

# BUILDING A **BETTER FUTURE TOGETHER** DOMINICAN REPUBLIC POLICY NOTES





October 2016

**BUILDING A**  
**BETTER FUTURE TOGETHER**  
**DOMINICAN REPUBLIC POLICY NOTES**



# Contents

<b>Acknowledgements</b>	<b>11</b>
<b>Foreword</b>	<b>13</b>
<b>Chapter One: Overview</b>	<b>15</b>
Introduction	15
The Diagnostic: High Growth, Not as Inclusive	16
Why Has Growth Not Led To Better Equity Outcomes?	16
Puzzling Labor Market Outcomes: Rising productivity and stagnant real wages	17
A Domestic Economy with Weak Inter-Sectoral Linkages	19
Insufficient and Inefficient Public Spending on Social and Infrastructure Services	20
Factors that May Affect the Sustainability of Growth and Shared Prosperity	24
<b>Chapter Two: Toward More Evenly Shared Prosperity in the Dominican Republic</b>	<b>31</b>
Introduction	31
Country context	31
Challenges	34
Policy Directions	44
<b>Chapter Three: Challenges and Opportunities to Improve the Quality and Efficiency of Social Services</b>	<b>47</b>
Introduction	47
<b>Education</b>	<b>48</b>
Context: Main Achievements	48
Challenges	49
Policy Directions	51
<b>Health</b>	<b>53</b>
Context	53
Challenges	54
Policy Directions	57
<b>Social Protection</b>	<b>58</b>
Context	58
Challenges	60
Policy Directions	61

<b>Chapter Four: Policy Directions for Improving the Quality and Availability of Basic Infrastructure Services</b>	<b>67</b>
Introduction	67
<b>Water and Sanitation</b>	<b>68</b>
Country Context	68
Challenges	70
Policy Directions	74
<b>Electricity Sector</b>	<b>75</b>
Country Context	75
Challenges	76
Policy Directions	82
<b>Information and Communication Technologies</b>	<b>84</b>
Country Context	84
Challenges	85
Policy Directions	86
<b>Chapter Five: Policy Directions for Sustainable and Inclusive Growth in the Dominican Republic</b>	<b>91</b>
Introduction	91
<b>Macro-fiscal Sustainability</b>	<b>92</b>
Country Context	92
Challenges	96
Policy Directions	97
<b>Competitiveness and Inclusive Growth</b>	<b>98</b>
Country Context	98
Challenges	101
Policy Directions	106
<b>Environmental Sustainability and Resilience to Climate Change</b>	<b>109</b>
Country Context	109
Challenges	110
Policy Directions	111
<b>List of Figures</b>	
1.1 Fast growth in income per capita versus slowly declining poverty and inequality	17
1.2 Rising productivity and declining real earnings per hour in two sectors: 1996-2013	18
1.3 Output per person employed in the DR and LAC: 2001-2014	19
1.4 Technological composition of exports	19
1.5 Tax revenues as percentage of GDP in LAC in 2012	21
1.6 Composition of taxes and GNI per capita across countries	21
1.7 Social spending as a share of GDP across countries	21
1.8 How progressive are the DR's social programs?	23
2.1 Annualized growth incidence curve, the Dominican Republic, 2005-2013	32
2.2 Ratio of the average income of the richest 10% and poorest 10%, 2005 and 2013	33
2.3 Contribution of circumstances to inequality of opportunities in the Dominican Republic, 2015	33
2.4 Socioeconomic breakdown of the population, the Dominican Republic and LAC, 2005 and 2013	34
2.5 Asset-based conceptual framework for the generation of household income	35
2.6 Contribution to the change in moderate poverty in the DR, by component, 2005-2010 and 2010-2015	35
2.7 Median wages per hour for the bottom 40 and the top 60 (in Dominican pesos of 2007)	38

2.8	Sources of income by quintile in the Dominican Republic, 2013	39
2.9	Concentration shares of direct transfers by decile, various countries	39
2.10	Climate change vulnerability index (IVACC) and the quality of life index (ICV)	40
2.11	Policy areas that affect household income-generating capacity	41
2.12	Rates of moderate poverty in urban and rural areas in the Dominican Republic	43
2.13	Percentage of households categorized as extreme poor (ICV1) and Human Development Index (HDI) by province	44
2.14	Share of public investment and population, and poverty rate by province	45
3.1	Education outcomes in the DR	51
3.2	Overage and School Failure, 2013-2014	51
3.3	Maternal Health Care & Mortality Rates: DR, LAC, and UMIC 2014 (%)	55
3.4	Trends in per capita public spending on health (PPP) from 2000 to 2014: DR relative to LAC and UMIC	56
3.5	Evolution of coverage of Progresando con Solidaridad components	59
3.6	Coverage of health insurance by scheme and gender	59
4.1	Comparison of water access rates to improved water sources for urban and rural areas	69
4.2	Comparison of sanitation access rates to improved facilities for urban and rural areas	69
4.3	Access to water inside the house and poverty rates in all provinces of the DR	71
4.4	Open defecation and poverty rates in all provinces of the DR	71
4.5	Sewerage lag index comparing sewerage and piped water by service provider	71
4.6	Proportion of current expenses financed by the Central Government for different service providers (%)	73
4.7	Proportion of income coming from water and sewerage services (%) by service provider	73
4.8	Evolution of Electricity Generation by Source	76
4.9	System Average Interruption Frequency Index (SAIFI) for Comparable Countries in 2015	77
4.10	System Average Interruption Duration Index (SAIDI) for Comparable Countries in 2015	77
4.11	EDES Commercial Data	79
4.12	Total Power System Losses in Comparable Countries (2014)	80
4.13	Residential Electricity Prices in Comparable Countries in 2014 (US\$/kWh)	80
4.14	Monetary Transfer to the Electricity Sector 2009 - 2015	81
4.15	Electricity Subsidies Pre-tax in Comparable Countries (% of GDP, average 2011-13)	81
4.16	Submarine Cable Map for the DR	84
4.17	Internet Penetration (%)	86
4.18	Broadband prices versus income	86
5.1	Factors that Can Affect the Sustainability of Growth	92
5.2	Dominican Republic Fiscal Accounts, 2012-2017	94
5.3	Dominican Republic Debt Structure, Various Years	95
5.4	GDP Composition 2008 -2015 - Contribution to Real GDP Growth	99
5.5	Growth accounting decomposition (Solow model)	100
5.6	Restrictiveness of Product Market Regulation (PMR) for the Dominican Republic	101
5.7	Real earnings index and productivity (output per worker) index, 2002=100, 1991-2013	102
5.8	Actual and benchmarked index of market concentration in 17 non-tradable industries in selected countries	104
5.9	Restrictiveness of Product Market Regulations by components/sub-components for the Dominican Republic	105

## List of Tables

1.1	Summary of Policy Directions	25
2.1	Loss of purchasing power of wages by quintile, Sept. 2000 – Sept. 2015	40
3.1	Percentage of students in the lowest level of performance in reading and math in latest regional assessment (2013)	50
3.2	DR Health Insurance Coverage: 2007 and 2016 by Insurance Regime	54

4.1	Central government allocations and external resources spent in the WSS sector (1990-2014)	70
4.2	Average tariff for metered water supply and sewerage service, based on a 15 m <sup>3</sup> water consumption	72
4.3	Contributions GoRD to EDEs	79
4.4	Country Incomes and Expenses	81

## List of Boxes

1	The 'Cuba Effect' on Tourism	103
---	------------------------------	-----

## Annexes

	Annex I: Education and "Ninis" in the DR	64
	Annex II: Education and Gender	65
	Annex III: Health: Extending Insurance to Include the Informal Sector: Examples from Other Countries	66
	Annex IV: Access levels of households to WSS and poverty rates by province	88
	Annex V: Targeted water metering programs to become more efficient and increase revenues	89

# Acronyms

ADESS	Administrator for Social Subsidies
AECID	Spanish Agency for International Development Cooperation
ASOCARES	Rural Water Community Associations
BAR	Rural Broadband Connectivity Project
BIT	Bilateral Investment Treaties
CAASD	Corporation of Aqueduct and Sewage System of Santo Domingo
CAFTA-DR	Dominican Republic-Central America Free Trade Agreement
CAIPI	Comprehensive Early Childhood Care Centers
CARIFORUM-EU	Economic Partnership Agreement between the Caribbean Forum and the European Community
CC	Climate Change
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CCSS	Costa Rica Social Security
CCT	Conditional Cash Transfers
CDEEE	Corporation of State-Owned Electricity Companies
CEDLAS	Center for Distributive, Labor and Social Studies
CEI-RD	Export and Import Center of the Dominican Republic
CEPM	Energy Consortium Punta Cana-Macao
CEQ	Commitment to Equity Assessment
CIAT	Inter-American Center of Tax Administrations
CNE	National Energy Commission
COAAROM	Water and Sewer Corporation of La Romana
CODIREyMAPS	Board for the Reform and Modernization of APS Sector and Water Table
CONARE	National Board for State Reform
CORAA	Water and Sewer Corporations
CORAABO	Water and Sewer Corporation of Boca Chica
CORAAMOCA	Water and Sewer Corporation of Moca
CORAAPLATA	Water and Sewer Corporation of Puerto Plata
CORAASAN	Water and Sewer Corporation of Santiago
CORAAVEGA	Water and Sewer Corporation of La Vega
CPC	PROSOLI Training Center
CR	Contributory Regime
CRC	Community Report Cards
CSA	Climate-Smart Agriculture
CSR	Contributory-Subsidized Regime

CTC	Community Technology Centers
CTP	Technical Committee on Poverty
DGII	General Directorate of Internal Revenue
DIGEPEP	Directorate of Special Programs for the President's Office
DIGEPRES	General Directorate of Budget
DRM	Disaster-Risk Management
DRR	Disaster Risk Reduction
DWPE	Detention Without Physical Examination
ECD	Early Childhood Development
ECLAC	Economic Commission for Latin America and the Caribbean
EDEs	Electricity Distribution Companies
EMBIG	Emerging Market Bond Index Global
EMS	Upper Secondary Education
END	National Development Strategy 2030
ENDESA	National Demographic and Health Survey
ENFT	National Labor Force Survey
ENIGH	National Survey of Household Incomes and Expenditures
EPA	Economic Partnership Agreement
EPA	Export Promotion Agency
ETED	Dominican Electricity Transmission Company
FDA	Food and Drug Administration
FDI	Foreign Direct Investment
FDT	Telecommunication Development Fund
GCPS	Social Cabinet
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GNI	Gross National Income
GNP	Gross National Product
GoDR	Government of the Dominican Republic
Hacienda	Ministry of Finance
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HOI	Human Opportunity Index
HR	Human Resources
IADB	Inter-American Development Bank
ICT	Information and Communication Technologies
ICV	Quality of Life Index
IDEC	Dominican Initiative for Quality Education
IMF	International Monetary Fund
INAFOCAM	National Institute for Formation and Teacher Training
INAIFI	National Institute for Early Childhood Comprehensive Care
INAPA	National Institute of Potable Water and Sewers
INDC	Intended Nationally Determined Contribution
INDOTEL	Dominican Institute of Telecommunications
INFOTEP	National Institute of Technical and Vocational Training
ISFODOSU	Salomé Ureña Teacher Training Institute
IT-ITES	Information Technology and Information Technology-Enabled Services
IVACC	Climate Change Vulnerability Index
IZA	Institute for the Study of Labor

LAC	Latin America and the Caribbean
M&E	Monitoring and Evaluation
MEM	Ministry of Energy and Mines
MEPyD	Ministry of Economy, Planning and Development
MESCyT	Ministry of Superior Education, Science and Technology
MFA	Multifibre Arrangement
MIC	Ministry of Industry and Commerce
MINERD	Ministry of Education
MMR	Maternal Mortality Rate
MOH	Ministry of Public Health
MOPC	Ministry of Works
MSME	Micro, Small and Medium Enterprises
NAP	Network Access Point
NEC	National Education Council
NEP	National Education Pact
NHI / SENASA	National Health Insurance
NHS	National Health Services
Nini	Neither studying nor working
NPLs	Non-Performing Loans
NSPD	New Dominican Budgeting System
OCDE	Organization for Economic Co-operation and Development
PAHO/WHO	Pan American Health Organization- World Health Organization
PASCT	Water and Sanitation in Tourist Areas Project
PEFAs	Public Expenditure and Financial Accountability Assessments
PIB	Gross Domestic Product
PISA	Program for International Student Assessment
PMR	Product Market Regulation
POS	Point of Sale
pp	Percentage Points
PPAs	Power Purchase Agreements
PPP	Purchasing Power Parity
PPP	Public Private Partnership
PROMESE/CAL	Program of Essential Medicines/Center for Logistical Support
PROSOLI	Integrated Project for Social Protection and Promotion (Progressing with Solidarity)
RBF	Results Based Financing
RHS	Regional Health Services
ROA	Returns on Assets
ROE	Returns on Equity
ROSC	Report on the Observance of Standards and Codes
SEDLAC	Socio-Economic Database for Latin America and the Caribbean
SENI	National Interconnection Electricity System
SEZ	Special Economic Zones
SIASAR	Rural Water and Sanitation Information System
SIE	Superintendence of Electricity
SIGEF	Integrated System of Financial Management
SIME	Integrated Monitoring and Evaluation System
SISALRIL	Superintendence of Health and Labor Risks
SISDOM	System of Social Indicators
SISKLOR	Residual Chlorine Monitoring System

SISMOPA	Water Potability Monitoring System
SISVICA	Water Quality Monitoring System
SIUBEN	Single Beneficiary Selection System
SME	Small and Medium-Sized Enterprises
SN-PMR	National System for Disaster Prevention, Mitigation and Response
SOE	State-owned Enterprises
SP	Social Protection
SPS	Sanitary and Phytosanitary Measures
SR	Subsidized Regime
TADAT	Tax Administration Diagnostic Assessment Tool
TB	Tuberculosis
TERCE	Third Regional Comparative and Explanatory Study
TFP	Total-Factor Productivity
UMIC	Upper Middle Income Countries
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value-Added Tax (ITBIS)
WDI	World Development Indicators
WSS	Water Supply and Sanitation
WTO	World Trade Organization

# Acknowledgements

This set of policy notes for the Dominican Republic (DR) is an initiative of the Caribbean Country Management Unit at the World Bank Group and aims to provide the incoming Administration with a selective diagnostic of the country's current challenges and an independent set of policy recommendations to contribute to the nation's development process. The policy notes were written by a team led by Francisco Carneiro, Lead Economist and Program Leader for Macro-fiscal Sustainability and Resilience, and Cecile Niang, Program Leader for Growth, both from the Caribbean Country Management Unit. The core team included Gianluca Mele, Christine Lao Pena, Mark Lambrides, Laura Berman, Juan Carlos Parra Osorio, and Jean-Martin Brault.

The Overview was prepared by Francisco Carneiro, Cecile Niang, and Gianluca Mele with inputs from Leyla Castillo, Onur Erdem, Alejandro Espinosa-Wang, Andrea Gallina, Jennifer Keller, Jonna Maria Lundvall, Luiz Edgard Oliveira, José-Daniel Reyes and McDonald Benjamin. Policy Note 2 (*Toward more evenly shared prosperity in the Dominican Republic*), was prepared by Juan Carlos Parra Osorio with research assistance from Giselle del Carmen and inputs from José-Daniel Reyes, John Daniel Pollner, Oscar Calvo, McDonald Benjamin, Miguel Sánchez, Juan Barón, Lucía Solbes and Hugo Brousset. Policy Note 3 (*Challenges and Opportunities to Improve the Quality and Efficiency of Social Services*), was prepared by Christine Lao Pena, Juan Barón, Axelle Latortue, Hugo Brousset, Carine Clert, Miriam Montenegro, Lucia Solbes, with inputs from Rafael de Hoyos, Jonna Maria Lundwall, Carmen Carpio, Alfredo Perazzo, Natalia Santiago-Bench and McDonald Benjamin. Policy Note 4 (*Policy Options for Improving the Quality and Availability of Basic Infrastructure Services*) was prepared by Mark Lambrides, Laura Berman, Jean-Martin Brault, Gabriel Pinto and McDonald Benjamin, with inputs from Oscar Alvarado, Elena Gasol Ramos, Doyle Gallegos, and Rocío Sánchez Viguera. Policy Note 5 (*Policy Options for Sustainable and Inclusive Growth*), was prepared by Francisco Carneiro, Cecile Niang, and Gianluca Mele with inputs from Graciela Miralles Murciego, Tanja K. Goodwin, Paul Maximilian Bisca, Jean-Martin Brault, Leyla Castillo, Alejandro Espinosa-Wang, Oscar A. Ishizawa, Jennifer Keller, Jonna Maria Lundvall, Marialisa Motta, Luiz Edgard Oliveira, Miria Pigato, Daniel Reyes, Maritza A. Rodriguez, Gerardo Segura, Raha Shahidsaless, Remi Trier, Rafael Van der Borght, Eli Weiss and McDonald Benjamin.

The team is grateful to McDonald Benjamin, Country Manager for the Dominican Republic at the time of writing, and the peer reviewers Miguel Sánchez (Senior Economist, GMFDR), and John Anderson (Economist, GTCDR) for insightful advice. Inputs received from Alessandro Legrottaglie, Marialisa Motta, Miria Pigato, Sabine Hader, Laurent Mselatti and other members of the Dominican Republic Country Team at the World Bank during the preparation of the policy notes are also gratefully acknowledged.

The team is especially grateful for the valuable feedback received from the Authorities at an initial workshop on the policy notes in February 2016, attended by high-level officials from the Ministry of the Presidency; the Ministry of Economy, Planning and Development (MEPYD); the Ministry of Finance; the Ministry of Energy and Mines; the Ministry of Industry and Commerce; the Ministry of Education; the Ministry of Higher Education, Science and Technology; the Social Cabinet; the Central Bank of the Dominican Republic; the Superintendency for Electricity; the National Social Security Council; the National Council on Climate Change; the National Health Insurance Service; the National Institute for Professional Technical Training; the Social Subsidies Administration Unit; the Progressing with Solidarity (PROSOLI) Program, and the Single Beneficiary Selection System (SIUBEN). The team would like to express particular thanks to Mr. Juan Monegro, Vice Minister for Planning in MEPYD at the time of writing, and to Dr. Magdalena Lizardo, Director of the Advisory Unit for Economic and Social Analysis in MEPYD, who coordinated the Authorities' feedback and suggestions to the team.

The work was carried out under the overall supervision of Marialisa Motta, Practice Manager, Trade and Competitiveness Global Practice, and Miria Pigato, Practice Manager, Macroeconomics and Fiscal Management Global Practice. Sophie Sirtaine, Country Director for the Caribbean Region, provided strategic guidance and advice to the team. McDonald Benjamin, Country Manager for the Dominican Republic at the time of writing, and Alessandro Legrottaglie, Country Manager for the Dominican Republic from September 2016, supported the team and guided the process of consultations with the country authorities. Mohammed Edreess Sahak formatted the final version of the report. Elisabeth Mekonnen, María Hermann, Virginia Ricart, Omar Jiménez and Carla Bordas Portela provided logistical support to the team.

# Foreword

The Dominican Republic has enjoyed one of the strongest growth rates in Latin America and the Caribbean over the past 25 years, averaging over six percent in the 1990s and over 5 percent since 2000. Growth has accelerated again since 2014, to 7 percent per annum, raising the country's income per capita to 92 percent of the regional average, versus 57 percent in 1992. Yet, in spite of this remarkable economic performance, economic growth in the Dominican Republic has not been as inclusive as in the rest of the region; one in three Dominicans remains below the poverty line.

We believe that the key challenge that the Dominican economy faces at this time is to understand this conundrum of rapid growth with limited poverty reduction and to address it through policies that both sustain economic growth while making it more inclusive. These Policy Notes are designed to support this process. They point to a unique combination of factors in the Dominican Republic, notably the country's labor market dynamics, the structure of its economy, the distributive impact of its fiscal policies, and its vulnerability to external shocks, that help to explain why poverty has not fallen faster in spite of rapid growth.

The start of a new Administration is invariably a time at which plans with respect to development are reviewed for the medium term. Thus these Policy Notes have been prepared at this time with a view to supporting the new Administration for 2016-20 by analyzing areas in which policies and programs can potentially have a greater and better impact in achieving inclusive and sustained growth. We believe that there are four areas of particular interest moving forward.

First, we argue that the inclusiveness of growth can be enhanced by cross-cutting policies aimed at increasing competitiveness and productivity, with a focus on the sectors that generate most of the jobs and employ workers from poorer households. There is a spectrum of cross-cutting policy options for enhancing shared prosperity that relate to creating and promoting economic linkages between special economic zones and the rest of the economy, equipping the labor force with the skills needed in the labor market, expanding financial access for small and micro enterprises, improving the prospects for exports, increasing cohesion and territorial planning to reduce the persistent regional differences, and reducing gender gaps in the labor market.

Second, we believe it will be important to continue strengthening the quality and efficiency of social services. For example, in education there are a range of policy options related to expanding early childhood services, increasing student retention, upgrading pedagogical instruction and sharpening the focus on learning outcomes. Priorities in the area of health relate to institutional strengthening for sector management as well as increasing public resources for health to achieve universal coverage while also enhancing the results orientation and efficiency of public spending on health. In the area of social protection there are various policy options that can serve to reinforce inter-sectoral coordination, for a more efficient and integrated social service delivery, enhance targeting and ensure full coverage of the extreme poor.

The third key area is improving the quality and availability of basic infrastructure services, notably water supply and sanitation as well as electricity services and, in a modern economy also information, communication and technology services. These are all essential to ensure inclusive and sustained growth. There are important policy options that relate to strengthening sector institutions and governance, as well as ensuring affordable, high-quality coverage in all three areas, while reducing subsidies and improving financial performance.

Finally, the fourth key area relates to policy choices to ensure that development is sustainable, whether in relation to macro-fiscal sustainability, competitiveness in a global economy, or to environmental sustainability in a context of climate change and vulnerability to natural disasters.

The Dominican Republic is well placed to build on its successes and advance on an inclusive growth agenda. A number of interventions are highlighted in the Policy Notes that are already proving successful. In other cases, relatively small but persistent adjustments in policy can mean the difference between achieving impact and remaining in the status quo. With these Policy Notes, the World Bank hopes to inform the national policy dialogue on how to advance on the most pressing challenge that the Dominican Republic faces at this time, namely to sustain its exemplary growth while ensuring that this growth is inclusive and brings greater prosperity to all its citizens. It is our sincere hope that the analysis and policy options presented in these Policy Notes can contribute to breaking the cycles of poverty and achieving a more prosperous future for all the people of the Dominican Republic.



*Jorge Familiar Calderon*  
*Vice President, Latin America and the Caribbean*

# Chapter 1.

## Overview

### Introduction

**In preparing these policy notes, the World Bank intends to provide the incoming administration with some considerations and recommendations on key development policy issues.** The World Bank has been a long-time partner of the Dominican Republic (DR), supporting its development process through a fruitful engagement that involves budget support, investment projects and advisory services. For years, World Bank experts have studied the Dominican economy and provided diagnosis that have helped in many instances to inform important reforms. The start of a new administration is invariably a time at which plans with respect to development are reviewed for the medium term. The inauguration of the new administration for 2016-20 is, therefore, the occasion for a new set of policy notes that will offer the Dominican Government and stakeholders the World Bank's perspectives on the country context and recent advances in key areas, as well as some of the key remaining challenges and policy options for how to address them.

**The focus of these policy notes is on the challenges that need to be overcome and the policy options that could be pursued to keep the Dominican Republic on a path of sustainable and inclusive growth.** The assessment in this new set of policy notes is based on the insights of World Bank experts on which policies could support the eradication of extreme poverty and the

promotion of shared prosperity in the DR by improving the quality of public service delivery, increasing the competitiveness of the economy, improving resilience to economic and climate shocks, and making growth more inclusive. In line with those objectives, the sectors and thematic areas covered in the policy notes include: (i) recent trends in poverty and shared prosperity; (ii) the quality and coverage of public spending on the social sectors (education, health, and social protection); (iii) an assessment of the factors that could affect the quality and efficiency of infrastructure services in the sectors of water and sanitation, and electricity; and (iv) the factors that could affect the sustainability of growth from an economic, social, and environmental and climate resilience points of view. Each policy note describes succinctly the current country context, what the existing main challenges are in each sector, and what the focus of policy should be to secure sustainable and inclusive growth.

