1	1.34	13.4	86.6
Single	9.1 (9.4)	39.0	8.3	23.2	2.80	35.8	64.2

Source: Authors' calculations using ENFT. \* Share of female heads in parentheses



## ANNEX 7

# Consultation process

**T**he SCD core team followed an inclusive process in the development of the final product and the elaboration of the diagnostics, that relied on internal discussions with World Bank, IFC and MIGA staff, and discussions with a wide range of stakeholders in the Dominican Republic, including government officials, private sector, academia, civil society, and development partners. In this annex, the collaborative steps followed towards the preparation of the draft document are detailed.

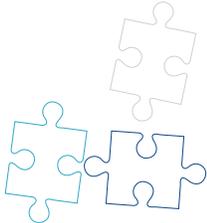
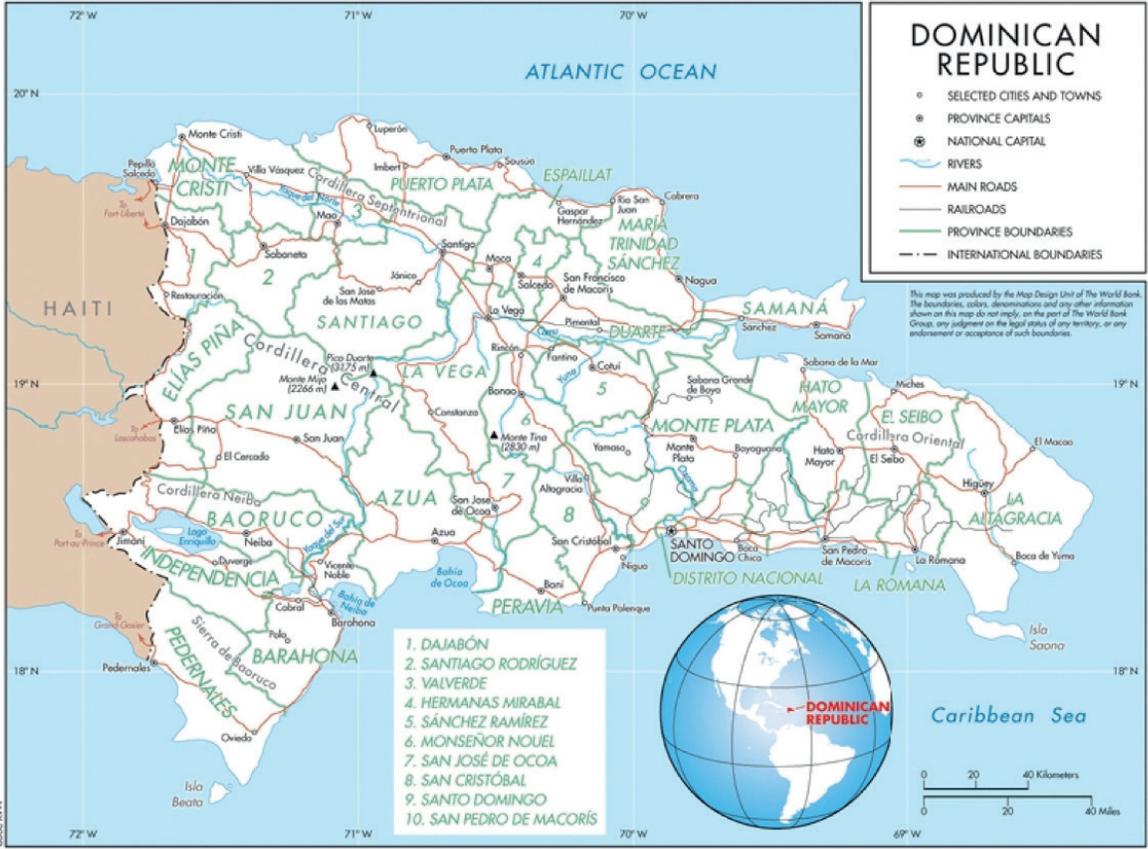
- July-October 2017: Initial outreach to Global Practices to identify focal points and organize the work.
- October 2017: Country Team brainstorming on a first draft of the storyline.
- November-December 2017: Country visit to present a revised proposed storyline and identify key challenges for the Dominican Republic. The week-long mission included more than 20 meetings with more than 200 participants from government (Ministry of Economy, Development and Planning, Ministry of Finance, Central Bank, Ministry of Industry, Trade and Production, the National Directorate for Tax Collection (DGII), and the National Council for Competitiveness (CNC)), the private sector (industrial chambers, representative of SEZs, representatives of the financial sector, and representatives of the tourism sector), civil society, academics (meeting with economists and academics from local universities), and development partners.
- February 8, 2018: ROC Concept Note review meeting.
- March-May 2018: Two rounds of consultations with the regional front office.
- April 2018: Brainstorming meeting with GP focal points to discuss the decision meeting draft of the storyline and identify priorities.
- April 2018: Brainstorming meeting with Practice Managers to discuss preliminary findings of the SCD and proposed priorities.
- May 2018: Follow-up meeting with Program Leaders to refine storyline and priorities.
- May 30, 2018: ROC Decision Meeting.
- June 2018: Submission to Board of Directors.
- September 2018 (planned): Dissemination of SCD in country and launch of the CPF dialogue.





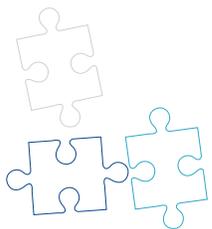
# ANNEX 8

# Map of the Dominican Republic

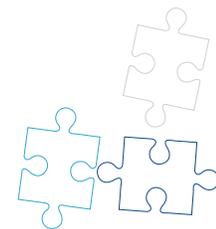


# References

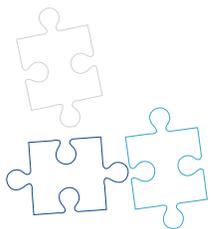
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