**This overview section sets the stage for the individual policy notes and highlights some of the topics that help explain current economic and social outcomes in the Dominican Republic.** In order to place the policy notes into context, this section reviews the Dominican Republic's recent economic performance and its social and poverty outcomes. It starts with a brief diagnostic of why, in spite of remarkably high economic growth rates, the DR has not seen faster improvements in living standards and better equity outcomes. The main factors that contribute to this general state of affairs are highlighted, including

those that are associated with the performance of the DR's labor markets, the degree of inter-sectoral linkages in the domestic economy and how this could be a factor that affects growth and poverty outcomes, and the efficiency of public spending in the social and infrastructure sectors. Finally, this overview lists the factors that may affect the sustainability of growth and shared prosperity and that should deserve the authorities' attention.

## The Diagnostic: High Growth, Not as Inclusive

**The Dominican Republic has enjoyed one of the strongest growth rates in Latin America and the Caribbean over the past 25 years.** Between 1992 and the year 2000, the Dominican Republic economy grew at an average rate of 6.7% per annum, making it the top performer in the region. In the period 2001-2013, growth remained high at an average rate of 5.1%, placing the Dominican economy in 4th place in the group of top growth performers (after Panama, Argentina and Peru). This good performance got even better more recently when economic growth rates averaged 7% in 2014-15 fueled by strong domestic demand. This overall dynamic growth has enabled a convergence of the DR's GNI per capita (US\$6,198 in 2015) with that of the region,<sup>1</sup> from 57% in 1992 to 90% of the regional average in 2015. In fact, estimates show that if the pace of growth observed during the past five years continues, the gap would disappear by 2020.

**In spite of this remarkable economic performance, growth has not been inclusive.** In 2000 the poverty incidence in the Dominican Republic was 32%. In the wake of the banking crisis of 2003-04, the country's GDP that had grown by 6% in 2002 contracted by 0.3% in 2003. As a result, almost one million people moved into poverty and the poverty rate reached 50% of the population in 2004. When the economy recovered after the crisis, poverty rates began to fall slowly and have only returned to the pre-crisis level in 2015 (see Figure 1.1),<sup>2</sup> but above the average for LAC.<sup>3</sup> At the same time, it is worth noticing that inequality improved between 2000 and 2015 (with the Gini

index falling from 0.507 to 0.455). There is also evidence that income growth in the lower quintiles has been faster than in the richer strata of the population between 2005 and 2015; yet, this has been insufficient to compensate for the effects of the 2003 crisis, which disproportionately affected the poor. Another important characteristic of the DR is the limited upward economic mobility. Over the past decade and a half, just under 7% of the population in the DR moved up in the income ranks (e.g., from vulnerable to middle class), vis-à-vis 41% in the LAC Region, which is a striking fact in light of the rapid increase in the country's GNI per capita.

**Over the last two years, poverty declined substantially for the first time since 2000.** The *Policy Note on Poverty and Shared Prosperity* highlights that, after remaining above 40% since the crisis observed in 2003 in the DR, poverty calculations for 2014 point to a sizeable one-year reduction and data for 2015 suggest a continued reduction in poverty. According to the latest official data available, monetary poverty declined to 36.4% in 2014, dropping further to 32.3% in 2015. Extreme poverty declined less, moving from 8.4% in 2014 to 7% in 2015. Factors cited to explain the sizable drop in the overall poverty rate include the highest rate of economic growth in the country among LAC countries during these two years,<sup>4</sup> inflation below the target range of the Central Bank, a favorable external scenario with low oil prices (which boosted disposal income), high public investment in construction and remodeling of schools (which contributed to job creation), and school meal programs. This confluence of factors seems to have led to changes in labor and non-labor income and coincided with demographic shifts, all contributing to a decrease in poverty for the first time since 2000.

## Why Has Growth Not Led To Better Equity Outcomes?

**The combination of high economic growth and stubborn poverty rates can be attributed to a combination of factors that are unique to the DR.** Many emerging economies actually display a behavior that is similar to what is currently observed in the Dominican Republic where the elasticity of poverty with respect to

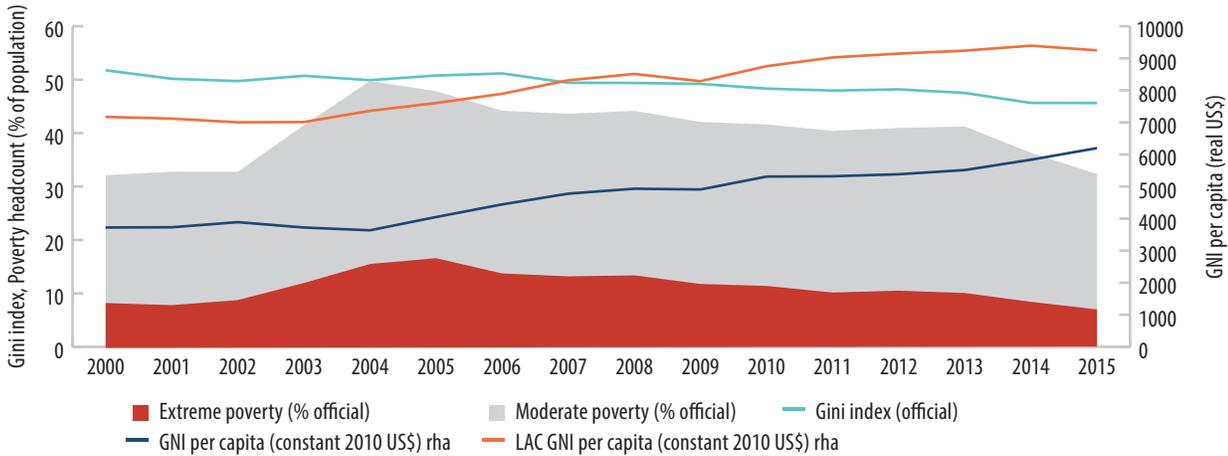
1 GNI per capita, Atlas Method. World Development Indicators.

2 World Bank, 2014a. "When Prosperity is not Shared: the Puzzle of the Weak Links between Growth and Equity in the Dominican Republic". Equity Assessment, The World Bank, Washington, DC.

3 See SEDLAC. <http://sedlac.econo.unlp.edu.ar/eng/statistics-detalle.php?idE=34>

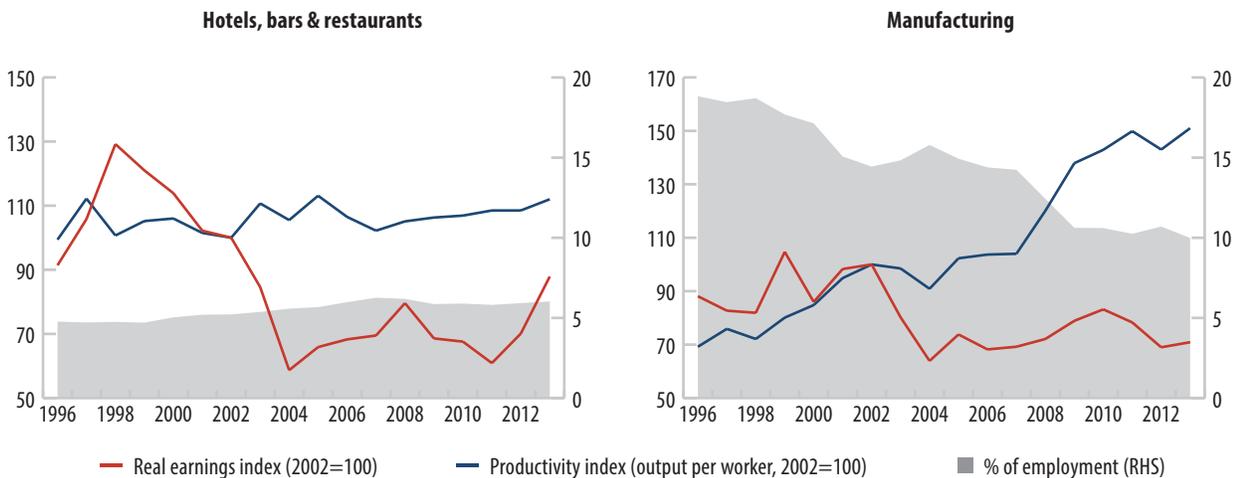
4 According to the Central Bank of the Dominican Republic, this remarkable growth performance has been above the country's potential growth since the last quarter of 2014.

Figure 1.1: Fast growth in income per capita versus slowly declining poverty and inequality



Source: Comité Técnico Interinstitucional de Medición de la Pobreza (CTP) and World Development Indicators.  
 Note: Poverty line used for the calculation is the level of \$4 PPP per capita per day.

Figure 1.2: Rising productivity and declining real earnings per hour in two sectors: 1996-2013



Source: World Bank staff estimations based on Central Bank of the Dominican Republic.

economic growth is low. The reasons for that are varied and country-specific. In the case of the DR, there are three major distinguishing features of the Dominican economy that help explain why poverty has not fallen faster in spite of rapid growth: (i) a labor market that does not seem to fully reward workers for their rising productivity; (ii) a domestic economy that does not enjoy enough intersectoral linkages; and (iii) a public sector that does not spend enough nor particularly well to reduce poverty. In addition, the DR remains highly exposed to natural disasters and exogenous shocks that, if not mitigated properly with the right policy choices, may affect the sustainability of growth and shared prosperity in the medium and longer terms.

### Puzzling Labor Market Outcomes: Rising productivity and stagnant real wages

**Real earnings declined after the financial crisis of 2003-04 and have not returned to their pre-crisis level, despite significant productivity gains.** Figure 1.2 illustrates this trend for, hospitality and manufacturing, two of the sectors that employ the most number of workers in the country. Real earnings per hour fell to RD\$10.3 in 2004 and only recovered nine years later to reach RD\$12 in 2013, compared with an average of RD\$16 over the 2001-2002 period. In fact, real earnings fell and/or remained stagnant in all sectors, including manufacturing as well as transport and communications, where productivity has grown since

2002.<sup>5</sup> Over the last fifteen years, the DR has completely filled the gap in terms of output per person employed that used to exist vis-à-vis the LAC average (see Figure 1.3).

**The stagnation of real wages has prevented the lower strata of the population from getting out of poverty.**

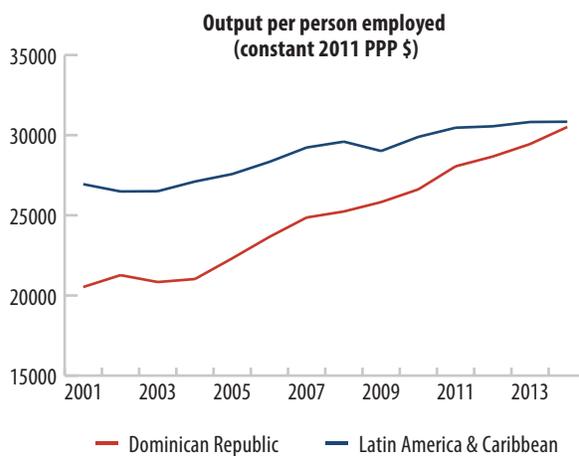
One of the possible reasons for this disconnect between productivity growth and real wage levels may include the reconversion of Special Economic Zones toward more capital-intensive industries. It can also be attributed to rising informality in the labor market, at least in the most low-skilled and labor-intensive sectors. Informality levels have increased slightly between 2004 (54%) and 2013 (56%), in spite of the effective establishment of the social security system. This may have to do with the fact that a large proportion of the new jobs have been created in low value added services (housekeeping, petty commerce), often as a result of self-employment. Informal workers in the DR are a very diverse group, and informality is widespread across sectors.<sup>6</sup> Some of the workers are forced to accept informal contracts, while some small business owners do not register their businesses because they find

it burdensome and costly, in particular those that do not plan to expand their businesses in the future. This may negatively impact productivity, as business fragmentation due to informality may prevent the attainment of economies of scale.

**High levels of informality push people outside of the social security safety nets, strip the state from potential tax resources and limit their participation in organized workers unions.** 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. On the other hand, in a context of rising real exchange rates in the aftermath of the crisis of 2003, keeping wages down may have been the only way to continue attracting FDI and preserving external competitiveness.

**The significant inflow of Haitian migrants to the DR over the past 15 years has fed a perception that migration might be affecting negatively wage levels and employment opportunities of Dominican citizens.** The empirical evidence that Haitian migrants are driving down real wages in the DR, however, is weak. The *Sustainability Policy Note* highlights that Haitian immigrant labor is largely limited to unskilled and informal employment in agriculture and construction, and that Haitian immigrants are more likely to be complements than substitutes to both capital as well as the relatively more skilled Dominican workers. In fact, simulations show that a “do no harm” approach to migration (with all migrants fully regularized to work in the DR) would have positive impacts on growth and wages, particularly for urban and low-skilled workers. On the other hand, if the DR were to close its borders altogether for migrants, the economy would suffer severe losses in export volume and consequently in terms of GDP growth.

Figure 1.3: Output per person employed in the DR and LAC: 2001-2014



Source: World Bank staff estimations based on World Development Indicators (WDI) data.

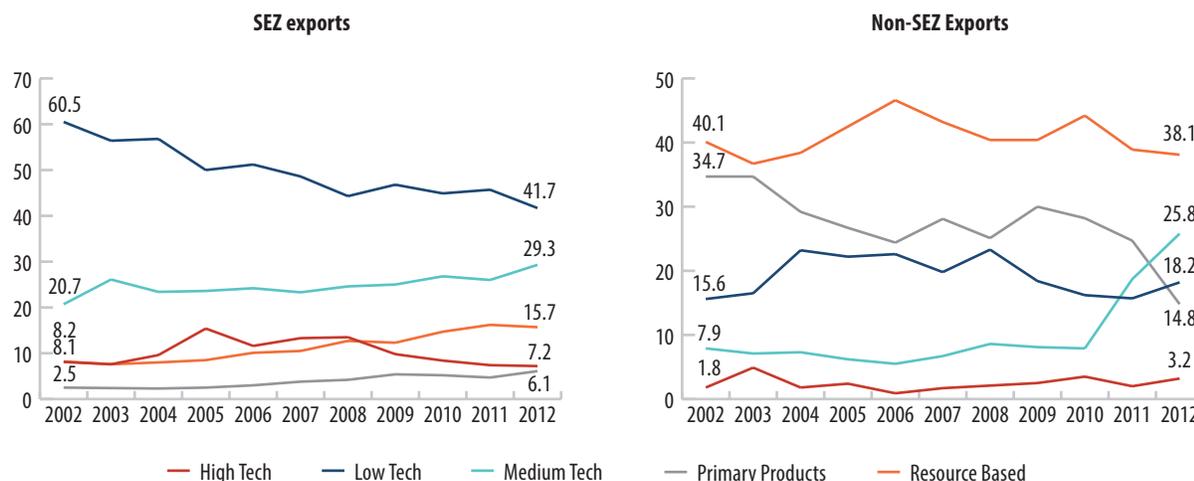
5 See Abdullaev and Estevão (2013), “Growth and Employment in the Dominican Republic: Options for a Job-Rich Growth.” IMF Working Paper WP/13/40. Washington, DC. It needs to be underlined that measuring productivity as output per worker (as in the charts above) or as output per hour (as done by Abdullaev and Estevão) leads to similar results. The public sector is the only sector in which real wages rose modestly, and at the same time it is the only sector in which productivity stagnated and indeed declined.

6 See Guzman (2007), *La informalidad en el Mercado laboral urbano de la República Dominicana*. Banco Central de la República Dominicana. Santo Domingo.

### A Domestic Economy with Weak Inter-Sectoral Linkages

**The disconnection between high value-added sectors (with limited job generation) and low value-added sectors (with informality and high employment growth) is a symptom of a segmented economy, evident also in the structure of exports.** Firms

Figure 1.4: Technological composition of exports



Note: These figures show the evolution of the technological content of the Dominican Republic's exports.  
Source: World Bank (2014b), a Trade Competitiveness Diagnostic for the Dominican Republic.

operating under Special Economic Zones (SEZ) produce and export higher value-added products when compared to exporters that are subject to the national regime. The former group specializes in sectors such as clothing, footwear, medical devices, and jewelry whereas the latter group specializes mostly in resource-based products, such as minerals (gold, ferronickel) and agricultural products (Figure 1.4). On the surface, the Dominican export basket looks well diversified in terms of products, but only a handful of goods are really meaningful in terms of export value. Manufactured products that require some level of industrial transformation typically come from SEZs: medical instruments, cigars, electrical circuit breakers, and T-shirts.

**Most of the activities in SEZs happen in isolation from the rest of the economy, reducing the potential for positive externalities and spillovers.** The literature on SEZs in the Dominican Republic discusses at length the lack of backward linkages,<sup>7</sup> although direct evidence is scant. Employing enterprise surveys, the World Bank

7 See Burgaud and Farole (2011), "When Trade Preferences and Tax Breaks Are No Longer Enough: The Challenge of Adjustment in the Dominican Republic's Free Zones". Chapter 7 in Farole and Akinci, Special Economic Zones: Progress, Emerging Challenges, and Future Directions. The World Bank. ISBN: 978-0-8213-8763-4; Sánchez-Ancochea (2012), "A Fast Herd and a Slow Tortoise? The Challenge of Upgrading in the Dominican Republic." *Studies in Comparative International Development*, 47, pp. 208–230; and World Bank (2016): "Special Economic Zones, Global Value Chains, and Domestic Linkages in the Dominican Republic".

(2014b) finds that Dominican FDI enterprises (most of them located in SEZs) import almost 70% of their inputs, compared to 49% in the Caribbean, 58% in Central America, and 43% in South America and Mexico.<sup>8</sup> SEZs are not buying inputs from domestic suppliers, which limits the potential for knowledge transmission, learning by doing processes and efficiency gains. Another tentative interpretation is that the lack of linkages with the rest of the economy may also indicate that most of the wealth generated in the export process remains in SEZ companies that are usually foreign owned.

**Above and beyond issues of inter-sectoral linkages in the domestic economy, the Dominican Republic faces challenges to improve its competitiveness in an increasingly globalized world.** While Dominican exports of goods and services have been increasing in value, their share of GDP has been eroding, from 35.8% in 1995 to 24.6% in 2015. Despite recent progress on the Doing Business rankings, the DR still has complex and expensive regulatory procedures, and weak legal institutions when compared to other countries in the region. For example, according to the 2017 Doing Business Report, in Santo Domingo the average cost to complete a procedure to enforce a contract is 40.9% of the demand, compared to

8 The authors look at the Dominican FDI companies (defined as those with a percentage of foreign ownership above 10% of social capital) by using World Bank-IFC Enterprise Surveys. The Dominican survey sample consists of only 57 observations; hence, the results should be interpreted with caution.

the 31.3% in the Latin America and the Caribbean region, and 21.3% in the OCDE. Other example is the average cost to complete a contract enforcement procedure. At the subnational level, the time to obtain the same permit from the Ministry of Works in four different cities varies from 52 to 158 days.<sup>9</sup> A number of challenges to achieve more open markets persist, both in relation to the regulatory framework to promote competition and its implementation. The sustainability policy note presents policy directions to increase competitiveness and unleash inclusive growth.

### Insufficient and Inefficient Public Spending on Social and Infrastructure Services

**With limited fiscal space the Dominican Republic has faced difficulties to conduct equity-enhancing public policies.** On the tax side, for example, the Dominican Republic is characterized by limited revenue generation and underperforms in relation to other countries in Latin America and the Caribbean in terms of revenue generation (Figure 1.5). Tax revenues have declined from an average of 15.1% of GDP in 2005-2008 to an average of 13.3% of GDP in 2009-2013. This is mostly explained by the dismantling of tariffs and duties in the context of the DR-CAFTA agreement. The Government has adopted a total of six tax reforms between 2004 and 2012, which however have not translated into significant tax collection gains. One of the most significant measures (in terms of revenue collection capacity) introduced was the increase in VAT rates from 12% to 16% (law 288-04) and then 18% (law 253-12), which is slightly progressive but any further increase would likely produce regressive effects.<sup>10</sup>

**The Dominican Republic relies heavily on indirect taxation, which is by nature a more regressive form of taxation.** Indirect taxes accounted for 63% of total tax revenues in 2013, compared to 71% in 2010. However, the VAT tax's productivity, measured as the percentage points of GDP collected for each percentage point of VAT rate, is dramatically low at 0.26, especially considering the high consumption to GDP ratio, averaging 93.3% in 2008-12. Reliance on indirect taxation is partly due to the

modest roles played by personal income taxes (featuring a relatively high exemption threshold) and corporate income taxes (with many companies in Special Economic Zones benefiting from exemptions). Large existing exemptions result in low effective tax rates. Tax revenues oscillate around 14% of GDP. The tax effort is considered low relative to lower-middle-income countries.<sup>11</sup> The Dominican Republic's revenue gap, measured as the difference between the current level of tax collections and the level that would result from achieving the tax effort prevailing in countries with the same income, moves around 7% of GDP. As depicted in Figure 1.6, a simple comparison with other countries shows that the Dominican Republic has lower indirect and direct tax revenues than some other countries with lower GNI per cap.

### On the expenditure side, a series of challenges limit the fiscal space to conduct redistributive policies.

First, the crisis of 2003 had a large fiscal cost, associated to the bailout of one of the main financial entities of the country, and the State has been devoting since 2007 around 1% of GDP to the recapitalization of the Central Bank. Second, while the Dominican Republic non-financial public sector debt stock declined from around 29% of GDP in 2003 (following the crisis) to 18% in 2007, it has been expanding again recently, reaching 34.4% of GDP in 2015. A third challenge is represented by inefficiencies in the electricity sector, which have entailed government transfers averaging 1.3% of GDP between 2009 and 2015. While the amount of transfers have fallen in recent years, due largely to the drop in electricity generation costs brought on largely by falling oil prices, transfers continue to be a large fiscal drain for the Government of Dominican Republic. Furthermore, due to the poor quality and limited availability of electricity service, businesses and residents resort to investing in backup generators and inverters if they can afford them, which increases costs, posing a serious burden for the competitiveness of Dominican companies and wellbeing of households. Finally, fiscal space has also been eroded by increasing current expenditure, on account of an upward wage bill and rising interest payments.

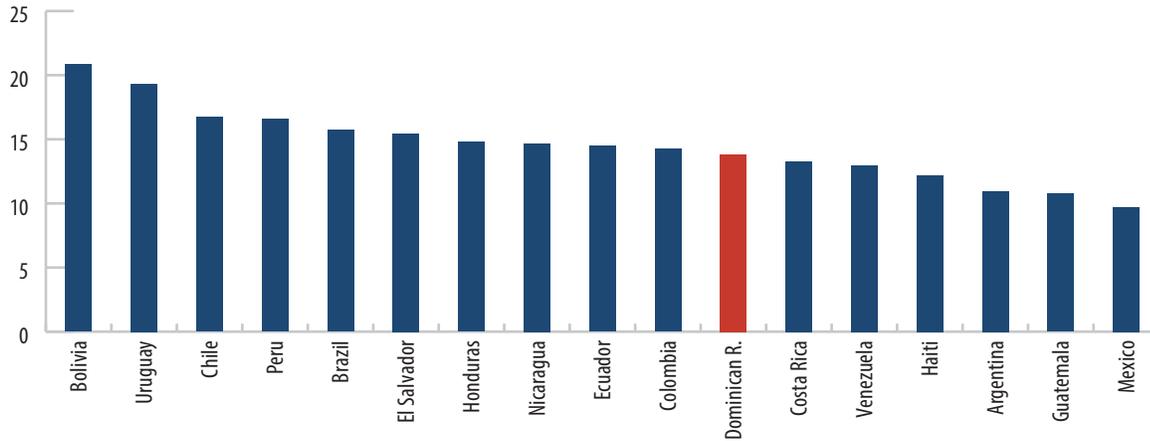
### Social spending in the Dominican Republic is low compared with regional standards, although it has increased relative to other sectors, in a context of

9 Doing Business in Central America and the Dominican Republic 2015. Dajabón: 158 days; Santo Domingo: 90 days; Higuey: 90 days; Santiago de los Caballeros: 52 days

10 According to micro-simulation exercises conducted by the Ministry of Economy, Planning and Development, with the support of the World Bank, in January 2013.

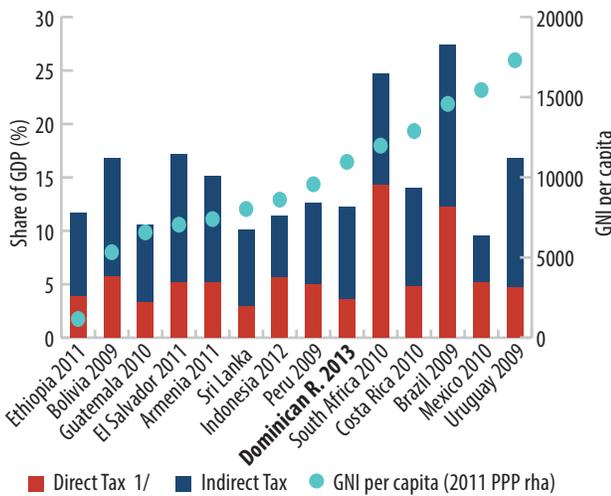
11 Tax effort is defined as the ratio of the actual revenue that a country collects to its tax capacity.

Figure 1.5: Tax revenues as percentage of GDP in LAC in 2012



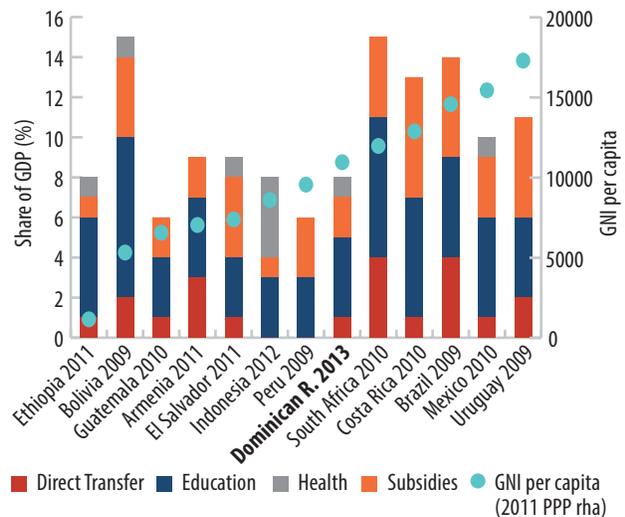
Source: CEPALStat.

Figure 1.6: Composition of taxes and GNI per capita across countries



Source: Authors' estimates and Lustig et al. (2013), Commitment to Equity (CEQ) Standard Indicators.

Figure 1.7: Social spending as a share of GDP across countries



Source: CEQ working papers (<http://www.commitmenttoequity.org>), Tulane University and World Bank staff calculations.

**relatively limited revenue generation.** In 2007-11, public expenditures averaged 2.3% of GDP on education and 1.6% of GDP on health, compared to regional averages of around 4.5% in each of these sectors. Starting in 2013, the Dominican Republic raised its budget allocations for education in response to popular demand to achieve the spending levels mandated by Education Law 66-97. Public expenditure in education increased from 2% of GDP in 2011 to 3.8% in 2013, a year in which around 60% of the additional resources were used to improve and expand infrastructure (Figure 1.7). Most of the funding went to the

primary education. On the other hand, economic spending (especially for transportation infrastructure) declined in 2013, partly reversing an upsurge in public spending that expanded the central government deficit to 6.6% of GDP 2012, prompting fiscal consolidation.

**The country has seen notable improvements in the coverage and provision of public education, as well as student learning; however, there is still a long way to go to improve education quality that delivers student learning.** The *Policy Note on Social Service*

*Delivery* describes a number of areas where progress has been achieved on the provision of social services and the gaps that remain to be addressed. For example, the net enrollment rate at the basic education level (6-13 year olds) was 95.5%, while at the secondary level (14-17 year olds) it increased from 49.8% to 64.4% between 2005 and 2015. However, the low level of resources for public education in the past as well and weaknesses in teacher training have led to an inadequate supply of high quality teachers and challenges for initial education coverage, among others. On the quality side, despite substantial progress in learning by Dominican students between 2006 and 2013 as captured by regional assessments, Dominican students continue to perform poorly and lag behind the other LAC countries, reflecting the weakness of the system in helping students develop basic cognitive skills (e.g. reading and math), in particular in early grades.

**Despite low health expenditures by international standards, the Dominican Republic has made important progress in expanding health-insurance coverage but certain key health outcomes remain low relative to its income level.** At 2.9% of GDP in 2014, public expenditures in health were lower in the Dominican Republic than in other countries with similar income levels (Figure 1.7). According to SISALRIL reports,<sup>12</sup> health insurance coverage increased from 9% in 2007 to almost 64% in June 2016. Since 2007, the number of persons covered by the Contributory Regime (CR) increased from 739,850 to 3,500,714 while the Subsidized Regime (SR) coverage for the poor increased from 35,706 to 3,308,606. The SR currently covers all the eligible poor registered in the Unique Beneficiary Information System (SIUBEN). However, there is significant scope to improve health outcomes in the country. For example, under age 5 mortality rates remain relatively high for a middle-income country—at 31 per 1,000 people as of 2015. Although the percentage of births attended by skilled personnel is higher than the regional average, according to data from the 2016 World Development Indicators, the DR's maternal mortality rate is significantly higher (93 per 100,000 live births) than the regional average (71 per 100,000 live births). Various assessments indicate that the majority of maternal deaths are preventable and that the quality of health services remains a major concern.

**Social assistance has moved in the right direction and experienced significant progress over the last decade.** At the time of the banking crisis of 2004 and its resulting sharp economic slowdown that plunged around 1.7 million Dominicans into poverty, most existing social-transfer programs were untargeted and unable to shield the vulnerable population from major shocks. The episode triggered a social safety net reform. The so-called *Solidaridad* program was established as a targeted cash-transfer scheme in 2005. The Government also introduced the Single Beneficiary Selection System (SIUBEN) as a targeting mechanism based on a life-quality index, created an independent Administrator for Social Subsidies (ADESS), and eliminated some existing untargeted programs. Over time, noncontributory programs expanded coverage significantly, with a particular focus on reaching the poorest in the last triennium. The food support component of the cash transfer program has progressively increased coverage while other new programs have been introduced and increased coverage like the Progress by Studying Bonus. Since 2012, the main conditional incentive for food support (*Comer es Primero*) added approximately 200,000 new households, reaching a total of 747,760 households by 2014.

**While coverage of social programs has increased, the main objective going forward should be on making existing programs more progressive.** Figure 1.8 illustrates how regressive or progressive each social program in the Dominican Republic is. A progressive social program has a negative coefficient, which means that they contribute to increase the disposable income per capita of the poor more than they benefit the wealthier. While a large number of social programs in the DR appear to be progressive in absolute terms, with a coefficient below -0.1, a few others remain largely regressive. On the progressive side, one can find most components of education expenditures—except for tertiary education, which is highly regressive, as in most countries—and all health-spending components. The most progressive cash transfer is the *Incentivo a la Asistencia Escolar*, followed by *Bonogas Chofer* and *Comer es Primero*. *Bonogas Hogar* and *Bono Luz* are practically neutral in terms of redistribution; *Incentivo a la Marina* is regressive. Both the indirect electricity subsidy and tax expenditures are highly regressive in the sense that they contribute to increasing the disposable income per capita of the wealthier proportionately more than they benefit the poor. This is concerning not only because

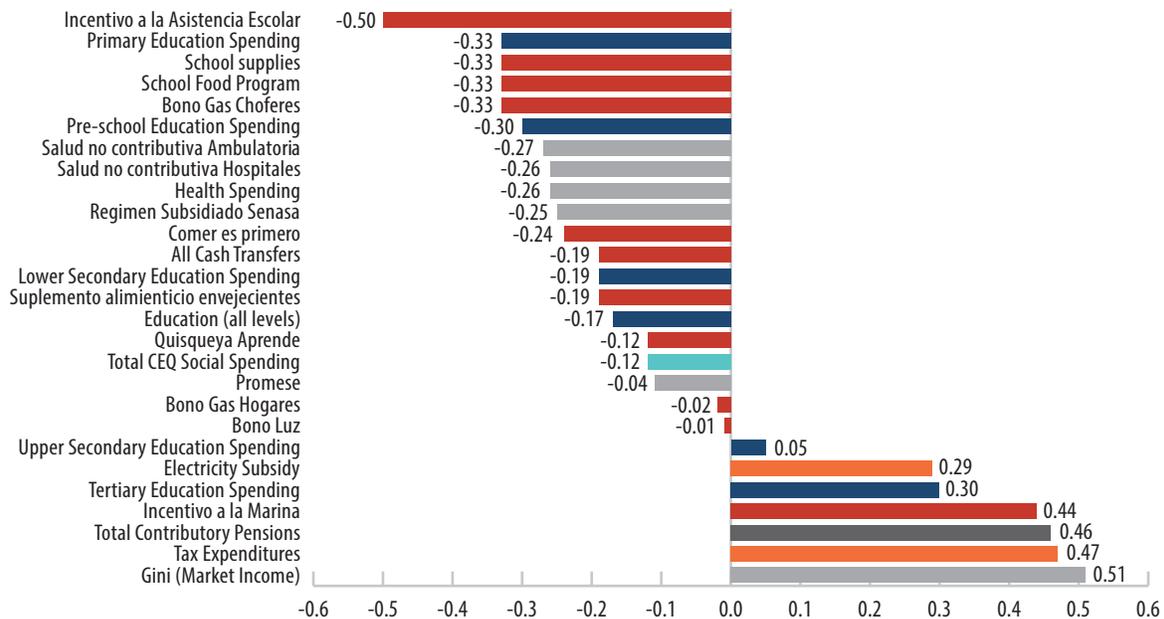
of the regressive nature of these subsidies but mostly because long-standing electricity-sector inefficiencies have been a major drag on other public spending that could benefit the poor; for example, the electricity sector deficit in 2012 (1.54% of GDP) represented three times the amount spent on social subsidies and CCTs, the entire health budget (excluding social security), and two-thirds of the amount devoted to education.

**In the infrastructure sectors, there are major gaps in terms of quality and reliability.** While access to water and sanitation services and electricity is considered to be high in the country, there is a widespread perception that the efficiency, quality and reliability of the largely publicly provided service is generally poor. There are a number of reasons for this state of affairs in the infrastructure sector, ranging from institutional and governance weaknesses, commercial and financial management, price setting and cost recovery issues, and the provision of transfers and subsidies. The sub-optimal quality of these infrastructure services and lack of reliability, together with the high cost of largely privately provided internet access represent a tremendous burden on households and businesses alike representing a major drag on the country's long-term growth potential and environmental quality and

sustainability. In general terms, the current situation has negative impacts on the citizens' living standards and the productivity of workers and firms. Deficiencies in the quality and reliability of water and electricity services can affect negatively the main engines of growth in the country, including tourism, agriculture, manufacturing, and drive away foreign direct investment.

**Overall, there are a number of common challenges in the provision of public social and infrastructure services.** Despite improvements in living conditions of the population there is a strong demand to improve social and infrastructure service delivery. The *Policy Notes on Social Service Delivery and on Infrastructure Services* emphasize the areas that need the most attention. Enhancing the quality of services would require corresponding improvements in (i) the efficiency of both resource allocation and public spending; (ii) institutional capacity and coordination to improve synergies within and across sectors, as well as among public and private stakeholders; and (iii) cost recovery, especially in water and sanitation, and electricity. Strengthening governance of the sectors could also benefit from increasing the strategic use of various citizen participation tools to increase transparency and strengthen accountability.

Figure 1.8: How progressive are the DR's social programs?



Source: Authors' estimates based in ENIGH 2007.  
 Note: Concentration coefficients are calculated in the same manner as the Gini; when the concentration coefficient is above the diagonal, the difference between the triangle of perfect equality and the area under the curve is negative, and spending is progressive in absolute terms. As the figure shows, both the indirect electricity subsidy and tax expenditures are highly regressive.

## Factors that May Affect the Sustainability of Growth and Shared Prosperity

**The Dominican Republic remains vulnerable to the so-called “middle-income trap”.** Despite significant structural changes in the Dominican economy, growth has not been inclusive over the last two decades or so. Many countries in the world with a similar trajectory of that of the DR have fallen victim of the so-called “middle-income trap”—a situation in which a country fails to achieve a high-income status due the lack of structural reforms that end up stifling growth. To be sure, of 101 economies that were middle income in 1960 only 13 escaped this middle-income trap and became high-income economies in 2008—Equatorial Guinea; Greece; Hong Kong, China; Ireland; Israel; Japan; Mauritius; Portugal; Puerto Rico; Republic of Korea; Singapore; Spain; and Taiwan, China.

**A faster improvement in equity and shared prosperity will require sustaining high growth through structural reforms in four critical areas.** The *Policy Note on Sustainability* argues that there are four inter-related areas that could have self-reinforcing effects on long-term inclusive growth in the DR: (a) macro and fiscal management; (b) the competitiveness of the economy (including several factors, such as, for example the quality of infrastructure, the business environment, the soundness of the financial sector, among others); (c) factors that affect social sustainability (including the quality of public service delivery in core sectors such as education, health, water and sanitation, and electricity); and (d) environmental sustainability and resilience to climate change. In the case of ICT, the DR authorities are advised to focus on a three-pillar approach. First, it would be necessary to improve the institutional framework and sector governance, which would pave the way to improve competition in the sector. Second, efforts to improve institutions and sector regulation, coverage and affordability would need to improve. Third, it would be necessary to invest in skills and to address demand-side factors. While there has been progress in all of these four areas over the last few years, there are a number of reforms that could boost growth and make it more equitable and inclusive. The main policy directions suggested in each of the policy notes are summarized in Table 1.1.

Table 1.1: Summary of Policy Directions

Cross-cutting policy options for enhanced shared prosperity
<p><b>Increase the supply and quality of skills and human capital</b></p> <ul style="list-style-type: none"> <li>• Continue building on the recent improvements in the quality of education by increasing student learning and retention in the school system, and continue expanding access to early childhood development services.</li> <li>• Increase access to job training and internships to facilitate the transition from school to labor force and improve job matching.</li> <li>• Strengthen the connection between employers and the school system so that relevant skills are included in the curriculum and students have better information about labor demand.</li> </ul>
<p><b>Incentivize job creation</b></p> <ul style="list-style-type: none"> <li>• Invest in productivity-enhancing technologies and financial access for small and micro enterprises, where the majority of the jobs are created.</li> <li>• Simplify regulatory procedures and strengthen legal institutions to improve the business environment.</li> <li>• Explore opportunities to promote exports in under-trading sectors that already employ workers from poorer households.</li> </ul>
<p><b>Support policies to enhance skills adapted to the structural change in sectoral specialization in SEZs</b></p> <ul style="list-style-type: none"> <li>• Introduce social assistance programs designed to accelerate worker employment transitions to lower labor-intensity industries, including vocational training in new skills demanded by SEZ firms, job search assistance, and transitional income support.</li> </ul>
<p><b>Increase cohesion and territorial planning to reduce the persistent regional differences</b></p> <ul style="list-style-type: none"> <li>• Consolidate the efforts to build capacity of local governments to formulate development plans and investment projects that reflect local needs expressed through participatory processes.</li> <li>• Consider adding needs-based criteria to the formula to transfer resources to municipal governments.</li> </ul>
<p><b>Reduce gender gaps</b></p> <ul style="list-style-type: none"> <li>• Elaboration of labor policies that give women sufficient flexibility to find a balance between work and family demands.</li> <li>• Continue expanding access to affordable childcare and pre-school.</li> <li>• In order to reduce teenage pregnancy, find innovative ways of outreach and of providing relevant audience-friendly information on issues such as reproductive health and rights, using behavioral change methods and engaging schools and community level organizations.</li> </ul>
Improving the quality and efficiency of social services
Education
<p><b>Continue efforts to expand early childhood development services and develop solid strategies to increase student retention</b></p> <ul style="list-style-type: none"> <li>• Expedite INAIPI's institutional strengthening to enable it to more effectively and rapidly increase service provision.</li> <li>• Regarding secondary school, it is recommended that MINERD develop systems and strategies to more directly tackle low enrollment in what would soon be secondary education.</li> <li>• Adopt early warning systems that are gender-informed to prevent dropouts and teacher trainings that cater to different learning levels within each grade and that address gender-specific issues.</li> <li>• Consolidate the curriculum for upper secondary on technical-vocational education to provide the skills for employment and give more alternatives for youth—in particular for young men who drop out of school without employment-relevant skills.</li> </ul>
<p><b>Prioritize initiatives that matter the most for pedagogical instruction, and that have direct classroom impact</b></p> <ul style="list-style-type: none"> <li>• Strengthen teacher evaluations, and make use of available data in the system to feed into the design and implementation of teacher training programs, improving the teacher entry exam, the accreditation of teacher training programs (capitalizing on new regulations), and teacher accreditation, among others.</li> <li>• Continue improving components related to teachers' careers, including salaries, evaluations, and incentives.</li> <li>• Strengthen M&amp;E systems, implement student assessments and teacher evaluations, strengthen supervision and data at the school level, and increase the use of data for decision-making at all levels of the system.</li> <li>• Empower and support schools, and school principals, to improve their management in order to improve learning conditions and outcomes, as has been done in Brazil, Colombia, and Mexico.</li> </ul>
<p><b>Deepen the implementation of reforms, sharpen the focus on learning outcomes, and improve coordination of programs and initiatives as agreed in the NEP.</b></p> <ul style="list-style-type: none"> <li>• Improve coordination—both internally within MINERD and its institutes, externally with other ministries (MESCYT and Ministry of the Presidency), and also with partners—to avoid duplication, exploit synergies of joint work, and improve service delivery in a faster way.</li> </ul>

Table 1.1: Continue

Improving the quality and efficiency of social services	
<b>Health</b>	
<p><b>Continue to improve the quality of public spending on health and overall sector management and allocate more resources to health to address gaps in service delivery and insurance coverage.</b></p> <ul style="list-style-type: none"> <li>At 2.9% of GDP in 2014, the DR's health public expenditures' share of GDP is below the country's Ten Year Health Plan target of 4%. More funds are needed to (a) invest in health personnel, equipment and other inputs to improve quality of care and address service gaps in rural areas and for the poor and (b) expand financial protection coverage, to reach the poorest who remain unregistered in SIUBEN; to expand access to non-formal workers, as well as to eventually integrate health insurance packages and provide a single health benefits package for all citizens.</li> <li>In terms of improving cost effectiveness of spending, more resources would also need to be allocated to prevention and promotion and public/collective health.</li> <li>Actions can also be taken to improve spending by building on lessons learnt from the results-based financing (RBF) primary care pilots, and expanding RBF to hospitals.</li> <li>The Government could also consider applying RBF to improve health care worker performance (competencies, absenteeism) and provide incentives for health workers especially doctors to serve in rural areas.</li> <li>Use a combination of incentives and sanctions to promote the functioning of the referral-counter-referral system and to encourage adherence to the policy designating primary care as the gatekeeper for people to accessing the health services network.</li> <li>Expanding the use of RBF would require further improvements in health information systems and training staff in information management system and monitoring and evaluation.</li> <li>Undertake additional analysis and allocate more resources to cover the target population of the Contributory Subsidized Regime (CSR).</li> </ul>	
<p><b>Continue to strengthen the MOH's capacity to coordinate and regulate the sector and ensure the timely provision of essential public health services while also enhancing the institutional capacity of the National Health Services (NHS) and National Health Insurance (NHI).</b></p> <ul style="list-style-type: none"> <li>Adopt a structured and costed action plan to strengthen both the MOH and the NHS, and move forward with the identified capacity strengthening actions for the NHI. These institutions would also need to coordinate regularly to avoid duplication of efforts and maximize synergies.</li> </ul>	
<p><b>Assess which functions would be best decentralized and which ones would be best remain centralized, and build capacity at all administrative levels.</b></p> <ul style="list-style-type: none"> <li>Strengthen RHS capacity to function more independently under the coordination of the NHS with the Minister of Healthy exercising its stewardship and regulatory functions.</li> </ul>	
<b>Social Protection</b>	
<p><b>Enhance the quality of health and education services with PROSOLI interventions.</b></p> <ul style="list-style-type: none"> <li>PROSOLI could reduce the gap between affiliates and eligible population, and reinforce incentives to reduce dropouts at the basic level of education.</li> <li>Ensure that the training plans of the Education and Health sectors include building capacities of personnel located in prioritized territories according to PROSOLI, ensuring that a percentage of the trainees come from poor and extreme poor areas.</li> </ul>	
<p><b>Ensure access to social protection services to all extreme poor in the country.</b></p> <ul style="list-style-type: none"> <li>Enhance access to identity schemes, by implementing incentive mechanisms for the supply side, reducing administrative barriers for timely registrations (Declaraciones Oportunas), expediting procedures for late registrations (Declaraciones Tardias) and improving processes for registering Dominicans at birth, including those who have only one parent with Dominican nationality.</li> <li>Continue to update the information of all poor households in the country through SIUBEN and, in turn, to expand PROSOLI's coverage to all extremely poor households.</li> </ul>	
<p><b>Expand SIUBEN's role to become the entry door of the social protection system.</b></p> <ul style="list-style-type: none"> <li>Reinforce the institutional foundation of SIUBEN, strengthening its legal and regulatory framework.</li> <li>Ensure that the targeting system is increasingly exploited, designing incentive mechanisms to encourage its use by different programs, local governments and beneficiaries (to request to be incorporated or recertified).</li> <li>Assess strategies to secure enough funding and human resources to respond to clients' requests</li> </ul>	

Table 1.1: Continue

Improving the quality and efficiency of social services
<b>Social Protection</b>
<p><b>Develop policies to link the contributory and non-contributory pillars, as well as interventions in the labor market.</b></p> <ul style="list-style-type: none"> <li>• Develop strategies in the medium-term with a view to adopt non-contributory pensions, and in the long-term with a view to expand the management system of subsidies to the co-pillar, ensure the exchange of information between the two pillars, and prioritize vulnerable sectors with limited ability to contribute to respond with targeted policy interventions.</li> <li>• Ensure that exit strategies from social assistance programs to labor market policies are consistent with the continuity of protection toward securing access to employment.</li> <li>• Make sure that social assistance interventions delivered through the GCPS are consistent with those territorially prioritized by the strategy <i>Quisqueya Sin Miseria</i>.</li> </ul>
<p><b>Reinforce inter-sectoral coordination.</b></p> <ul style="list-style-type: none"> <li>• Further improve intersectoral coordination and prevent leakages and duplication of roles, by establishing databases that are interoperable to allow more effective management of the sector.</li> <li>• Strengthen the institutional capacities and links with the Ministry of Economy (MEPyD).</li> </ul>
<p><b>Document and carry out assessments of interventions that have a major impact on poverty reduction.</b></p> <ul style="list-style-type: none"> <li>• Carry out assessments or evaluations on the impacts of both (vertical and horizontal approaches), including an analysis of available resources.</li> </ul>
Policy Options for Improving the Quality and Availability of Basic Infrastructure Services
<b>Water and Sanitation</b>
<p><b>Continue efforts to establish and consolidate the sector's institutional framework.</b></p> <ul style="list-style-type: none"> <li>• This requires the passing of the WSS Law and continued efforts with the associated decrees, as well as other activities related to its implementation, once the Law is approved.</li> </ul>
<p><b>Take incremental steps to improve service provision in a more efficient and targeted manner, in order to put the sector on a more sustainable path.</b></p> <ul style="list-style-type: none"> <li>• Establish a sector investment strategy with a long-term vision and a short-term program informed by the sanitation strategy under preparation, and adding priority water supply investments, strategically designed to maximize improvements in service quality and efficiency.</li> </ul>
<p><b>Prepare a Sector Financing Policy covering government financing for both investment and operational expenses.</b></p> <ul style="list-style-type: none"> <li>• Establish sector-specific review and monitoring mechanisms for national public investments (including external sources).</li> <li>• Explore linking operational subsidies to performance agreements with service providers.</li> </ul>
<b>Electricity Sector</b>
<p><b>Improve the institutional framework and electricity sector governance.</b></p> <ul style="list-style-type: none"> <li>• Institutions and Governance. Clearly define the different roles of the sector actors to achieve a more efficient sector. This would mean that the MEM should absorb the functions of the CNE and those of CDEEE. Until this change is effectively made, sector governance needs to improve, and it will be important to have effective coordination between the CDEEE and the EDEs to achieve an efficient administration. It is also important that the government grant SIE the authority and autonomy established in the law with regard to setting tariffs, ensuring healthy competition among the sector agents, and monitoring and supervising compliance with laws and regulations, including service quality.</li> <li>• Transparency and Accountability. In the short to medium-term improving the MEM, SIE, Hacienda, and CDEEE's ability to monitor the operations of the EDEs is vital to enhance accountability and eliminate the operational deficit. Afterwards it will be important that the CDEEE begins operating within its legal boundaries. The EDEs in particular should carry out annual audits of their financial statements, by independent and reputable audit firms based on international financial reporting standards and practices no later than six months after the close of the fiscal year.</li> <li>• Electricity Pact. It is important to maintain an open dialogue and to broadly disclose all information related to the sector in order to infuse the needed trust and empowerment of all stakeholders. The solution to sector issues should be systematic and will require commitment from all sector actors to achieve an efficient, competitive, and sustainable electric service.</li> </ul>

Table 1.1: Continue

Policy Options for Improving the Quality and Availability of Basic Infrastructure Services	
<b>Electricity Sector</b>	
<p><b>Enhance the quality of service provision.</b></p> <ul style="list-style-type: none"> <li>• <b>Improved service quality.</b> All final end-users should be able to have continuous, high-quality, reliable, transparent and affordable electricity service. The programmed electricity blackouts should be reduced to diminish the need for investments in alternative energy sources and help promote economic growth and shared prosperity. Over the medium-term the sector should strive to ensure that all clients pay their bills on time and are provided constant electricity service, with appropriate voltage levels and no fluctuations. A solid social outreach program will be needed to complement the technical improvements to enhance awareness and willingness to pay for service and to regularize customers to achieve this goal.</li> </ul>	
<p><b>Restore the efficiency and financial sustainability of the electricity sector.</b></p> <ul style="list-style-type: none"> <li>• <b>Generation.</b> It is essential to have clear rules of the game and greater transparency in the generation sector, both for conventional and renewable energy. It is also important that the state better defines its participation in the sector. It is also vital that the EDEs carry out a call for tenders to power producers to cover their power capacity and energy needs given that the existing contracts will be closing at the end of August 2016. The country could also benefit from the low prices of natural gas to help bring down generation costs. Various barriers related to expanding access to natural gas supply and securing finance would need to be addressed to exploit this potential.</li> <li>• <b>Transmission.</b> It is important to ensure the operational and financial autonomy of ETED and allow it to collect transmission fees to provide sufficient resources for it to fulfill its functions under the law. This would require effectively passing these costs onto customers in bills and then having the EDEs pay ETED for these services from payment collections. ETED will also have to ensure that transmission fees are collected from the electricity market participants that use the transmission network to exchange power.</li> <li>• <b>Distribution.</b> To eliminate the operational deficit of the EDEs, it will be important to implement an integrated loss reduction program to reach the goal of 15% total losses. The loss reduction program should incorporate a social management strategy aimed at restoring trust between end-users and EDEs, raising payment levels, and educating customers on the use of electricity in a more efficient and safe way. Making this happen will also require improved sector governance, transparency, and oversight.</li> <li>• <b>Electricity tariff.</b> SIE should publish the procedures and formulas used for the automatic adjustment of electricity tariffs based on costs as required by the law. SIE could take advantage of the currently low international oil prices and apply the technical tariff in the short run so that the transition will be more viable since it would not require major adjustments. To protect the poorest consumers, subsidies could be targeted and provided to those low-income users that qualify for the targeted cash transfer program Bonoluz. This would imply that Bonoluz coverage should be expanded so that it covers all low-income electricity users that are eligible for the Government's Sistema Único de Beneficiarios (SIUBEN) programs.</li> <li>• <b>Climate Change.</b> Good planning and design and investments to strengthen and reinforce electricity infrastructure so that it can withstand future climate events would help improve its resiliency. The preparation of a solid emergency preparedness and response plan for how to respond to and recover from these types of events is also essential for reducing the vulnerability of the Dominican electricity system and ensuring continuity of the service even after these types of events occur.</li> </ul>	
<b>Information and Communications Technology</b>	
<p><b>Improve the institutional framework and sector governance.</b> This requires strengthening regulations to promote competition that will ensure equitable access to the international gateway and cable landing stations and open access to incumbents' networks, ensuring all major infrastructure (e.g. roads, pipelines, transmission lines) have provisions for an optical fiber link, promoting intermodal competition (e.g. between cable and telecommunications providers), mandating incumbents to make local access lines available to competitors at wholesale prices (local loop unbundling), and focusing INDOTEL on enhanced sector regulation.</p>	
<p><b>Enhance coverage and affordability.</b> This will require investments to increase the national coverage of the broadband backbone. To complement the existing coverage in wealthier urban centers and future private investments to expand the network, government can undertake public investments that ensure inter-nodal connections between existing unconnected private (e.g. cable) providers and expand the backbone to poor, remote municipalities to ensure full coverage, and thereby reach the National Development Strategy goal of 80% internet coverage by 2030.</p>	
<p><b>Address demand-side and related factors.</b> This demand investing in skills and policies for the future. It will be necessary to create an Open Innovation Hub to improve digital literacy; connect knowledge with investors, and keeping up with the state of the art via policy analysis and reform.</p>	

Table 1.1: Continue

Policy Choices for Sustainable and Inclusive Growth
<b>Macro-fiscal Sustainability</b>
<b>Reforming tax policy should be a priority.</b> Widen the tax base by reforming the VAT and other current tax exemptions that are found to be highly regressive. The impact of the removal of VAT exemptions on electricity for the poorest could be mitigated through transfer programs (such as Bonoluz). Undertaking a thorough cost-benefit analysis of the incentives on corporate income taxations would also be advisable.
<b>Improve the efficiency of the tax administration system.</b> Undertake a full-fledged diagnostic to identify strengths and weakness of the DR's revenue administration system.
<b>Continue to pro-actively seeking opportunities to reduce debt.</b> Avoid future primary deficits in order to prevent additional pressure on the debt path. Putting the debt on a downward trajectory would require a fiscal effort equivalent to -2.5% of GDP over the next 3 years.
<b>Adopt a medium-term fiscal framework with a clear counter-cyclical orientation.</b> Establish binding fiscal targets and budgetary performance indicators to complement the current medium-term expenditure framework. Adopt a rules-based fiscal framework with a more clearly defined counter-cyclical orientation.
<b>Develop a comprehensive framework for Monitoring and Evaluation (M&amp;E) and auditing.</b> The MEPyD, the Ministry of Finance and the Ministry of Public Administration should develop a comprehensive framework for M&E and auditing. This framework could be piloted on a small number of key public programs before being extended across the public sector.
Competitiveness and Inclusive Growth
<b>Competitiveness and Inclusive Growth</b>
<b>Prioritize policies aimed at forging domestic linkages between SEZs and the domestic economy.</b> <ul style="list-style-type: none"> <li>• Continue to remove ineffective policies such as harmful local content requirements and protectionist non-tariff measures that restrict the ability of domestic firms to import and transform key inputs.</li> <li>• Connect domestic suppliers by designing targeted programs for local suppliers, developing a supplier database, creating matchmaking services, and introducing incentives to encourage local sourcing from SEZ firms.</li> <li>• Attract competitive international suppliers and support the upgrading of domestic suppliers through non-equity modes of investment (e.g. franchising).</li> <li>• Delineate an overarching national policy for export promotion and FDI attraction that leverage SEZs as an engine of an inclusive economic growth.</li> <li>• Foster the competitiveness of national industries which do not have easy access to up-to-date information on existing opportunities by revamping the role of the Export Promotion Agency (EPA).</li> </ul>
<b>Continue working on the implementation of legal reforms on competition and business regulations, particularly:</b> <ul style="list-style-type: none"> <li>• Launch the enforcement of the existing competition law in order to prevent and punish anticompetitive behavior; appoint Executive Director for Competition Authority, Procompetencia</li> <li>• Develop a strategy to review and remove regulatory restrictions in key product markets, especially those that risk to enable anticompetitive behavior of market players;</li> <li>• Finalize the implementation of the new insolvency law by developing accompanying rules and regulations;</li> <li>• Finalize the draft law on secured transactions for parliamentary approval;</li> <li>• Remove barriers to open new business from the Commercial Code (such as minimum capital requirements);</li> </ul>
<b>Improve regulations and encourage greater transparency related to financing of MSMEs while also creating additional instruments.</b> <ul style="list-style-type: none"> <li>• Increase volumes and sources of private sector finance beyond banks, such as angel investors, venture capital funds, and leasing;</li> <li>• Increase the use of financial services to support productive activities while reducing transaction costs;</li> <li>• Increase the scope and depth of non-financial services to address key constraints to credit;</li> <li>• Further develop private capital markets to help alleviate market concentration.</li> </ul>
<b>Industry-specific reforms</b>
<b>Integrate new segments of market by fostering the development of non-all-inclusive tourism niches.</b>
<b>In order to ensure that more firms are able to comply with international standards, it is important to strengthen national systems for quality inspection and verification.</b>

Table 1.1: Continue

Competitiveness and Inclusive Growth
<b>Industry-specific reforms</b>
<p><b>Increase the relatively low marginal productivity and limited access to information and markets of smallholder farms.</b></p> <p><b>Integrate Producers into Domestic and Global Value Chains. The competitiveness of producer groups could be fostered through strategic alliances between the public and private sectors and would require:</b></p> <ul style="list-style-type: none"> <li>• Technological innovation to raise productivity;</li> <li>• Targeted market intelligence to enhance market access;</li> <li>• Financial capital to boost access to productive assets; and</li> <li>• Capacity-building and technical assistance to be able to meet the market demands.</li> </ul>
Environmental Sustainability and Resilience to Climate Change
<p><b>Integrate disaster risk management tools in core administrative processes.</b></p> <ul style="list-style-type: none"> <li>• Integrate disaster risk management into public investment and territorial planning processes by introducing screening mechanisms and disaster-risk considerations.</li> <li>• Develop hazard and risk information tools (e.g. safe school or safe hospital index).</li> <li>• Create a dedicated risk-analysis unit to update DRM disaster plans, develop DRR tools for public institutions, identify and analyze high-risk areas, and develop and disseminate risk maps and information in coordination with relevant authorities and local communities.</li> <li>• Include risks resulting from climate change into fiscal risk management strategies.</li> </ul>
<p><b>Strengthen the Growth Potential of the Agri-food Sector</b></p> <ul style="list-style-type: none"> <li>• Make producers more productive and resilient, while lowering their carbon footprint, through climate smart agriculture;</li> <li>• Integrate producers into domestic and global value chains;</li> <li>• Strengthen institutions and the provision of public goods;</li> <li>• Promote the sustainable use and management of natural resources at the watershed level;</li> <li>• Encourage good agricultural practices on pastures, land grazing and rain-fed agriculture in the upper and middle sections of the watershed</li> <li>• Adopt modern and efficient irrigated agriculture in the middle and lower sections of the watershed.</li> </ul>
<p><b>Promote the Conservation of Natural Resources Assets</b></p> <ul style="list-style-type: none"> <li>• Continue to implement the strategy for Integrated Water Resources Management at Watershed Level</li> <li>• Implement the Payment and Compensation for Ecosystem Services strategy</li> <li>• Ensure continued commitment in the REDD+ program.</li> </ul>

## Chapter 2.

# Toward More Evenly Shared Prosperity in the Dominican Republic

### Introduction

**A** key element in the Dominican Republic's long-term vision, as set forth in the National Development Strategy 2030 (END), is that of a prosperous country that promotes equity and equal opportunity, and develops in a sustainable, geographically balanced, and integrated manner. This note describes the progress achieved in some of these areas and suggests a number of important elements to ensure its sustainability and achieve the goals proposed in the END. In fact, the policy directions discussed in this note should be seen as cross-cutting actions that would have a complementary effect on the recommendations of the sectoral policy notes in this volume.

**One of the biggest policy challenges for governments around the world is how to translate economic growth into improved living standards of broad segments of their populations, and the DR is no exception.**<sup>13</sup> Inclusive growth has been defined as output growth that is sustained over time, broad-based across economic sectors, and creates productive employment opportunities for large parts of a country's

labor force. The concept of inclusiveness encompasses equity, equality of opportunity, and protection in market and employment transitions.<sup>14</sup>

**The note is structured in three sections** covering: a) the country context; b) the challenges faced by households to generate income, the policies that affect the capacity of households to generate income, and the high and persistent regional differences in the country; and d) selected policy directions.

### Country context

**The Dominican Republic (DR) is one of the countries in Latin America and the Caribbean (LAC) that has experienced the highest economic growth in the past 20 years and has closed the gap with the regional average.** In 1990 the country's GNP was only 57% of the regional average, climbing to 92% in 2014.<sup>15</sup> Estimates show that if the pace of growth observed in the last five years continue, the gap would disappear by 2020.<sup>16</sup>

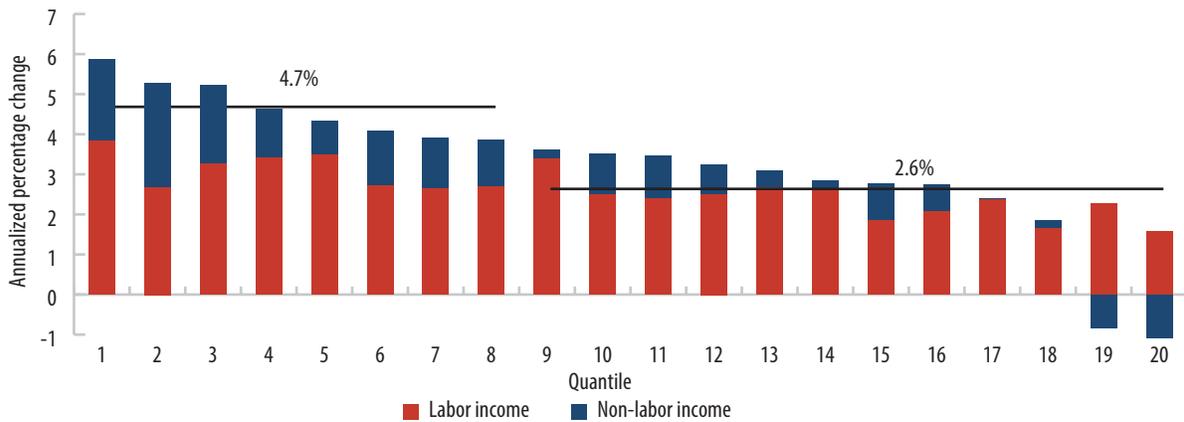
14 Ianchovichina, E., and S. Lundstrom (2009), "Inclusive Growth Analytics: Framework and Application", Policy Research Working Paper WPS4851, World Bank.

15 In dollars, 2011 PPP. World Development Indicators.

16 World Bank (2014), When Prosperity is Not Shared: The Weak Links between Growth and Equity in the Dominican Republic.

13 World Economic Forum (2015), The Inclusive Growth and Development Report 2015.

Figure 2.1: Annualized growth incidence curve, the Dominican Republic, 2005-2015



Source: Author's calculations using data from the National Labor Force Survey (ENFT).

**An analysis of the growth incidence suggests that the country's economic growth between 2005 and 2015 was pro-poor.** Per-capita income for individuals in the bottom 40% grew at an annual rate of 4.7%, while the growth rate for the top 60% was 2.6% (Figure 2.1). Changes in labor income explain most of the growth in total income which changes in non-labor income are greater.

**The DR has also achieved a sustained reduction in inequality of income distribution, with a 5-point decrease in the Gini coefficient,** from 50.7 in 2005 to 45.5 in 2015, at all times below the inequality levels for the region. If we compare the average income in the extreme deciles of the distribution, known as the 90/10 ratio, all countries in the region experienced reductions in inequality between 2005 and 2013. In the Dominican Republic an average household in the richest 10% earned 9.8 times more than an average household in the poorest 10% in 2005, while in 2013 it earned 7.7 times more (Figure 2.2).

**Nonmonetary poverty—defined as lack of access to essential services—has decreased steadily since 2000.** The share of the population with no access to two services decreased from 44% in 2000 to 28% in 2015, while the share lacking access to four services declined from 16% to 7% in the same period.<sup>17</sup> Between 2000 and 2015 there were notable increases in sanitation and school

attendance, especially in rural areas, where the share of the population with no access to sanitation was reduced by 29 percentage points and the share of households with at least one school-age child (7-17) not attending school regularly was reduced by 34 pp.<sup>18</sup>

**Despite significant gains in coverage, a few characteristics (family income level, education of parents, and living in urban areas) explain a large share of the inequality of opportunities for children at birth.** Viewed in isolation, parents' education accounts for more than 35% of the inequality of opportunities in 2015, and nearly 60% of the inequality of opportunities to complete sixth grade on time (Figure 2.3). These circumstances make intergenerational mobility difficult.

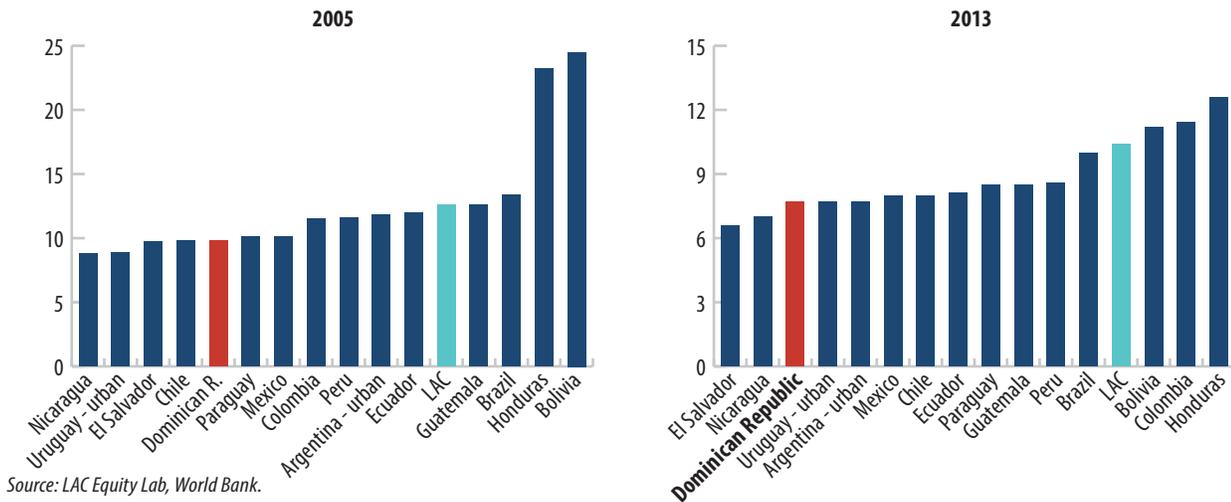
**The Dominican Republic is the fourth most unequal country in LAC in terms of gender equality and the third most unequal among the countries with a high level of human development.** Inequality between women and men is measured in three areas: reproductive health, empowerment, and access to the labor market. Human development in the country was reduced by 48% in 2015 due to gender inequality.<sup>19</sup>

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

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

19 United Nations Development Program (2015), Human Development Report 2015. The only Latin American countries below the Dominican Republic are Honduras, Guatemala, and Haiti, and in the group of countries with high human development only Iran and Tonga have lower indexes.

Figure 2.2: Ratio of the average income of the richest 10% and poorest 10%, 2005 and 2013

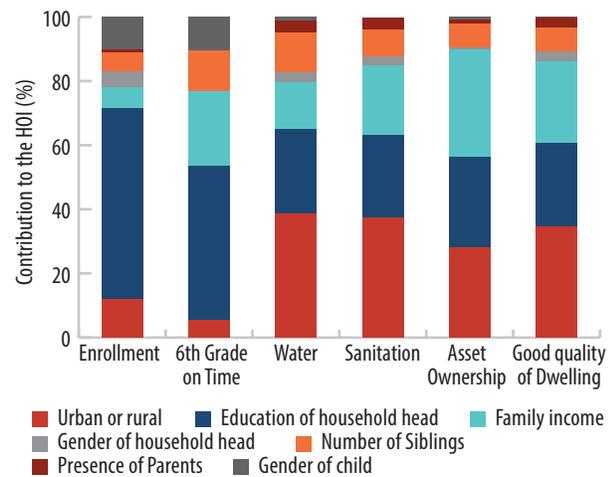


Source: LAC Equity Lab, World Bank.

After eight years of small decreases in the monetary poverty rate,<sup>20</sup> in the past two years official data indicate that poverty declined unexpectedly by more than 10 percentage points. Factors cited to explain this drop include the highest rate of economic growth in the country among LAC countries during these two years,<sup>21</sup> inflation below the target range of the Central Bank, a favorable external scenario with low oil prices, high public investment in construction and remodeling of schools, and school meal programs. This confluence of factors seems to have led to changes in labor and non-labor income and coincided with demographic shifts, all contributing to a decrease in poverty for the first time since 2000.

The decline in poverty in the past two years is impressive, especially considering that the structural problems constraining the links between growth and

Figure 2.3: Contribution of circumstances to inequality of opportunities in the Dominican Republic, 2015



Source: Author's calculations using data from the ENFT.

poverty reduction have not been resolved. However, the confluence of factors that caused the poverty decline is most likely transitory, and the situation could be reversed in the short term unless measures are taken to ensure that economic growth brings greater benefits to the bottom 40% of the population. According to an analysis done by the World Bank and presented to the Technical Committee on Poverty (CTP), roughly 20% of the change in poverty between 2013 and 2015 can be explained by an atypical high reduction in the average size of households surveyed in the National Labor Force Survey (ENFT). Even allowing for this factor, the poverty reductions between 2013 and 2015 are the largest in the past 15 years.

20 Two different but complementary concepts are used to measure poverty in the DR. Monetary poverty is defined as the lack of monetary resources to purchase a basic consumption basket that is socially accepted. Non-monetary poverty is measured both using the concept of unmet basic needs—lack of access to 3 or more basic services in a list of 15— and the concept of a quality of life index (ICV in Spanish) —combining different variables and dimensions that define the quality of life of a household. See Ministry of Economy, Planning and Development - MEPyD (2014), El Mapa de la Pobreza en la República Dominicana [The Poverty Map in the Dominican Republic], and Ministry of Economy, Planning and Development – MEPyD, and National Statistics Office – ONE (2012), Metodología para el Cálculo de la Medición Oficial de la Pobreza Monetaria en la República Dominicana [Methodology for the Calculation of the Official Monetary Poverty Measure in the Dominican Republic].

21 And above the potential growth since the last quarter of 2014, according to the Central Bank of the Dominican Republic.

**The very high economic growth has brought reductions of poverty and inequality that are sustained but smaller than expected.**

This fact is recognized in the National Development Strategy of the DR 2030 (END) and the diagnostic assessment of non-inclusive economic growth dates from at least the end of the 1990s.<sup>22</sup> Although the LAC region's poverty rate declined steadily from 37.4% to 23.4% between 2005 and 2014,<sup>23</sup> in the DR it decreased more slowly from 40.5% to 28.6% –well above the regional average– in the same period. By way of illustration, if poverty in the Dominican Republic had responded to GDP growth as it did in the LAC region during the period 2006-2014, there would have been 1.1 million fewer poor people in the country in 2014.

**During the period 2005-2014 and compared to LAC, the DR poverty reduction rates were lower, the vulnerable population increased at a faster rate, and growth of the middle class was slower** (Figure 2.4).<sup>24</sup> During that period, poverty decreased by 14 percentage points (pp) in LAC and by 11.9 pp in the DR, the share of

vulnerable population increased 2 pp in LAC and 5.5 pp in the DR, while the size of the middle class increased by 11.2 pp in LAC and only by 7 pp in the DR.

**However, although upward economic mobility has improved in recent years, it is very limited in the DR, in contrast to the higher mobility in the LAC region.**

Between 2000 and 2015 only 7% of the population in the DR moved up to a higher socioeconomic group, 8% moved to a lower group, and the remaining 85% remained in the same group. In the region, 41% of the population had upward mobility, 2% moved downward, and 57% remained in the same group between 2000 and 2011.<sup>25</sup>

## Challenges

### Households' capacity to generate income

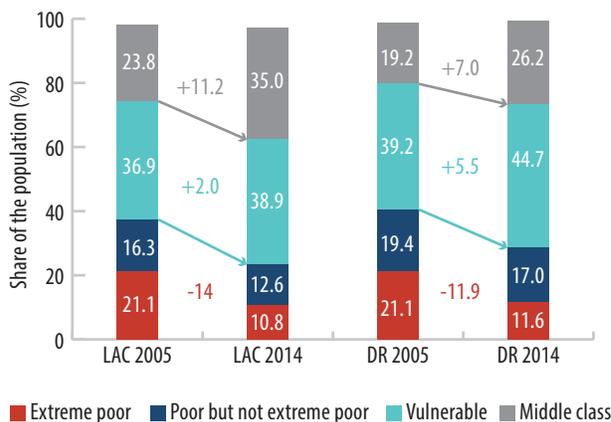
**A key ingredient of more inclusive growth is the enhanced capacity of households, especially those in the bottom 40%, to generate income to emerge from poverty and avoid the risk of downward mobility.**

To explain household income we must take into account the interaction of macroeconomic and microeconomic variables in order to achieve and sustain the goals of reducing poverty and promoting shared prosperity from a social, economic, and environmental standpoint. Household income depends on four main components (Figure 2.5): (1) the capacity of households to generate income based on the assets they own; (2) the transfers they receive, which may include domestic and international remittances and private and public transfers in cash or kind; (3) the aggregate prices of the basket of goods and services they consume; and (4) the effects of negative or positive shocks (health, natural disasters, violence, job loss).<sup>26</sup>

**A household's capacity to generate income based on its assets can be disaggregated into three elements:**

(i) the stock of income-generating assets owned by each member of the household, which includes human capital (e.g., educational level and years of experience in the labor market), financial and physical assets (e.g., ownership of

Figure 2.4: Socioeconomic breakdown of the population, the Dominican Republic and LAC, 2005 and 2014



Source: LAC Equity Lab, World Bank.

22 World Bank (2001), Dominican Republic Poverty Assessment: Poverty in a High-growth Economy (1986-2000).

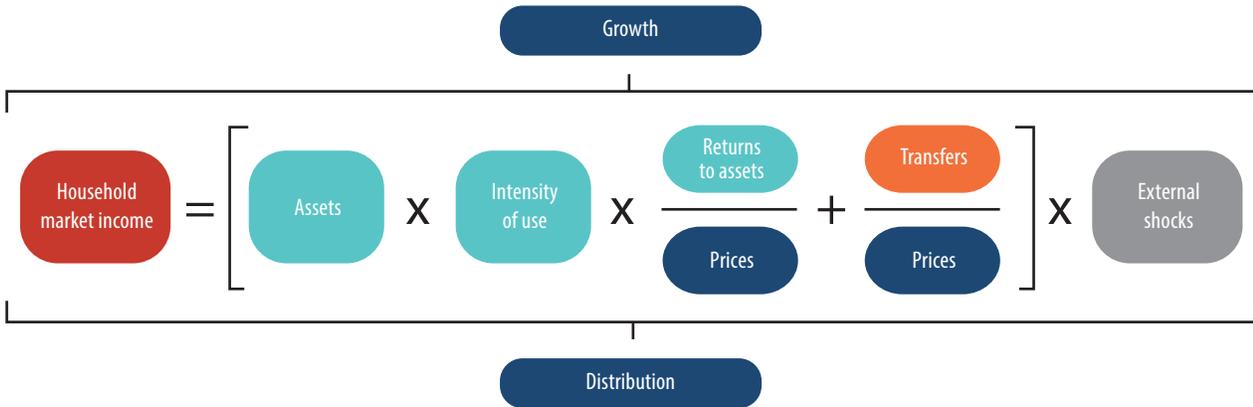
23 The poverty line is US\$4/day, 2005 PPP. Comparable data are used from SEDLAC (World Bank and CEDLAS) for a group of 17 countries. This permits comparison between countries and the calculation of regional statistics, but is not necessarily comparable with each country's official statistics.

24 Using comparable data from SEDLAC (World Bank and CEDLAS). Individuals are considered vulnerable if their daily income is between US\$4 and US\$10, and in the middle class if their daily income is between US\$10 and US\$50. All amounts are expressed in 2005 PPP dollars.

25 World Bank (2014), op. cit.

26 For a more detailed explanation of the conceptual framework, see Cord, L., Genoni, M.E., and C. Rodríguez-Castelán, editors (2015), Shared Prosperity and Poverty Eradication in Latin America and the Caribbean, World Bank, Washington, DC.

Figure 2.5 : Asset-based conceptual framework for the generation of household income



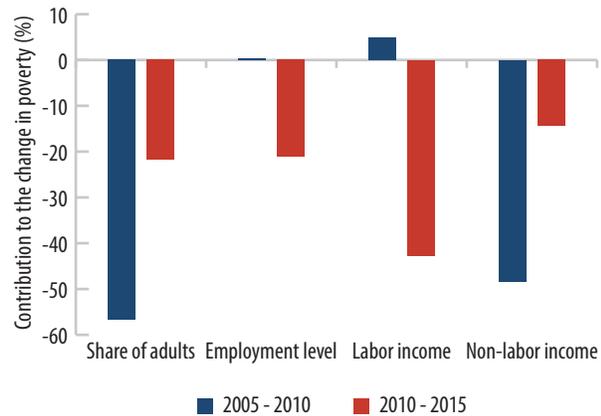
Source: Cord, Genoni, and Rodríguez-Castelán (2015).

machinery or financial assets such as stocks and bonds), social capital (e.g., the set of standards and social networks that facilitate collective action), and natural capital (e.g., land, soil, forests, and water); (ii) the rate at which these assets are used by each member of the household to generate income, which includes participation in the labor market, the use of machinery, and the exploitation of land for agricultural production; and (iii) the returns to assets (e.g., the cost of factors of production, including wages and interest rates).

**Labor income (employment plus earnings) was responsible for a 44% reduction in poverty between 2005 and 2015, with a negligible contribution in the period 2005-2010 when poverty declined 4.3 percentage points, and a contribution of 64% of the 11.5 percentage points of poverty reduction in the period 2010-2015 (Figure 2.6).** In the DR, as in all LAC countries, labor income accounts for most of the income of households in both the bottom 40 and top 60% on the income distribution. From 2000 to 2015 labor income in the DR remained at about 63% of total income of the bottom 40 and about 70% of the total income of the top 60.

**Given the importance of labor income in the income of the poorest households, an analysis of how the capacity to generate labor income has changed can help us understand the country’s progress in poverty reduction and the promotion of more evenly shared prosperity.** While there is a good understanding of the decomposition of changes in poverty in the DR, more

Figure 2.6: Contribution to the change in moderate poverty in the DR, by component, 2005-10 and 2010-15



Source: Author’s calculations using data from the ENFT.

work is needed to understand the impact on poverty of different policies and programs. The rest of this section analyzes each of the components of household income using the proposed conceptual framework and discusses how public policies can affect household income-generating capacity.

### Assets: human capital

Human capital is defined as the set of skills and knowledge that accounts for an individual’s productive capacity, and can be measured using variables such as labor experience, educational attainment, and quality of education.

**In the past 15 years there have been significant gains in access to education at all levels.**<sup>27</sup> The gap in educational achievement between the bottom 40% and the top 60% has been closed in the past 15 years. The average number of years of schooling for heads of household in the bottom 40% of the population increased by 35%, from 4.6 years in 2000 to 6.2 years in 2015, while for the top 60% it increased by 13%, from 7.7 to 8.7 years in the period.

**However, low levels of learning and high dropout rates are the biggest challenge facing the DR education system, which affect not only access to employment but also wages.** According to the results of the Third Regional Comparative and Explanatory Study (TERCE) of 2013,<sup>28</sup> despite showing the largest improvement, students in the DR had the worst results in the LAC region in six of the seven areas evaluated (reading and mathematics for the third and sixth grades, natural sciences for the sixth grade, and writing for the third grade) and the second lowest scores in the remaining area (writing for the third grade). The World Economic Forum rates the Dominican Republic 138th among 144 countries with respect to the quality of primary education. In terms of school dropouts, of every 100 students who begin school, only 75 of those who begin in the first grade finish the fourth grade, 63 finish the sixth grade, and only 52 complete the eight-year basic education program in time.

**The Government has demonstrated its commitment to addressing these challenges through a broad agenda of reforms in the education sector,** starting with doubling the budget for pre-university education to 4% of GDP since 2013, developing new curricula and a solid teacher career framework, and improving the organization and regulation of the education system. Despite the increase in the average education level of the economically active population, entrepreneurs in the DR complain about the limited availability of skilled labor.<sup>29</sup>

27 The recent and ambitious school construction and upgrading policy has contributed to these gains. This policy includes the construction of 11,873 new classrooms, 967 more rehabilitated, and 86 early childhood development centers which are expected to be completed soon.

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

29 Cited as the third greatest problem for doing business in World Economic Forum (2016), The Global Competitiveness Report 2015-2016.

**University enrollment shows occupation segregation by gender, associated with traditionally assigned social roles.** Women tend to be underrepresented in technical career pathways, but outnumber men in careers such as social services, social sciences, education, medicine, humanities and personal services.<sup>30</sup> Moreover, young women (ages 15-24) are more than twice as likely as young men to be neither employed nor enrolled in school (referred to as 'ni-nis').<sup>31</sup>

### Assets: financial assets

**Access to financial services has improved over the last years, however increasing volume and sources of private sector finance and accompanying access to credit with non-financial services are key challenges to support shared prosperity.** According to the latest Findex data, 54% of adults have an account at a formal financial institution. This represents a significant increase from the previously reported 38.2% and is well above the median for the region, which stands at 40.7%. However, overall credit to micro, small, and medium enterprises (MSME) is low. In terms of access to finance for enterprises, around 57% of firms held a line of credit. When classified by size, this figure decreases to 49.8% of small firms having a credit line, and increases to 64.6% for medium-sized and to 76.5% for large firms. Commercial loans have increased from around 12% of GDP in 2007 to 17% in 2015, with MSME finance representing 3% of GDP and 5%, respectively.

**Despite high FDI inflows, longer-term access to finance in the economy is scarce, particularly for small productive operators.** Access to finance is a major constraint faced by informal firms in the DR. Commercial loans to SMEs increased from around 12% of GDP in 2007 to 17% in 2015, but average loan amounts remain low and maturities are typically short. Private credit was equal to 25.4% of GDP in 2014, almost half of what would be expected given the level of financial sector development in the country, and well below the regional median of 43%.

30 Using information from the 2010 Population Census.

31 Sistema de Indicadores Sociales de la República Dominicana (SISDOM), 2014. In 2014, 27.2% of women are neither employed nor in school compared to 12.7% of young men.

## Intensity of use: labor force participation and demand for labor

**To transform human capital into income, people need to participate in the labor market and there must be enough demand for their knowledge and skills.** The participation of adults in the labor market in the DR was the lowest in the entire LAC region in 2014. Despite small increases in the participation of both groups since 2000, the bottom 40 participate less in the labor market than the top 60 (57.3% vs. 69.6% in 2015).

**The problem of low labor force participation in the Dominican Republic is primarily a gender issue.** Although women account for 65% of university enrollment and 80% of those who graduate with honors, only 52% of working-age women participate in the labor market while 78% of men do. The participation rate of women in the Dominican Republic is lower than the average for the LAC region, and the unemployment rate for women in the country (23%) is almost three times higher than for men (7.9%).<sup>32</sup>

**Domestic violence and teenage pregnancy might be contributing to lower participation rates.** These phenomena usually constraint women's ability to make their own choices and reach their goals.<sup>33</sup> Gender-based violence is one of the main mortality causes in the DR for women aged 15-49, and around 30% 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 DR has the third highest rate of teenage pregnancy in LAC.<sup>34</sup> Different studies have found a significant correlation between teenage pregnancy and childbearing, lower educational achievement, and poorer labor market outcomes for women.<sup>35</sup>

**Women represent around 70% of the inactive population and almost half of the working-age women are inactive.** The latter share decreases sharply with the level of education, with 71% of working-age women with no education in 2015 being inactive, compared to 25% for

women with university education. The main reasons for inactivity in women are household responsibilities (39.1% –a responsibility almost exclusively of women– and studies (38.6%), while by far the main reason for men is studies (65.1%).<sup>36</sup> The importance of household responsibilities to explain inactivity might hint at barriers women face in the DR to balance work and family. More generally, the lower participation and high inactivity rates for women indicate the existence of barriers or fewer opportunities and incentives. These issues should be studied in greater detail because an influx of women into the labor force has the potential to contribute significantly to poverty reduction and more evenly shared prosperity in the DR, and it will be important to design and implement policies to address this gap.

**High and sustained economic growth has not led to a robust demand for labor.** The number of jobs created between 2000 and 2015 (about 1.3 million) is less than what is expected in one of the economies with the highest growth in the region. Productivity per worker has been the main engine of economic growth, with job creation playing a limited role.<sup>37</sup>

**The potential of Special Economic Zones to keep generating low-skill jobs is likely to be reduced.** Industries operating in the zones have historically relied on maquiladoras, demanding mostly low-skilled labor.<sup>38</sup> The end of the Multi-Fiber Agreement (MFA) in 2005 and the signature of the CAFTA-DR agreement generated a structural shift from clothing manufacturing to medium/high skilled manufacturing –the latter less employment intensive– that has reduced the potential of SEZs to generate low-skill jobs at a high pace. The total number of jobs created by SEZs is 21% lower in 2014 than in 2000. More than 50,000 jobs for female workers were lost in SEZs between 2009 and 2000 as a result of the decline in the textile sector due to the expiration of the MFA. Female employment in SEZs has since recovered and increased by 31.1% between 2009 and 2014 due to increased activity in footwear, services, and medical equipment.

32 Central Bank of the Dominican Republic.

33 World Bank (2012), Teenage Pregnancy and Opportunities in Latin America and the Caribbean: On Teenage Fertility Decisions, Poverty and Development.

34 United Nations Development Program - UNDP (2013), Human Development Map of the Dominican Republic.

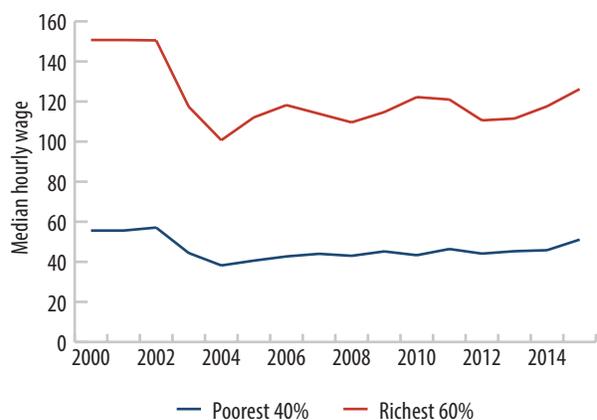
35 World Bank (2012), op. cit.

36 SISDOM (2014), op. cit.

37 World Bank (2016a), Do Labor Markets Limit the Inclusiveness of Growth in the Dominican Republic? World Bank Latin America and Caribbean Region. Processed.

38 World Bank (2016c), Special Economic Zones, Global Value Chains, and the Degree of Domestic Linkages in the Dominican Republic. Processed.

Figure 2.7 : Median wages per hour for the bottom 40 and the top 60 (in Dominican pesos of 2007)



Source: Author's calculations using data from the ENFT.

**On the other hand, the emergence of medium-high skill manufacturing in the SEZs might contribute to increase the insufficient demand for skilled labor.** High-skill workers in the DR have much higher unemployment rates than unskilled workers,<sup>39</sup> and despite government's efforts to improve the quality of education, an inadequately educated workforce was cited as the third most problematic factor for doing business in the DR, suggesting that educated workers do not possess the skills that firms need.<sup>40</sup>

### Returns to assets: wages

**Real wages in the DR are lower than before the banking crisis of 2003 with the top 60% earning about 2.5 times the wages of the bottom 40 in 2015.** Between 2000 and 2015 real wages for the bottom 40 decreased 8% and 16.3% for the top 60. Overall, real wages decreased more than 30% between 2000 and 2004 partly due to an inflation rate of 42.7% in 2003 and 28.7% in 2004, to then increase 34% between 2004 and 2015 for the bottom 40 and 25% for the top 60 in the same period (Figure 2.7).

**Between 2000 and 2013 labor productivity in real terms increased by 39% while remuneration for labor decreased by 26%.<sup>41</sup>** The decline in real wages has

39 World Bank (2016a), op. cit.

40 World Economic Forum (2016), Global Competitiveness Report 2015-2016.

41 Labor productivity is measured by output per hours worked for total employment.

affected all groups of workers, regardless of their skills or years of education, and all sectors except for public administration and defense.<sup>42</sup> The sectors that have contributed most to economic growth have experienced a declining share of employment, resulting in a reduction of the percentage of total output allocated to labor payments relative to that of capital.<sup>43</sup> The multiplicity of minimum wages and the historical weakness of labor unions may partly explain the decrease in real wages despite the rising productivity.<sup>44</sup>

**While more workers currently have access to formal jobs, the poor are concentrated in informal jobs with lower wages.** The increasing concentration of low-skilled workers in low-quality jobs and in unproductive sectors limits the impact of employment on poverty reduction. There has also been a change in the sectors that hire the poor, with a shift from manufacturing to the service sectors, trade, and construction. Productivity and real wages in these sectors has grown more slowly or has stagnated, in the context of a sustained increase in productivity at the aggregate level. A decomposition analysis reveals that changes in the sector employing low-skilled workers—most of whom receive low income—contributed to an increase in poverty between 2003 and 2013.<sup>45</sup>

### Transfers

**Transfers are an important source of income for the poorest households in the DR.** In 2013, transfers accounted for 22% of the income of the first quintile, and their share in total income decreased for higher income groups to 8% in the richest quintile (Figure 2.8).

**In terms of public sector transfers, the Dominican Republic has made substantial progress in the establishment of a social protection system in the past 10 years,** including rationalization of spending in social welfare by reducing the dispersion of programs and strengthening the design of programs such as *Progresando con Solidaridad* (PROSOLI).<sup>46</sup> Cash transfers in the country

42 Abdullaev, U., and M. Estevão (2013), "Growth and Employment in the Dominican Republic: Options for a Job-Rich Growth", IMF Working Paper, WP/13/40.

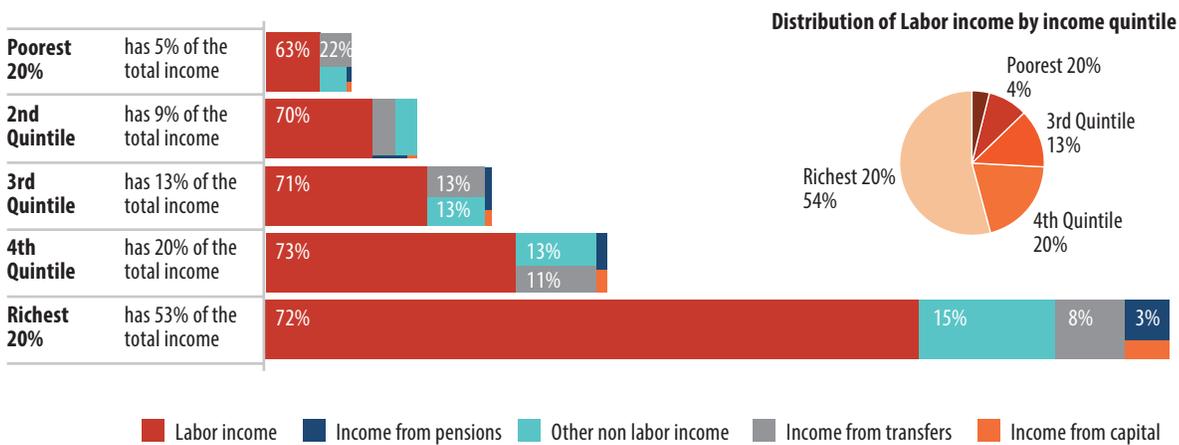
43 World Bank (2016a), op. cit.

44 There are at least 9 different minimum wages depending on the type and size of the firm, not including minimum wages for different types of construction workers.

45 Ibid.

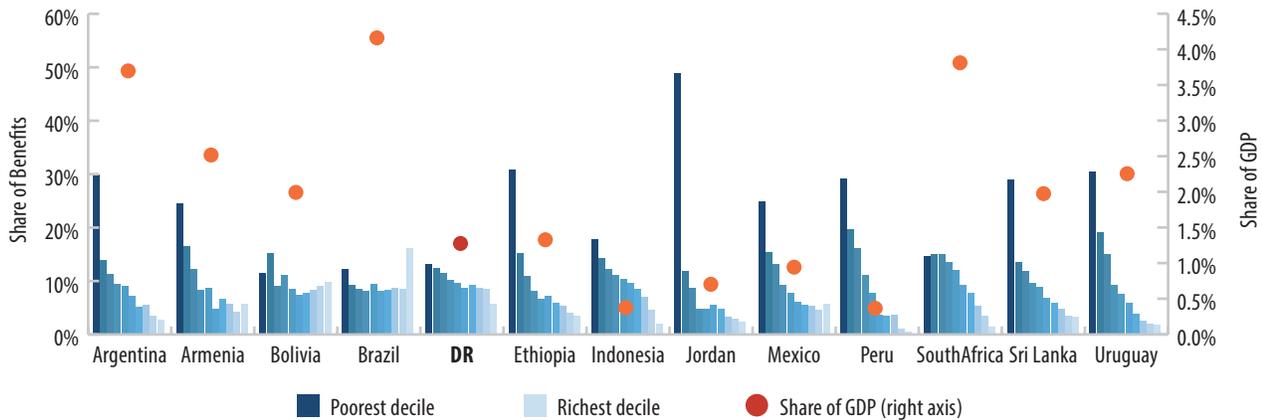
46 See note on service delivery.

Figure 2.8: Sources of income by quintile in the Dominican Republic, 2013



Source: LAC Equity Lab using data from SEDLAC (CEDLAS and World Bank).

Figure 2.9: Concentration shares of direct transfers by decile, various countries



Source: World Bank (2016b).

are generally well focused and proportionally do more to help the poor and at-risk population.<sup>47</sup>

**However, in comparison with other countries, direct transfers in the DR have the potential to generate greater redistribution of income** considering that the rate by which the share of total benefits decreases by decile is lower than that observed in other countries.<sup>48</sup> Countries such as Argentina, Peru,

and Uruguay not only devote a greater percentage of transfers to the poorest households (decile 1) than the DR, but this percentage declines more rapidly as household income increases (Figure 2.9). Despite great advances in coverage in the past eight years, individual transfer amounts are relatively small and a portion of the spending on transfers does not go to the poor.<sup>49</sup>

(see Lustig, N., and S. Higgins (2013), "Commitment to Equity Assessment (CEQ): Estimating the Incidence of Social Spending, Subsidies and Taxes. Handbook." CEQ Working Paper No. 1, July 2011; revised September 2013). However, the results should be interpreted with caution because of the countries' different taxes and exemptions.

47 World Bank (2016b), Fiscal Policy and Redistribution in the Dominican Republic. Processed.

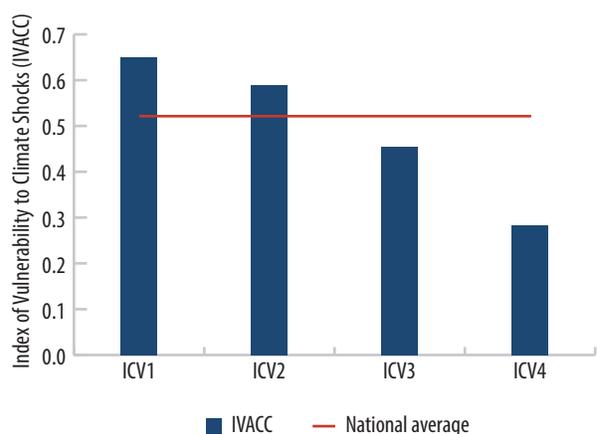
48 These country comparisons are based on the same methodology

49 World Bank (2016b), op. cit.

**Table 2.1: Loss of purchasing power of wages by quintile, Sept. 2000 – Sept. 2015**

Quintile	Inflation (%)	Wage increase (%)	Loss of purchasing power of wages (%)
1	292.0	158.2	45.8
2	283.7	144.7	49.0
3	278.5	132.3	52.5
4	272.7	108.0	60.4
5	261.6	91.9	64.9

Source: Author's calculations using data from the Central Bank of the Dominican Republic and the ENFT.

**Figure 2.10: Climate change vulnerability index (IVACC) and the quality of life index (ICV)**

Source: Single System of Beneficiaries - SIUBEN (2013), *Análisis de los datos resultantes de IVACC [Analysis of data from the IVACC]*. Mimeo.

## Prices

The purchasing power of household income is determined by the prices of goods and services they use.

**Between 2000 and 2015, the inflation of the basic basket has been greater for the poorest groups of the population but this has been partly offset by higher wage increases.** While the cost of the basket for quintile 1 increased 2.9 times, the cost for quintile 5 increased 2.6 times (Table 2.1). The higher inflation for the poorest quintiles was partially offset by higher wage increases in the same period. Inflation was 1.8 times greater than the wage increases for quintile 1, and 2.8 times greater for quintile 5. As a result, wages for higher quintiles lost more purchasing power (64.9% for quintile 5) between 2000 and 2015 than for lower quintiles (45.8% for quintile 1).

## External shocks

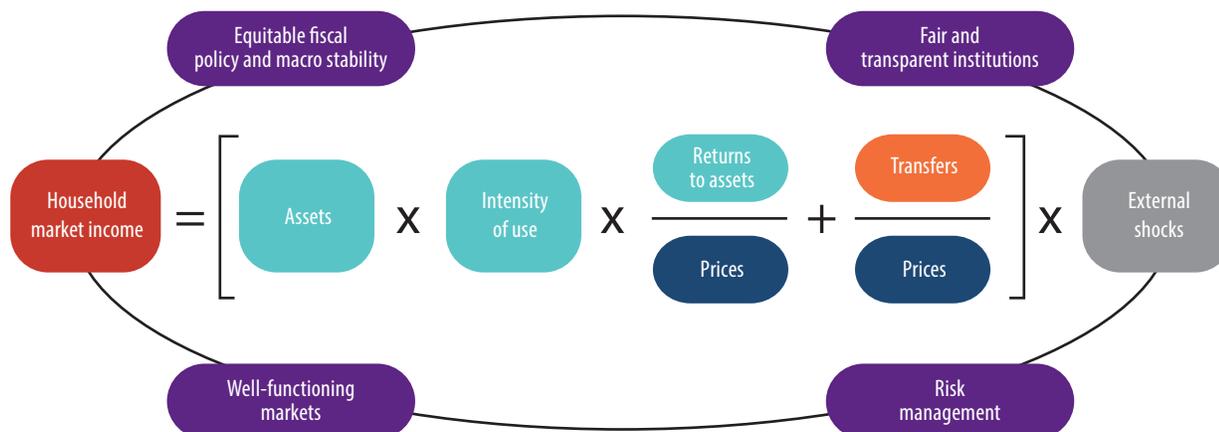
Depending on their nature, external shocks can affect health and education indicators and one or more components of household income, and rich and poor households in different ways.

**The shock that had the greatest impact on the bottom 40% of the population in the past 15 years is the banking crisis of 2003.** Between 2002 and 2004, as a result of a cumulative inflation of 93%, real wages decreased by 33%, resulting in a 25% loss in the purchasing power of household income. Between September 2002 and September 2004, about 600,000 individuals fell into extreme poverty, and the number of persons living in moderate poverty grew by one million. It was not until 2015 that poverty rates returned to their pre-crisis levels, while real wages continued below their 2002 level: real wages for the bottom 40 in 2015 were 10.5% lower than 2002 levels and 16.1% lower for the top 60.

**Household income and well-being are affected not only by the shocks themselves but also by the uncertainty about their magnitude and effects.** For example, the poorest households are hardest hit by climate shocks not only because they are more exposed, but also because they have fewer resources and receive less support from relatives, the community, the financial system, and even the social protection networks to avert the disaster, cope with it, and adapt.<sup>50</sup>

50 Hallegatte, S., Bangalore, M., Bonzanigo, L., Fay, M., Kane, T., Narloch, U., Rozenberg, J., Treguer, D., and A. Vogt-Schilb (2016), *Shock Waves: Managing the Impacts of Climate Change on Poverty*. Climate Change and Development Series. World Bank, Washington, DC; and Báez, J., de la Fuente, A., and I. Santos (2010). "Do Natural Disasters Affect Human Capital? An Assessment Based on Existing

Figure 2.11: Policy areas that affect household income-generating capacity



Source: Cord, Genoni, and Rodríguez-Castelán (2015).

**In the DR vulnerability to climate shocks is higher for the poorest households.** The climate change vulnerability index (IVACC in Spanish)—which measures the likelihood that a household is vulnerable to the occurrence of hurricanes, storms, and flooding, given certain socioeconomic and geographical characteristics—is higher for the poorest households and decreases as the standard of living increases (Figure 2.10).<sup>51</sup>

Having talked about challenges in the capacity of households to generate income, we now turn to challenges in policies that affect that capacity.

### Policies that affect households' capacity to generate income

We will now supplement the conceptual framework outlined above to organize the analysis of the links between policies and income growth of the bottom 40. The framework identifies four fundamental policy areas that have a direct impact on the capacity of households to generate income in an economy: (1) equitable, efficient, and sustainable fiscal policies and macroeconomic stability; (2) fair and transparent institutions capable of providing high-quality basic services; (3) well-functioning markets; and (4) adequate risk management at the macroeconomic and household levels (Figure 2.11).

Empirical Evidence." IZA discussion paper 5164, Institute for the Study of Labor, Bonn, Germany.

51 This index takes values between 0 (least vulnerable) and 1 (most vulnerable).

### Fiscal and macro policy

**Fiscal policy affects income-generating capacity through taxes and public spending.** Direct taxes affect the returns to assets and influence the intensity of their use. Indirect taxes can affect price levels, and public transfers not only have a direct impact on income but also incentivize the accumulation of human capital if they are tied to conditions such as school attendance or medical checkups.

**In comparison with LAC countries, the DR has low levels of tax collection.**<sup>52</sup> In 2015 tax collections accounted for 13.7% of GDP, a rate only higher than Haiti, Guatemala, and Paraguay, and well below the LAC average of 21%. The low levels of tax collection limit the levels of public social spending that are needed to close the gaps in the coverage and quality of basic services, and reach the goals set forth in the END. Budgetary

52 Some of the reasons for the low collection rate include the increase in tax expenditures and special regimes, high levels of tax evasion, and a relatively small tax base (see Salim, J. A. (2011), Elaboración de la Metodología para el Cálculo para la Evasión del ISR [Preparation of the Methodology for Calculating Income Tax Evasion], processed; and OECD (2013), Fiscal Policy for Development in the Dominican Republic). In this context it is noteworthy that tax incentives are established outside the tax code through entities other than the Ministry of Finance and that the private sector plays a deliberative role in designing special tax regimes for certain sectors (see Daude, C., Gutiérrez, H., and Á. Melguizo (2014), "Doctoring the Ball: The Political Economy of Tax Incentives for Investment in the Dominican Republic," OECD Development Center Working Papers No. 322).

rigidities in excess of 10% of GDP—which is higher than the total collected from the ITBIS (tax on the transfer of industrialized goods and services), income taxes, and property taxes—also limit the resources available for the social sectors. In 2013-2014, the DR had the lowest level of social spending as a percentage of GDP in all of Latin America, with under half the regional average.<sup>53</sup>

**An analysis of fiscal incidence using the commitment to equity (CEQ) methodology shows that in 2013 the country's fiscal policy was progressive.** In comparison with other countries and using the same methodology, the DR fiscal system is at the mid-range in terms of reducing income inequality through direct and indirect taxes, transfers, and subsidies.<sup>54</sup>

### Fair and transparent institutions

**The presence of fair and transparent institutions influences decisions for asset accumulation by households through various channels.** One of these channels is the provision of high-quality basic services that affect the accumulation and use of human capital. In the DR, increases in the coverage of services have been accompanied by improvements in equity of access. The human opportunity index (HOI), a measure of equitable coverage of goods and basic services critical to economic advancement in life, increased from 65 in 2000 to 78 in 2015.<sup>55</sup> Not all of the opportunities included in the index have evolved in the same way during the period. There were major improvements in the area of completion of the sixth grade on time (from 43 in 2000 to 71 in 2015) and in sanitation (37 in 2000 and 64 in 2015), but very little progress with regard to the index for drinking water (from 61 to 65 in the period).

**Institutional arrangements can be another barrier to the provision of quality services.** The institutional

framework of the public sector is one of the sector's main challenges. Duplication of functions, low coordination, and high institutional dispersion contribute to the delivery of low-quality of services and inefficient public spending. For instance, the Ministry of Health faces capacity constraints to coordinate the sector, and there is weak coordination of interventions between the contributory and non-contributory social assistance schemes.<sup>56</sup>

### Well-functioning markets

**Well-functioning markets, with more connectivity and competition, are important for reducing barriers to the efficient use of household assets and for increasing their return.** Markets with low levels of competition limit the growth of productivity, the creation of good jobs, and therefore the capacity of the labor market to translate economic growth into more income for the poorest households. Several studies have found that the existence of monopolies and imperfect competition results in greater losses in well-being for low-income households than for high-income households.<sup>57</sup> A recent study by the General Directorate of Internal Revenue (DGII) found that 35% of the country's markets are highly concentrated, 8% are moderately concentrated, and the remaining 57% are not concentrated.<sup>58</sup>

### Risk management

**Proper risk management can attenuate the negative effects of shocks on households, especially for the poor and vulnerable, which are more prone to risks.** The social protection networks, such as flexible transfer programs—which can be expanded during times of crisis and reduced during recovery—can be important tools for temporarily supplementing the income of households affected by external shocks. The

56 For a more detailed treatment of these institutional issues see policy note “Challenges and Opportunities to Improve the Quality and Efficiency of Social Services”.

57 See Urzúa, C. M. (2013), “Distributive and Regional Effects of Monopoly Power.” *Economía Mexicana NUEVA EPOCA*, 22(2): 279-295; Creedy, J. and R. Dixon (1998), “The Relative Burden of Monopoly on Households with Different Incomes.” *Economica*, 65(258): 285-293; and Argent, J., and T. Begazo (2015), “Competition in Kenyan Markets and its Impact on Income and Poverty: A Case Study on Sugar and Maize.” World Bank Policy Research Working Paper, (7179).

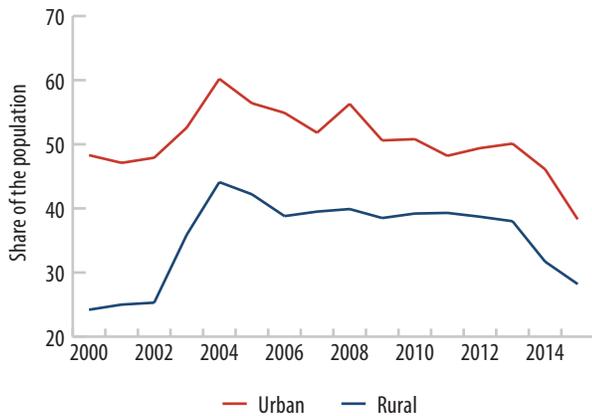
58 General Directorate of Internal Revenue (2015a). *Concentración de Mercado en la República Dominicana [Market Concentration in the Dominican Republic]*, 2015. The study uses tax declarations filed in 2014 for FY 2013.

53 Economic Commission for Latin America and the Caribbean - ECLAC (2016), *Social Panorama of Latin America and the Caribbean 2015*. Social spending is defined in the publication as resources allocated to plans, programs, and projects in education, health, social protection, protection of the environment, housing, and community services.

54 World Bank (2016b), *op. cit.*

55 The HOI takes values between 0 (no coverage) and 100 (total coverage), and takes into account coverage of basic services that offer opportunities (e.g., school enrollment and access to drinking water) and differences in the rate of coverage of groups formed based on characteristics that are beyond the individuals' control (e.g, gender, race, and place of birth).

Figure 2.12: Rates of moderate poverty in urban and rural areas in the Dominican Republic



Source: Author's calculations using data from the ENFT.

development of the climate change vulnerability index (IVACC) by SIUBEN will enable the Government to design disaster prevention and management mechanisms to protect the most vulnerable households, which tend also to be the poorest. To enhance the efficacy of prevention measures, these should be broader and mainstreamed in public planning.

**Insurance penetration remains quite low at around 1.5% of GDP.** In a country such as DR with high exposure to natural disasters, this presents a risks both for households and businesses. With the DR's expected joining of the Caribbean Catastrophe Risk Insurance Facility (CCRIF), this will provide an opportunity not only to obtain sovereign risk protection but also to extend insurance to the enterprise and household sectors of the economy.

We finally turn to challenges the country faces in terms of large and persistent regional and geographical differences.

## Persistent regional and geographical differences

**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 above poverty levels 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 (Figure 2.12).

**The greatest concentration of poverty in the border areas with Haiti has not changed in at least 15 years, nor has the fact that the National District and North Central regions have the lowest poverty rates.** The second survey of the Single Beneficiary System (SIUBEN) in 2012 identified major disparities in terms of extreme poverty rates and unmet basic needs between provinces. For example, 46% of the population in the Elías Piña province was considered extremely poor (category ICV1), but only 3.5% in Monseñor Nouel (Figure 2.13, panel A). In terms of human development measured by the Human Development Index, the differences are even greater with the Elías Piña province on the Haitian border having an index of 0.11 while the National District has an index of 0.73 (Figure 2.13, panel B).<sup>59</sup>

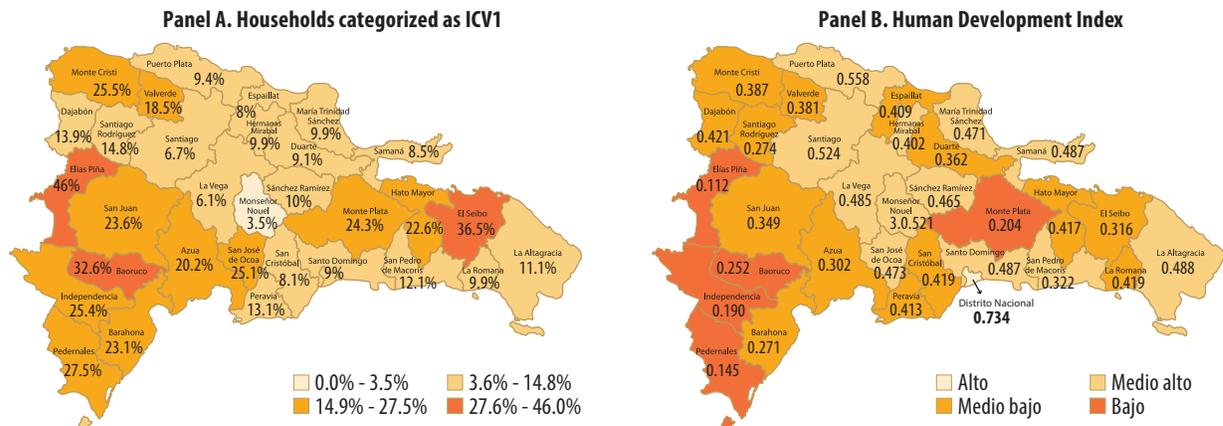
**The highest poverty rates are concentrated on the border with Haiti, particularly in the mountainous areas where less productive farming systems** (slash and burn for raising basic crops such as beans and corn) have been developed, which exert unsustainable pressure on the natural resources (soil, water and forests). Poverty is also concentrated in the low valleys where there are many *bateys* (sugar workers' towns), occupied by extremely poor Dominican Republic citizens of Haitian origin and temporary workers from Haiti who work in the larger Dominican sugar cane plantations. The Dominicans of Haitian origin are particularly vulnerable, as they not only receive low incomes, but must also contend with poor living conditions and social exclusion.<sup>60</sup>

**To address poverty and exclusion in the border region, a border development law granting tax exemptions to companies that operate in any of the seven provinces specified in the law was enacted in 2001.** This law has been criticized for not having the desired impact on local employment -or at a very high cost per job created- and on the quality of life of the residents of these provinces.

<sup>59</sup> United Nations Development Program - UNDP (2013), Human Development Map of the Dominican Republic. The Human Development Index for 2010 at the provincial level considers the accomplishments of the population in the country's provinces in three dimensions: a long and healthy life, education, and income level.

<sup>60</sup> IFAD ([http://www.ruralpovertyportal.org/country/home/tags/dominican\\_republic](http://www.ruralpovertyportal.org/country/home/tags/dominican_republic)).

Figure 2.13: Percentage of households categorized as extreme poor (ICV1) and Human Development Index (HDI) by province



Source: Single System of Beneficiaries - SIUBEN (2013), *Calidad de Vida: Estudio Socioeconómico de Hogares en la República Dominicana [Quality of Life: Socioeconomic Study of Households in the Dominican Republic]*.

Source: United Nations Development Program - UNDP (2013), *Human Development Map of the Dominican Republic*.

Some of the companies that benefited have been accused of unfair competition.

**Public investment is highly concentrated, with 75% of the investment in the period 2012-2015 concentrated in nine provinces that represent 54% of the country's population.** Investment is also concentrated in provinces with relatively low poverty rates (Figure 2.14) and in only a few sectors. Around 70% of the investment in the period 2012-2015 was in the transportation sector, while only 3.8% went to the health sector, and 0.8% to the water sector.<sup>61</sup> The latter two sectors face enormous challenges with respect to coverage and quality of service. The transfer of 10% of the central government's revenues to municipal governments based only on their population –and fulfilled only partially– exacerbates regional inequalities.

## Policy Directions

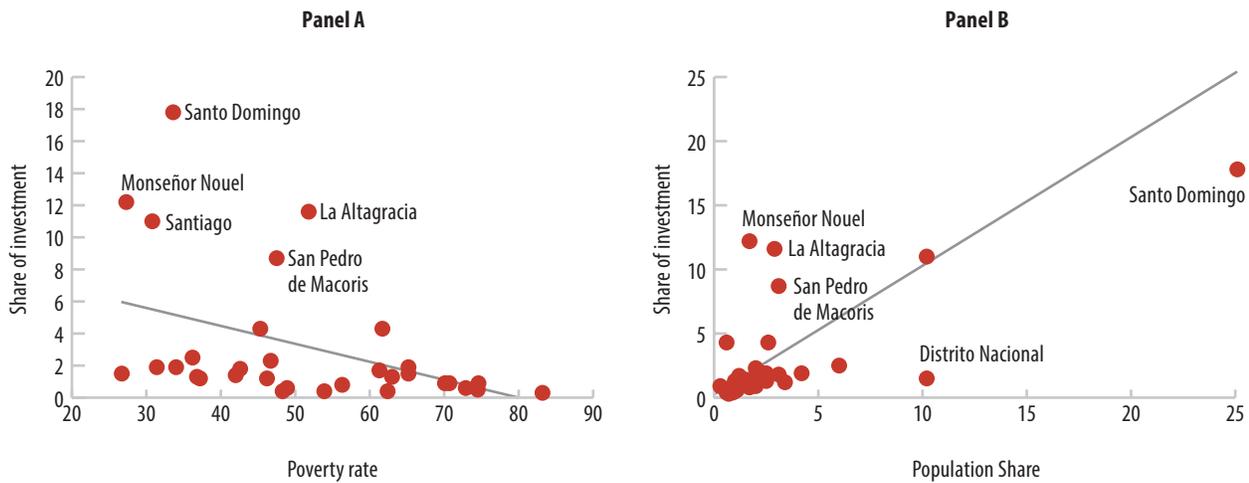
**The policy directions highlighted in this note are complementary and cut across those discussed in the other policy notes in this volume.** They focus on measures that can improve the wellbeing of the most disadvantaged groups in the DR and are therefore priorities to improve shared prosperity in the country.

**Increase the supply and quality of skills and human capital.** Continue building on the recent improvements in the quality of education by increasing student learning, increase retention in the school system, and continue expanding access to early childhood development services. Increase access to job training and internships to facilitate the transition from school to labor force and improve job matching, especially for young people. Strengthen the connection between employers and the school system so that relevant skills are included in the curriculum and students have better information about labor demand. These initiatives would improve employability and provide the necessary skills to enter and perform in the labor market.

**Incentivize job creation.** More research is needed to identify both constraints –bottlenecks, market failures– and opportunities for job generation in different economic sectors. Implement policies and provide incentives to increase competitiveness and productivity, especially in sectors that generate most of the jobs. Simplify regulatory procedures and strengthen legal institutions to improve the business environment. Invest in productivity-enhancing technologies and financial access for small and micro enterprises, where the majority of the jobs are created. Strengthen the quality of regulations to promote competition. Explore opportunities to promote exports in under-trading sectors that already employ workers from poorer households.

61 Ministry of Economy, Planning and Development - MEPyD (2016), Informe de Rendición de Cuentas de la Inversión Pública 2012-2015 [Report on Accountability of the Public Investment 2012-2015].

Figure 2.14: Share of public investment and population, and poverty rate by province



Sources: Public investment data from the MEPyD (2016). Information regarding the share of the total population is taken from the 2010 Census and the poverty rates by province are from the MEPyD (2014).

**Support policies to ameliorate labor adjustment costs accrued by the structural change in sectoral specialization in SEZs.** Social assistance programs designed to accelerate worker employment transitions to lower labor-intensity industries should be considered. These programs include vocational training in new skills demanded by SEZ firms, job search assistance, and transitional income support. Since open-ended financing for skills upgrading that is not targeted may have little if any financial returns, training programs need to be carefully designed, targeted, and incentivized, for example, through cost sharing by the worker.

**Increase cohesion and territorial planning to reduce the persistent regional differences.** Consolidate the efforts to build capacity of local governments to formulate development plans and investment projects that reflect local needs expressed through participatory processes. This would enhance the impact of the resources transferred to local governments by the Central government as established by law. Consider adding needs-based criteria to the formula to transfer resources to municipal governments. A draft bill on land use planning is currently being discussed by Congress and intends to provide a unifying framework to address many of the issues identified in this note. Some key elements the bill include: i) clear definition of responsibilities at the different planning levels in a way that is consistent with building institutional capacity; ii) provide mechanisms and resources to build capacity in local governments

to formulate plans and projects at a local level, their monitoring and evaluation; and iii) specify measurable goals that can be monitored and evaluated to assess implementation and impacts of the law.

**Reduce gender gaps.** Female workers hold the greatest potential to increase labor force participation in the DR. This would require formulating labor policies that provide women enough flexibility to find an equilibrium among competing demands from work and family. Continue expanding access to affordable childcare and pre-school. In order to reduce teenage pregnancy, find innovative ways of outreach and of providing relevant audience-friendly information on issues such as reproductive health and rights, using behavioral change methods and engaging schools and community level organizations. Initiatives like the extended shift (*'jornada extendida'*) that increase school attendance and retention have been proven effective to reduce teenage pregnancy in similar settings. Violence against women is a complex problem that requires not only laws and programs including psychological and social assistance, but also actions to transform the culture and conditions in which social relationships are established and consolidated. The challenge is to implement a model which complements sectoral and institutional actions for the protection of the rights of women to prevention, detection, care and punishment of violence in the judicial, health and education areas, in cultural institutions and the media.

**Increase financial access for MSMEs and extend insurance availability.**

Non-financial services can remove critical barriers, such as access to markets and networks that prevent MSMEs from accessing credit. These can include more effective use of electronic networks, e-money and electronic ID systems. Development of collective investment schemes could also help to indirectly channel financing to MSMEs. While there is reluctance by banks to directly finance what they see as high-risk small enterprises with scant documentation, development of an investor market willing to invest in pooled assets (or liabilities) of MSMEs could help diversify some risk and bring in additional funding as well as prudent risk takers including guarantee facilities to reduce a portion of portfolio downside risk. Such schemes would need to be developed as a partnership between financial authorities and the local and foreign investor community. With the DR's expected joining of the Caribbean Catastrophe Risk Insurance Facility (CCRIF), this will provide an opportunity not only to obtain sovereign risk protection but also to extend insurance to the enterprise and household sectors of the economy. The authorities should consider leveraging their intent to use sovereign/budget insurance as a potential mechanism to fund catastrophe coverage schemes for the underserved segments, particularly poorer households and small and micro enterprises.

# Chapter 3.

## Challenges and Opportunities to Improve the Quality and Efficiency of Social Services

### Introduction

**T**his Note covers the Dominican Republic's (DR) social sectors (education, health and social protection). In the context section, it emphasizes progress made since the last Policy Note jointly prepared by the World Bank and the Inter-American Development Bank (IADB) in 2012.<sup>62</sup> It also discusses the main challenges ahead for the Government team in the new Administration, and proposes a set of potential policy directions in key areas to enhance coverage and quality and, ultimately, outcomes.

**Since 2012, the Government made notable progress in improving coverage in the three social sectors (education, health and social protection).** In particular, it expanded the public supply of education facilities by building and rehabilitating schools and Early Childhood Development (ECD) centers. In the health sector - where coverage for health services had already been generally high - the country made the most significant progress in expanding health insurance coverage, particularly for the poor. In the case of social protection, the successful

roll-out of the Conditional Cash Transfers (CCT) Program contributed to increasing household consumption and improving education and health outcomes. Overall, service coverage improvements together with sustained growth and reduction in poverty contributed to improvements in living conditions and outcomes (for example, reduced repetition and drop-out rates in schools, reductions in infant and child mortality rates), increasing the DR's Human Development Index (HDI) from 0.70 in 2012 to 0.71 in 2014.<sup>63</sup>

**The social sectors also advanced with regard to certain institutional aspects.** The noteworthy reforms in the education sector include changes in teachers' policies and regulation covering teacher training, career development, remuneration, and performance evaluation, as well as increasing the share of GDP allocated to pre-university education from an annual average allocation of 2% to 4% since 2013. In the health sector, the establishment of the National Health Services (NHS), paved the way for the health sector to move forward with the separation of functions of health service provision under the NHS and stewardship and provision of collective health services

62 Banco Mundial y Banco Interamericano de Desarrollo, 2013. "El sector educación en la República Dominicana" en *Notas de Política República Dominicana: Día del Diálogo, 9 de marzo de 2013*, páginas 88-201, Washington, D.C.

63 The Human Development Index (HDI) is a composite statistic of life expectancy, education, and income per capita indicators. A country scores higher HDI when the life expectancy at birth is longer, the education period is longer, and the income per capita is higher.

under the Ministry of Health that was envisioned in the 2001 Health Sector Reform. Also, the MOH expanded its results-based financing pilots in primary health care facilities to more regions. The Government also made good progress with regard to strengthening the Social Protection System, including improvements of the Conditional Cash Transfers (CCT) Program and other strategies to link benefits (*Progresando Unidos*).

**However, the Government faces a number of common challenges in the social sectors.** While the DR's indicators have generally improved, several tend to be lower compared to their peers. For example, although the DR's HDI increased to .714 in 2014, it is lower than the averages for the LAC region (.748) and High Human Development Countries (.744). Also, although Dominican students showed the greatest improvement in regional assessments among 3rd and 6th grade students from 15 countries in the region between 2006 and 2013, they continue to lag behind other LAC countries. In the health sector, DR's maternal health care coverage tends to be higher than averages for LAC and Upper Middle Income Countries (UMIC), yet maternal and child mortality rates remain significantly higher than LAC and UMIC averages. As can be gleaned from the following sections, the three sectors share three main cross-cutting challenges related with: (i) quality of services and coverage gaps, (ii) public spending efficiency and performance accountability; and (iii) institutional capacity and coordination to improve synergies within and across sectors.

**system-level changes.** Evidence of these changes include the allocation of 4.0% of GDP to the pre-university education sector annually from 2013-2015 (up from an average allocation of 2.0% of GDP during 2008-2012). In addition, the commitment to transform the education sector has achieved results that will impact the entire system over the next ten years: i) by 2015, 882,558 students—representing 46% of students enrolled in the public system—had attended one of the new 3,418 full-time public schools; ii) the system's internal efficiency has improved, particularly in grades 1 to 8 (e.g. repetition decreased from 9.1% to 8.1%, and dropouts decreased from 3.4% to 3.0%); iii) beneficiaries of early childhood development services have more than doubled (from 18,000 in 2013 to 42,549 in 2015); and iv) Dominican students showed the greatest improvement in regional assessments among 3rd and 6th grade students from 15 countries in the region between 2006 and 2013.<sup>65</sup> In terms of expansion of the public supply of education services which was one of the biggest commitments of the current administration, achievements include 11,873 new classroom, 967 more rehabilitated, and 86 early childhood development centers which are expected to be completed soon.<sup>66</sup> <sup>67</sup> Furthermore, learning results from the DR's standardized assessments indicate that students in full-time schools are slightly more likely than students not attending fulltime schools to pass 8th and 12th grade assessments. A larger proportion of full time students than part-time students are also represented in the technical and professional stream.<sup>68</sup>

## EDUCATION

### Context: Main Achievements

**The current administration made education a prominent priority in the national agenda, and has made progress in the implementation of ambitious plans agreed under the National Education Pact (NEP),<sup>64</sup> and other regulations, leading to substantial**

64 The NEP's final document, signed in April 2014, includes i) teaching career reform by revising pre-service and in-service training programs and implementing an induction exam (i.e. capacity to recruit and train); ii) adopting an evaluation culture across all sectors and actors in the education system; iii) increasing quality of early childhood education; and iv) modernizing management of the system, with a focus on decentralization. The NEP is valid until 2030 and its strategies are aligned with the National Development Strategy 2010-2030 and the 10-Year Education Plan. The NEP priorities have been informed by the *Iniciativa Dominicana por una*

*Educación de Calidad* (IDEC), a Government led process involving a series of meetings with civil society, the private sector, universities, NGOs, and all active donors in the education sector – transcending political parties- to provide education policy recommendations.

65 The regional assessments compared are the *Segundo Estudio Regional Comparativo y Explicativo* (SERCE) and the *Tercer Estudio Regional Comparativo y Explicativo* (TERCE) carried out by UNESCO in 2006 and 2013, respectively. TERCE assesses competencies in reading, math in 3rd grade and reading, math and science in 6th grade, in 15 countries in LAC. TERCER Results will mark the baseline of the ambitious DR education reform and would allow the tracking of progress in student learning.

66 Specifically, at the end of December 2015, 25 *Centros de Atención Integral a la Primera Infancia* (CAIPI) are open, 17 are nearly finished, and 34 have a high chance of being finished by the end of 2016.

67 Although the Government objectives have not been achieved in these fronts due to the time it took to set up programs and process and identify land for construction, the results are substantial and significant for the system. In terms of classrooms, for example, the number of classrooms increased by 40% in the last four years.

68 See *Informe de resultados: Pruebas nacionales 2015—Primera convocatoria*, MINERD, Dominican Republic.

**As part of these system-level changes, the Government has significantly expanded its efforts to improve education by simultaneously tackling system weaknesses on multiple fronts.** On the pedagogical front it has developed new curricula for initial, primary, and secondary (general) education, while the technical-professional, secondary, and upper secondary curricula are expected to be finalized during school year 2016-2017. On the learning measurement front, the country has applied the Program for International Student Assessment/PISA (results of which are expected to be available in December 2018), and has developed a solid proposal for student assessment in 3rd, 6th, and 9th grades with a certification assessment at the end of 12th grade (the proposal is pending approval by the Nation Education Council, NEC). To modernize the functioning of the Ministry of Education (MINERD), the Government hired the services of an international consultancy firm to identify activities aimed at transforming MINERD's most critical processes to move ahead with the ambitious reform. At the same time it also advanced in the design of a new monitoring and evaluation system, and in the development of operation manuals for regional and school districts to move ahead with quality certification of their processes.

**More importantly, major steps to improve pedagogical instruction in classrooms have been taken, by advancing on critical reforms on teachers' career and policies.** In order to make the teaching profession more attractive, real salaries for public-school teachers significantly increased between 30% and 40% from 2012 to 2014.<sup>69</sup> This increase widened the salary gap between teachers and other university professionals from 23% to 56%, making the teaching profession more financially attractive. At the same time, the number of applicants who took the teacher entry exam to become public school teachers increased from 6,575 applicants in 2012 to 36,884 in 2015. In addition, teacher related policies and regulation have improved. In particular, MINERD has: i) published professional standards for teachers performance as part of teachers certification, ii) developed a solid teacher career framework (including induction, recruitment, evaluation, certification), and iii) under the leadership of the Ministry of Superior Education and Technology (MESCyT), developed regulations for universities and

teacher-training institutes to change the way teacher are trained, for example, by changing the curricula and classroom learning time. Several of these initiatives were only beginning or about to begin their implementation at the time of writing this note—for example, the induction program for new teachers launched in 2015. Nonetheless all these initiatives have the potential to change the quality of pedagogical instruction in classrooms in the medium- to longer-term. In addition to these reforms, MINERD's decentralized institutes are piloting and implementing important changes in the way they recruit and train teachers, both pre-service and in-service.<sup>70</sup>

## Challenges

**Looking beyond the achievement of allocating 4% of GDP for pre-university education, and the implementation of launched reforms, increasing student learning is the biggest challenge the education system faces the next decade.** Until new teachers are trained, reforms initiated fully take effect, and new students advance through the system, system-level challenges in increasing student learning will persist. Despite substantial progress in learning by Dominican students between 2006 and 2013 as captured by regional assessments, Dominican students continue to 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, 74.1% and 84.8% of third graders performed at the lowest level. These results are substantially worse than those of comparable countries, and represent the highest proportion of such results in the region. Poor performance in international assessments is observed for all socio-economic levels, although students from high socio-economic backgrounds obtained better results than students from disadvantaged households. In addition, students from the poorest backgrounds in the region performed better, on average, than Dominican students from the most advantaged background. Moreover the DR's own standardized assessments in 8th and 12th grades also highlight system-level inefficiencies that affect student

69 EDUCA estimates based on the report: *Informe Evolución de Recursos Humanos, 1990-2013*, Planning Office; MINERD, 2014. See: EDUCA's *República Dominicana: Informe de progreso educativo*.

70 The Instituto Nacional de Formación y Capacitación del Magisterio (INAFOCAM) is piloting improved in-service training courses and evaluating the impact of existing programs, while the *Salomé Ureña Teacher Training Institute* (ISFODOSU) is developing a more stringent approach in recruiting students and already started implementing training on a full-time basis.

**Table 3.1: Percentage of students in the lowest level of performance in reading and math in latest regional assessment (2013)**

Country	3rd grade		6th grade	
	Reading	Math	Reading	Math
Costa Rica	17.6	23.1	4.5	29.9
Ecuador	38.1	47.8	20.8	44.8
Guatemala	46.1	60.2	20.5	56.4
Nicaragua	56.2	68.0	25.6	71.0
Panama	48.9	60.1	25.8	67.5
DR	74.1	84.8	37.8	80.1
LAC	39.5	47.2	18.4	46.9

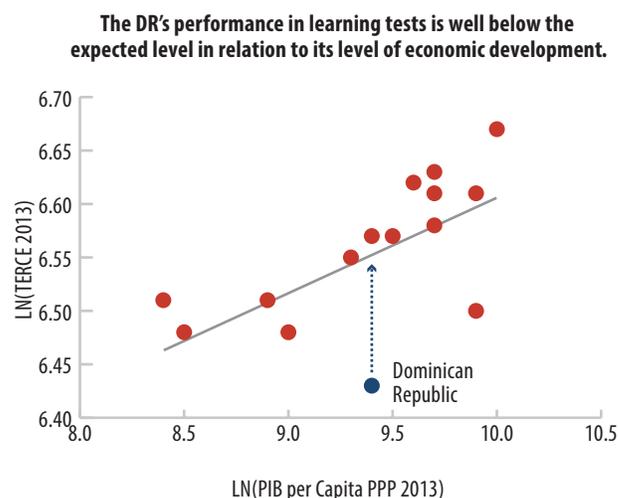
Note: The numbers refers to the percentage of students in each country whose performance is in the lowest level out of four levels. Source: TERCE, 2013.

learning. In 2015, 15 of every 100 students that reached the 8th grade, failed national assessments and were immediately held back by the system, which substantially increased the risk of: i) being overage in later grades and, more importantly, ii) dropping out (as shown below). The same worrying situation happened in the 12th grade, where 32 of every 100 students that reached that grade could not finish their studies, creating an educational dead-end for students, which is costly for households and the education system. In terms of equity, boys, students in public schools, and rural areas underperformed compared to girls, those in private schools and in urban areas.<sup>71</sup>

**The education system's weak capacity to generate learning in students, and the obstacles that the system imposes for students to progress through the system, affect the rates of school failure, overage and low enrollment in upper secondary (equivalent).**

Low reading comprehension and the lack of capacity to perform basic math in the first grades create major challenges that students must overcome in order to perform in other subjects, as their capacity to learn by reading is limited. These, and other weaknesses of the system, produce high rates of school failure in the first grades and continue the trend of failure in higher grades, including those who make it to upper secondary (or its equivalent). On average, promotion rates in basic education reached 90.5% and the dropout rate was

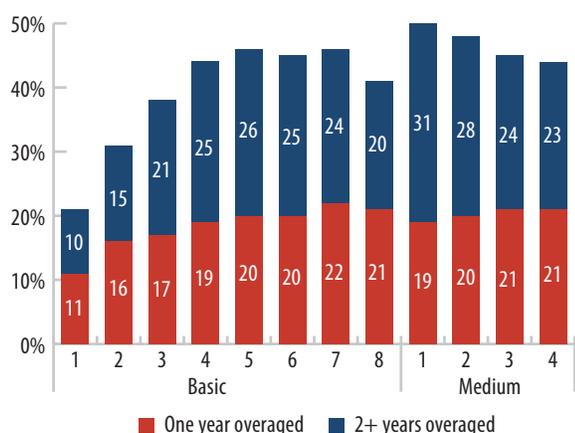
2.9% in 2013-14. Both indicators improved compared to 2009-2010 when they were 87.7% and 3.4%, respectively. However, school failure is very high at the end of the eighth grade (which is the end of the basic education cycle), in particular, in each grade of upper secondary (equivalent), with rates that range between 11.5% and 18.3% depending on the grade. Moreover, overage, school failure, and low enrollment get reinforced by the still-limited access to early childhood development services that could promote children's cognitive and socio-emotional development, school readiness, and

**Figure 3.1: Education outcomes in the DR**

Source: TERCE, 2013. Note: This graph uses the average of the results in the different areas and grades to get a single value per country. Each circle represents a country in the region that participated in the TERCE. GDP per capita information from the World Bank databases.

71 See *Informe de resultados: Pruebas nacionales 2015—Primera convocatoria*, MINERD, Dominican Republic.

Figure 3.2: Overage and School Failure, 2013-2014



Cycle	Grade	School Failure (Dropout + not promoted %)
Basic Education	1	8.0%
	2	9.0%
	3	13.4%
	4	10.2%
	5	9.5%
	6	8.2%
	7	9.6%
	8	7.7%
Upper Secondary (equivalent)	1	18.3%
	2	13.8%
	3	11.5%
	4	17.9%

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

reduce overage in the first grades, improve learning, and reduce the risk of dropout. ECD could also benefit disadvantaged populations which have a harder time accessing these type of services.<sup>72</sup>

**The quality of education, its relevance, and the efficiency of the system contributes to the phenomenon of youth “neither in work nor in school” (Nini).**<sup>73</sup> The percentage of the population between 15 and 24 years old who are “neither in work nor in school” (nini) in the Dominican Republic is 21.4%, slightly higher than the regional average. The total number of ninis increased from 356,000 in 1995 to 434,000 in 2013. This trend was driven by the increase in number of young men out of the education system who are not working. In addition, the nini phenomenon has an important gender dimension as 3 out of every 5 ninis are females, reflecting adolescent fertility rates in the Dominican Republic that are above the regional average (72 for 100,000 adolescent women). From the equity aspect, the nini phenomenon in the Dominican Republic is not concentrated in the poorest populations; which could indicate challenges in the quality of education or the pertinence of education for

the labor market (Annex I provides more information). The general path to become a *nini*, in particular for men, is to drop out from school and join the unstable, informal labor market (as they do not have the skills to find formal sector employment) and then transition into unemployment. Once informal jobs are lost, young men do not return to school. The LAC region also faces a similar problem with nearly 40% of youth between 15 and 19 years old leaving the education system.

**Governance of the system and lack of sufficient coordination of the reform agenda, particularly with respect to teacher policies present challenges.** MINERD, including its decentralized institutions (e.g. INAFOCAM and ISFODOSU), and MESCyT have made a substantial effort to coordinate activities to give structure to teacher policies (e.g. regulation on standards for teachers and new curriculum for teacher training); however, the challenge to coordinate all teaching career related actions remains as different institutions progress in the implementations of their plans. There is also room for improvement in terms of coordination with international partners. Finally, from the governance side, MINERD’s capacity has been affected by the lack of sufficient definition of roles, staff competencies, and processes that require attention and strong leadership. Use of available data to feed a coordinated effort for decision making process at all levels (central regional, and schools). For example, induction, teacher entry exam, certification, teacher evaluation, and student assessment data are still not commonly used to develop

72 Banco Mundial y Banco Interamericano de Desarrollo, 2013. “El sector educación en la República Dominicana” en *Notas de Política República Dominicana: Día del Diálogo, 9 de marzo de 2013*, páginas 88-201, Washington, D.C.

73 De Hoyos, R. 2016. “Ninis” en la República Dominicana. Note based on De Hoyos, R., Rogers, H. and M. Szekely (2015), “Ninis en América Latina: 20 millones de jóvenes en busca de oportunidades,” Banco Mundial, Washington, D.C.

targeted teacher training programs by INAFOCAM and other institutions; nor are data utilized well by school management committees to improve accountability and, empower school directors to make better decisions.

## Policy Directions

**Access to quality services: Continue efforts to expand early childhood development services and develop solid strategies to increase student retention.** There is a need to quickly develop INAIPI's institutional arrangements to enable it to more effectively and rapidly increase service provision. Of equal importance, INAIPI would need to develop a comprehensive approach to monitor and support quality of service; international experience shows that the only viable path for early childhood development is to increase access and quality simultaneously. Regarding secondary school, it is recommended that MINERD develop systems and strategies to more directly tackle low enrollment and dropouts in what would soon be secondary education (or beyond 8th grade). Early warning systems that are gender-informed to prevent dropouts and teacher trainings that cater to different learning levels within each grade and that address gender-specific issues, as well as other demographic variables, coupled with the opportunities created by the full-time model, place the DR in an advantageous position to both increase retention and improve the relevance of education for youth.<sup>74</sup> On this last point, it is important to consolidate the curriculum for upper secondary on technical-vocational education. This will ultimately provide the skills for employment and give more alternatives for youth—in particular for young men who drop out of school without employment-relevant skills. All interventions aimed at keeping youth in school have been proven to pay off, including: early warning indicators for dropouts, scholarships, programs aimed to reduce teenage pregnancy, training for employment—including socio-emotional skills (perhaps as part of the full-time program)—and eliminating system impediments for children to continue school.<sup>75</sup>

**Teachers and directors of centers are key to improving access and quality and it would be important to prioritize initiatives that matter the most for pedagogical instruction, and that have direct classroom impact.** The teacher is the most important factor to improve learning outcomes. DR's progress on teacher policies has been substantial, but many important initiatives are yet to be carried out. These include teacher evaluations, the use of available data in the system to feed into the design and implementation of teacher training programs, improving the teacher entry exam, the accreditation of teacher training programs (capitalizing on new regulations), and teacher accreditation, among others. In this regard, it is also important to continue improving components related to teachers' careers, including salaries, evaluations, and incentives. These initiatives will only work if they are well articulated and if the different actors—such as MINERD and its institutes and directorates, MESCyT, teacher training universities and institutes, unions, civil society—work together and continue to build on the regulations that have already been put in place.

**Increasing both learning and system efficiency to retain students would also require a continuous effort to ensure coordination of the reform agenda, particularly with respect to teacher policies.** MINERD, including its decentralized institutions (e.g. INAFOCAM and ISFODOSU), and MESCyT have made a substantial effort to coordinate activities to give structure to teacher policies (e.g. regulation on standards for teachers and new curriculum for teacher training); however, the challenge to coordinate would continue as different institutions progress in the implementations of their plans. Coordination with partners, via IDEC and other coordination groups, is important to avoid duplication and exploit synergies. Recent developments such as the Teacher Entrance Exam (*Concurso de Oposicion*) and the new regulation for teacher training programs show that coordination can result in substantial improvements.

**Modernize MINERD's processes, improve monitoring and evaluation systems, and use data for communication, leadership, and decision-making at all levels.** MINERD has started to work on modernizing roles, competencies, processes and leadership; aligning current activities to these initiatives will determine the speed of change of the education agenda for the next few years.

74 For a gender analysis in the education sector, see Annex II

75 For example, most countries in the region as well as the OECD and Asia have transformed high-stake student assessments into diagnostic assessment at the end of primary or basic education to avoid the detrimental effect of assessment on retention). These would increase the relevance of education for youth and create a more direct link to the ultimate education outcome goals.

MINERD's modernization and in particular, the definition of roles, staff competencies, and processes require particular attention and strong leadership to (i) define a realistic, time-bound implementation plan and follow it through and (ii) avoid duplicating efforts within the MINERD (e.g. on different aspects teacher training initiatives, on student assessment, on support to schools). MINERD's functioning will certainly impact all other activities and determine the success of many sector initiatives. As part of this process, it is important to strengthen M&E systems, implement student assessments and teacher evaluations, strengthen supervision and data at the school level, and increase the use of data for decision-making at all levels of the system (e.g. empower and support schools, and school principals, to improve their management in order to improve learning conditions and outcomes, as has been done in Brazil, Colombia, Mexico, and other countries).<sup>76</sup> Importantly, system decentralization could be deepened as participatory processes are strengthened, promoting ownership and accountability at the local and regional levels. Finally, this modernization process should aim to improve physical resources, pedagogical materials, administration, and system governance by reviewing and adjusting processes and developing systems to more closely monitor results, while at the same time supporting schools to be the drivers of change in the classrooms.

**It would also be important to deepen the implementation of reforms, sharpen the focus on learning outcomes, and improve coordination of programs and initiatives as agreed in the NEP.** Since 2012 the GoDR has embarked on a substantial reform of the education sector, which has included the expansion of services such as early childhood development and a full-time school model, among others. The reform should continue consolidating the gains that the system has started reaping. As part of the process ahead, improving coordination—both internally within MINERD and its institutes, externally with other ministries (MESCYT and Ministry of the Presidency), and also with partners—would avoid duplication, exploit synergies of joint work, and improve service delivery in a faster way. In addition,

<sup>76</sup> Also, induction, teacher entry exam, certification, teacher evaluation, and student assessment data can be used to develop targeted teacher training programs by INAFOCAM and other institutions; school management committees can be fed data on student learning and managerial indicators to improve accountability and, at the same time, empower school director to make better decisions.

the future education agenda points towards a sharp focus on learning outcomes; the DR is in a privileged position to make the shift from focusing on expanding access, to improving children's learning outcomes. Initiatives to improve learning also include the education chapter within the program República Digital which is focused on integrating ICTs for the improvement of learning in an effective way.

**Finally, there are many important questions for policy makers to address in the near future.** These include: What have been the effects of the full-time model on the balance between public and non-public education? How to advance the implementation of the basic curriculum based on competencies and its understanding by the actors in the system (for example, teachers, personnel of ministries, etc.)? Is the extra time being optimized for learning? How cost-effective is the full-time model? What is, and should be, the role of the education system in tackling youth issues (such as teenage pregnancy)? How to promote parental behaviors toward supporting the development of reading and writing skills in Dominican children? How to effectively use technology to improve learning in the classroom and in training teachers? How to monitor and evaluate progress toward the implementation of the NEP? These questions and others are left for further analysis and discussion. Initiatives to improve learning also include the education chapter within the program República Digital, which is focused on integrating ICTs for the improvement of learning in an effective way.

## HEALTH

### Context

**High health services coverage rates have generally yielded positive results.** National Demographic and Health Survey (ENDESA) data collected over time show improvements in national-level coverage rates in the Dominican Republic (DR),<sup>77</sup> as well as reduced coverage gaps between income quintiles and urban and rural areas. For example, the percentage of pregnant women who received prenatal care by a qualified health professional reached 99.3% in 2013, with the percentage of women in the poorest quintile who received this type of prenatal care increasing from 87% in 2007 to 98.5% in 2013, significantly

<sup>77</sup> CESDEM in coordination with the Ministry of Health. 2013. *Encuesta Demográfica y de Salud: República Dominicana*.

**Table 3.2: DR Health Insurance Coverage: 2007 and 2016 by Insurance Regime**

Insurance Regime	2007	2007 % of total population	2016* # of persons	2016 % of total population
Contributory	793,850	8.3	3,500,714	32.8
Subsidized	35,706	0.4	3,308,606	31.0
Subsidized-Contributory	0	0	0	0
<b>Total</b>	<b>829,556</b>	<b>8.7</b>	<b>6,647,407</b>	<b>63.8</b>

Source: SISALRIL Website. \*Note: as of June 2016.

narrowing the coverage gap with women in the richest quintile (98.7%).<sup>78</sup> Also, the percentage of births assisted by skilled professionals increased from 97.5% in 2007 to 98.5% of births in 2013, with professionally assisted births for women in the poorest 20% of households increasing from 89% in 2007 to 97.2% in 2013, just slightly less than 97.8% of mothers in the richest income quintile in 2013. Between 2010 and 2014, life expectancy increased from 73 to 74 years, while infant mortality and under-five mortality rates decreased from 28 to 26 per 1,000 live births and from 34 to 32 per 1,000 live births, respectively. Moreover, in the same period, tuberculosis (TB) incidence decreased from 67 to 60 while Human Immunodeficiency Virus (HIV) prevalence in the 15-49 age group declined from 1.2 to 1.0.<sup>79</sup> Challenges remain with certain indicators such as maternal mortality which will be discussed in the following section.

**Health insurance coverage significantly increased from 9% in 2007 to almost 64% in June 2016.** Since 2007, Contributory Regime (CR) coverage for formal sector employees more than quadrupled while the Subsidized Regime (SR) coverage for the poor increased almost a hundredfold (Table 3.2). In March 2016, the National Health Insurance (NHI) announced that the SR already covers all the eligible poor registered in the Unique Beneficiary Information System (SIUBEN).

**The Government increased its efforts to improve the quality of health sector spending.** The MOH has been progressively moving away from historical budgeting toward using results-based allocation of resources.

78 In 2013, 95.6% of women in rural areas and 95.3% in urban areas had at least 4 prenatal consultations (ENDESA).

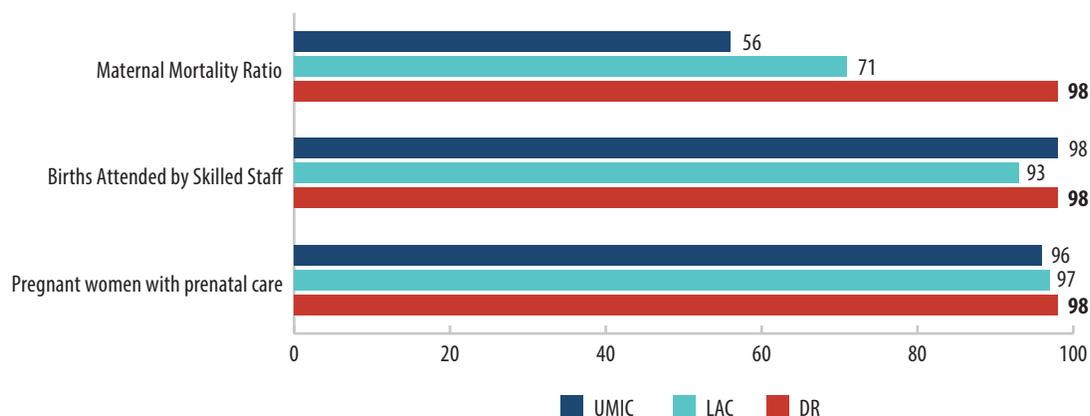
79 World Bank. 2016. World Development Indicators.

Since 2011, it has expanded its results based financing (RBF) mechanism pilots from three regions (VI to VIII) to six more regions (0 to V). With the focus on results, the use of the Clinical Management System to register and monitor adherence to protocols during consultations in primary level care facilities has increased in all the RBF regions. In addition, since 2012, the Program of Essential Medicines/Center for Logistical Support (PROMESE/CAL) has been officially designated as the sole public purchaser for medicines in order to achieve economies of scale and improve the affordability of medicines.

**The Government took a major step in implementing the separation of key health sector functions as envisioned in the 2001 Health Sector Reform.**<sup>80</sup> In 2015, the Government established the National Health Services (NHS) as the coordinating entity for the public network of health services while the MOH retains its functions of stewardship and management of collective/public health services and the NHI remains the main public purchaser of health services to improve financial protection and quality of services especially for the poor under the Subsidized Insurance Regime. The NHS is also responsible for (a) promoting the strengthening of regional health services (RHS), progressively facilitating their administrative and financial autonomy and (b) for assessing RHS compliance with MOH requirements.

80 In 2001, the Government passed two key laws as part of a major health sector reform program: the General Health Law (42-01) and the Dominican Social Security System Law (87-01). Aside from the establishment of a universal health insurance system, key provisions of these laws include changes in institutional and financial arrangements such as restructuring public provision of health services, together with progressively decentralizing regional health networks.

Figure 3.3: Maternal Health Care Coverage Rates and Maternal Mortality Ratios: DR, LAC, and UMIC 2014 (%)



Source: WDI.

## Challenges

**Most health outcomes have improved; yet several remain lower than regional averages; a few indicators have worsened and some diseases have emerged as major causes of deaths.** While DR's infant and under-five mortality decreased to 26 and 32 per 1000 live births, respectively in 2014, they both remain much higher than the averages for Latin America and the Caribbean (LAC) of 16 and 19 per 1000 live births, respectively and the averages for Upper Middle Income Countries (UMIC) of 16 and 20 per 1000 live births, respectively. In addition, while DR's maternal care coverage rates tend to be higher than averages for LAC and UMIC (Figure 3.3), its Maternal Mortality Ratio/MMR (98 per 100,000 live births) is significantly higher than averages for both LAC (71) and Upper Middle Income countries (56) in 2014. Even El Salvador, a lower middle country with a GDP per capita that is two-thirds of the DR's GDP per capita has a much lower MMR (56 per 100,000 live births). Also, the percentage of children 18-29 months of age who received all their required vaccinations decreased from 48.7 to 47.4% between 2007 and 2013.<sup>81</sup> In recent years, cardiovascular diseases, diabetes and cancers have increasingly become the main causes of death, followed by communicable, maternal, perinatal and nutritional conditions.<sup>82</sup>

81 ENDESA uses information provided in immunization cards.

82 Institute for Health Metrics and Evaluation, University of Washington and Human Development Network, World Bank. 2013. Global Burden of Disease: Generating Evidence, Guiding Policy. Latin America and Caribbean Regional Edition; World Health Organization website.

### Quality of care remains a major health sector concern.

As noted above, despite very high maternal care coverage rates,<sup>83</sup> maternal mortality in the DR remains high. Various assessments indicate that majority of maternal deaths in the DR could have been prevented with improvements in a combination of factors: adherence to norms, protocols, and quality standards by properly trained personnel, access to required equipment and inputs which also depend on having sufficient funding;<sup>84</sup> and enforcement of monitoring and supervision and regulatory arrangements under the overall stewardship of the MOH (discussed below).<sup>85</sup> Another reflection of the quality of public services is the large share of the population using private facilities. While majority of the population went to public facilities for outpatient consultations (59%) and inpatient services (51%),<sup>86</sup> these numbers are significantly lower than the share of the population who use public facilities in other upper middle income LAC countries such as Costa Rica (at least 80%) and Panama (at least 70%).<sup>87</sup>

83 A gynecologist/obstetrician attends to deliveries of 78.6% of women in urban areas and 69.7% of women in rural areas while a general practitioner attends to deliveries of 22.9% of women in urban areas and 28.8% of women in rural areas.

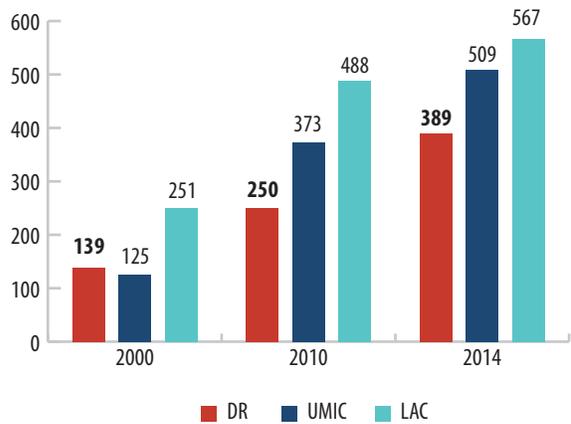
84 Project Hope 2010; Hoy Digital, July 8, 2016. *La RD registra 1,176 muertes maternas en centros de salud*. A. Castro. 2016. *The Unresolved Problem of Maternal Mortality in the Dominican Republic*. Draft Case Study.

85 Some studies note that medical interns and residents are not sufficiently supervised by specialized doctors throughout the delivery process. According to ENDESA (2013), the DR also has a high cesarean rate (56%) which is much higher than the international recommended rate (10%).

86 ENDESA 2013.

87 WB. 2015. Social Sector Expenditure and Institutional Reviews for Costa Rica and Panama.

Figure 3.4: Trends in per capita public spending on health (PPP) from 2000 to 2014: DR relative to LAC and UMIC



Source: WDI.

**Despite significantly increasing overall health insurance coverage, the government has not yet attained its 2011 goal of universal health insurance and significant differences exist between per capita spending between the Subsidized and Contributory Regimes.**<sup>88</sup> Approximately 30% of the population do not have access to health insurance. The Government's SR now covers all the poor registered in SIUBEN. However the poorest who remain unregistered, do not have access to health insurance. In addition, the Government has neither implemented the Contributory-Subsidized Regime (CSR) for the informal sector nor does it have a well-defined operational plan to launch it. Also, estimates based on available data indicate that the CR's per capita spending was at least 2.5 times higher than the SR per capita spending.<sup>89</sup>

**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 DR'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 2000 to 2014, DR's public share of total health spending increased from 37% to 67% while out of pocket spending's share of total health

expenditures decreased from 43% to 21%, the latter was lower than the average out of pocket health spending shares (both 32%) in UMIC and LAC. While the DR's public spending on health's share of GDP increased from 2.2% in 2000 to 2.9% in 2014, it remained lower than UMIC and LAC averages of 3.4% and 3.7%, respectively. The DR's per capita public spending on health was also lower than the UMIC and LAC averages (Figure 3.4). In 2000, DR's per capita public spending on health in purchasing power parity (PPP) terms was higher than the UMIC average and lower than the LAC average. After 2000, both UMIC and LAC's average per capita public spending on health increased more significantly. As a result, in 2014, DR's per capita public spending on health in PPP terms was less than a quarter of the UMIC average and almost less than a third of the LAC average.<sup>90</sup> Lack of sufficient funding is often cited as a major constraint to investments in health sector inputs and in expanding insurance coverage.

**While more public resources are needed in the health sector to continue to improve the quality of services and expand financial protection, there is room to improve efficiency and cost-effectiveness of sector spending.** Despite expanding RBF pilots in primary level care in more regions, health sector financing remains largely based on historical budgeting. Other indicators that point to inefficiencies in the health sector relate to: (a) people tending to bypass primary care centers and use hospitals for basic care. For example, tertiary care hospitals have been reported to manage uncomplicated dengue cases which could be handled in primary care facilities.<sup>91</sup> Bypassing could also result from weaknesses in the referral and counter-referral system, as well as 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 MOH spent 62% of its recurrent budget on curative services and only 5.7% on primary care and health promotion in 2014.<sup>92</sup> In addition, the Contributory Health Insurance and Subsidized Health Insurance Regimes spent only less than 1% and 10% of their respective budgets

88 The government set a goal of achieving universal health insurance coverage as part of health sectors reforms initiated in 2001.  
89 WB team's preliminary estimates based on available date from SISALRIL. *Memoria 2015*; SISALRIL. 2014. *Ocho Años Gestión Institucional* and MOH data.

90 Purchasing Power Parity (PPP) or international dollars refers to currencies adjusted across countries to make the value of purchased goods and services comparable.

91 PAHO cited in *OPS Alerta Salud maneja casos dengue de forma insostenible*. Hoy.com. November 4, 2015.

92 Rathe and Hernandez. 2014. *Gasto Nacional en Salud en la Republica Dominicana*.

for prevention and promotion activities.<sup>93</sup> Inefficient allocation of human resources also impacts on quality of services. Although the country's overall health worker to 10,000 population ratio increased from 19 in 2011 to 25 in 2015, thereby meeting the WHO's recommended ratio, there continues to be a wide gap between health worker to population ratios between urban and rural areas. The DR only reduced the urban-rural health worker gap from 17% in 2011 to 23% in 2015, reaching less than half of its 2015 goal of 50%.<sup>94</sup>

**Key sector institutions face capacity constraints in fulfilling their key functions.** Various institutional assessments note that the MOH faces capacity constraints to sufficiently monitor, regulate and enforce health sector norms and coordinate the entire sector which includes public and private entities. In addition, the NHS - established in mid-2015 - acknowledged that it would need to build its technical and operational capacity so it could effectively oversee the public network of health services. While the NHI has taken steps to train its staff to improve their capacity to undertake technical and financial assessments of service providers, it also recognizes that it needs to improve its management information system and strengthen its monitoring and supervision mechanisms to be able to effectively fulfill its function as the main public purchaser of health services.

## Policy Directions

**Continue to improve the quality of public spending on health and overall sector management and allocate more resources to health to address gaps in service delivery and insurance coverage.** At 2.9% of GDP in 2014, the DR's health public expenditures' share of GDP is below the country's Ten Year Health Plan target of 4%. More funds are needed to (a) invest in health personnel, medicines, equipment and other inputs to improve quality of care and address service gaps in rural areas and for the poor and (b) expand financial protection coverage, to reach the poorest who remain unregistered in SIUBEN; to expand access to non-formal workers (discussed below), as well as to eventually integrate health insurance packages and provide a single health

benefits package for all citizens. Actions can also be taken to improve spending by building on lessons learnt from the results-based financing (RBF) primary care pilots, and expanding RBF pilot to hospitals. The Government could also consider applying RBF to improve health care worker performance (competencies, absenteeism) and provide incentives for health workers especially doctors to serve in rural areas. User feedback and independent audits could complement efforts to improve service delivery. A combination of incentives and sanctions could also be implemented to promote both the implementation of the new model of care which designated primary care as the gatekeeper for people to access the health services network, and the functioning of the referral-counter-referral system. Expanding the use of RBF would require further improvements in health information systems and training staff in management information system and monitoring and evaluation. Mechanisms for rewards and sanctions would also need to be transparent. In terms of improving cost effectiveness of spending, more resources would also need to be allocated to prevention and promotion and public/collective health.

**Undertake additional analysis and allocate more resources to cover the target population of the Contributory Subsidized Regime (CSR).** Based on an evidence-based assessment which would need to include a labor market study on the link between employment status on insurance affiliation, the Government may wish to consider three options for the CSR: (i) implement it as envisioned in the 2001 Health Reforms; or (ii) pilot it and then assess whether and how to scale up. In Taiwan, for example, insurance was piloted in well-organized farmer associations and then evaluated before expanding; or (iii) amend the Social Security Law to absorb the CSR's target population in either the Subsidized or the Contributory Regimes, using criteria such as income, type, and size of business, progressively including self-employed individuals similar to what has been done in Costa Rica and Korea. Different countries have taken different approaches to cover the nonformal sector (Annex III presents examples).

**Continue to strengthen the MOH's capacity to coordinate and regulate the sector and ensure the timely provision of essential public health services while also enhancing the institutional capacity of the National Health Services (NHS) and National Health**

93 SENASA. 2014. *Boletín Estadístico de SeNaSa*.

94 DR. 2015. *Observatorio de Recursos Humanos en Salud de la República Dominicana: Medición y monitoreo de metas de República Dominicana*.

**Insurance (NHI).** The MOH has already undertaken various assessments related to its organizational structure and resources and has been undergoing an institutional reorganization, mainly as a result of the recent establishment of the NHS. What would be needed would be a more structured and costed action plan to strengthen both the MOH and the NHS, and to move forward with the identified capacity strengthening actions for the NHI.<sup>95</sup> These institutions would also need to coordinate regularly to avoid duplication of efforts and maximize synergies.

**Assess which functions would be best decentralized and which ones would best remain centralized, and build capacity at all administrative levels.** The 2001 Health Reforms envisioned a stronger autonomous role for the regional health services (RHS). Moving toward decentralization would have important administrative, financial, and decision-making implications including issues related to human resources and the distribution of health facilities. It would also require strengthening RHS capacity to function more independently under the coordination of the NHS with the MOH exercising its stewardship and regulatory functions. A clear definition of which functions would be best decentralized to the RHS and which ones would be best retained by the MOH together with a costed plan would be needed to realize this objective. In this regard the DR could review the experiences of other countries. Colombia's experience, for example, underscores the importance of strengthening the capacity of key actors (e.g., hospital staff and municipal mayors) to assume new roles and responsibilities, and ensure appropriate use of information systems.<sup>96</sup> Costa's Rica's case emphasizes the importance of: (i) having reliable information systems to analyze sources and distribution of health expenditures and (ii) a prospective health professionals' supply and demand model to improve coordination between the MOH and training institutes. Countries like New Zealand benefitted from having standardized and transparent mechanisms for monitoring and assessing performance. Some European countries (e.g., Denmark, the UK, and Croatia) are in the process of re-centralizing certain functions to reduce

inequities across regions/provinces and benefit from economies of scale and efficiencies derived, for example, from a better organization of integrated service networks that cover more areas in lieu of each area having its own hospital even if it is sparsely populated.<sup>97</sup>

## SOCIAL PROTECTION

### Context

**Social Protection has contributed to the reduction of poverty, specifically through public transfers such as the Conditional Cash Transfer program (CCT), which helped boost household consumption.** An impact evaluation carried out by the IADB shows that households beneficiaries of the CCT were positively associated with less risk of incurring in catastrophic out-of-pocket expenditures in health, increased height for age of children older than three years old, presented less risk of pregnancy adolescence and lower risks of repeating grades in high school, among other positive impacts.

### **Social assistance in Dominican Republic has experienced significant advances in the last decade.**

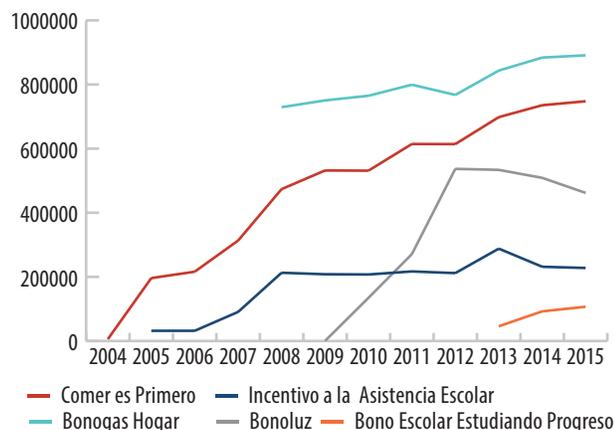
After the 2003 macroeconomic and banking crisis, the 2004-2009 period was characterized by the provision of monetary transfers to promote the access to education, health and nutrition services. Also, the first pillars were put in place to make the sector more efficient and transparent, through the creation of two institutions for targeting (SIUBEN, *Sistema Único de Beneficiarios*) and payment of social subsidies (ADESS, *Administradora de Subsidios Sociales*). From 2009 to 2012, the main progress achieved was in terms of intersectorial coordination to effectively make transfers conditional, improving verification of co-responsibilities and ensuring closing gaps in the supply of health and education services. The change of administration in 2012 started a new era for social assistance by merging the CCT with social support interventions (*acompañamiento sociofamiliar*) into *Progresando con Solidaridad* (PROSOLI), a CCT program that promotes households' empowerment and take up of other human development and social opportunities. The establishment of SIUBEN (targeting), and ADESS (delivery of subsidies) in 2004-09 and PROSOLI (affiliation

95 The NHI identified areas for strengthening that include its management information system, its actuarial management capacity, and its capacity to manage contracts with its health service providers. Based on discussions during Health Sector Reform APL2 Supervision Mission.

96 Schmunis. 2001. Draft Summary Note on Separation of Functions in the Health Sector in Costa Rica, New Zealand, and Colombia.

97 Saltman, R. 2008. *Decentralization, Re-centralization, and Future European Health Policy*, European Journal of Public Health. Vol. 18. No. 2, 104-106.

Figure 3.5: Evolution of coverage of Progresando con Solidaridad components



Source: ADESS.

and planning) after 2012 has effectively separated roles and functions, providing greater specialization to the SP system and making it more accountable.

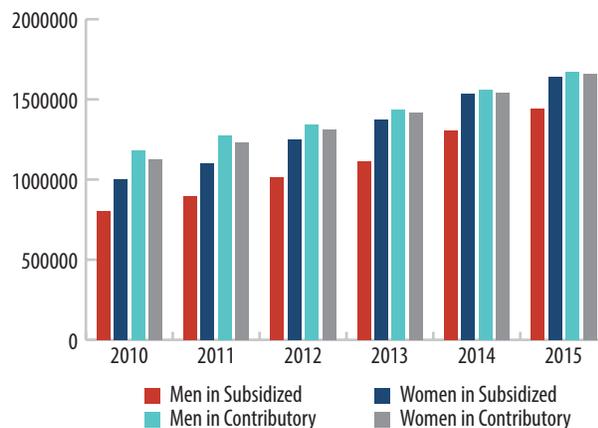
**In the past decade, noncontributory programs have expanded coverage significantly, with a particular focus on reaching the poorest in the last three years.**

The food support component of the cash transfer program progressively increased coverage; other components such as the incentive for school attendance were more stable while other new components have been appearing and increasing coverage like the Progress by Studying Bonus (see figure 3.5 for more detail on CCT components and their coverage over time). Since 2012, the main conditional incentive for food support (Comer es Primero) added approximately 200,000 new households, reaching a total of 747,760 households by 2014. 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 in order to reach the entire population, as will be discussed later. For example, the percentage of extremely poor households (classified as ICV1 and ICV2 by SIUBEN) covered by PROSOLI reached 86% in 2014.<sup>98</sup>

**The Government has been expanding health family insurance to its population, particularly for the poorest, in the form of subsidized schemes** (Figure

98 World Bank. Implementation Completion and Results Report for Social Protection Investment Project (P090010).

Figure 3.6: Coverage of health insurance by scheme and gender



Source: SISALRIL.

3.6). More than 60% of the population has health insurance coverage. The SENASA (*Seguro Nacional de Salud* or National Health Insurance) has made a significant effort to reach the poorest segments of the population using SIUBEN 2012 updated information; a process that encountered challenges given the generally isolated location of most of these households, and the lack of documentation.<sup>99</sup>

**Traditionally social expenditure focused on wealthier urban areas, yet recently, several initiatives have been increasing with a territorial approach to serve hard-to-reach populations.**

*Progresando con Solidaridad* has enhanced its decentralized operative structure by strengthening the capacity of both the operational structure (through the family liaison or *enlaces comunitarios*) the coordinating structures (regional and municipal committees), along with an increase in institutional presence through regional offices. To respond to the multidimensional nature of extreme poverty, the Government recently launched the *Progresando Unidos* strategy, targeted to extreme poor households that will have an area-based approach prioritizing 14 of the poorest provinces. Besides continuing with the utilization of SIUBEN as a targeting mechanism to reach this population, this initiative would provide the poorest with a combination of services including technical-vocational training, self-

99 More information on the different health insurance regimes is provided in this Note's Health Section.

entrepreneurship opportunities, financial inclusion services and housing improvements. *Progresando Unidos* is complemented by other initiatives undertaken using a territorial approach like the *Quisqueya Somos Todos*, an effort that aims to promote local integral development and which is developed and coordinated by the General Directorate of Special Programs for the President's Office (DIGEPEP), as part of the *Quisqueya Sin Miseria* strategy. This strategy presents significant advances especially in early childhood care by implementing childcare facilities (*Estancias Infantiles*), community centers (*Centros Comunitarios*) and literacy centers (*Núcleos de Alfabetización*) nationwide, having reduced the illiteracy rate from 14% to 7%.

**The Social Cabinet (Gabinete Coordinador de Políticas Sociales- GCPS) has begun to build links across social protection pillars.** In particular, the GCPS has begun supporting graduation schemes through certain CCT Program components and ensuring that these CCT beneficiaries are connected to income generation initiatives such as vocational training and entrepreneurship developments, along with financial inclusion and labor intermediation services, and vocational training initiatives. The GCPS has prioritized a demand-based approach for vocational training initiatives, following good practices of the Youth and Employment program (*Programa Juventud y Empleo*). Specifically, *Progresando Unidos* is coordinating with INFOTEP to provide training alternatives to young people between 18-29 years in the 14 prioritized provinces, to improve their technical and cognitive skills. These packages also include “*pasantías*”, if the youngsters are interested in immediate employment alternatives, or technical advice for business initiatives including training courses on technical topics, savings and cooperatives, among others.

**In the last years, the government placed significant emphasis on improving social sector efficiency.** A reform process was put in place to shift towards a results-oriented management at the different stages of the project cycle (planning, design, financing, implementation, monitoring and evaluation). This new phase was supported by two major planning documents that go beyond one administration period: the National Strategy for Development (2010-2030) and the Public Sector Multiannual Plan, which has been updated several times since 2010. These two documents have guided

investments in the short run in order to align medium and long term results for national policy. Based on this new approach, sectorial institutions such as *Progresando con Solidaridad* and SIUBEN have received the ISO 9001-2008 certification for normalizing their processes according to quality standards. Moreover, practices to promote transparent payments have also been fostered and the proportion of targeted spending has increased. For instance, in 2016, expenditures on targeted social protection programs which use SIUBEN represent approximately 65% of total social assistance.<sup>100</sup> SIUBEN has also initiated a process to identify multidimensional poor adding new variables to the Life Quality Index (*Indice de Calidad de Vida – ICV*).

**CCT social accountability mechanisms have been key tools to improve service delivery in education, health care and other social services at the local level.** Starting as a pilot in 2010, the CCT Community Report Cards (CRC, *Reportes Comunitarios*) is a community monitoring scheme for both beneficiaries and providers, to identify problems in the delivery of services to CCT households, facilitating the implementation of joint action plans to solve issues. This mechanism allows problems to be addressed at the community level. However, if required, they can be directed to the provincial and regional-level committees. While the results of the CRC impact evaluation are yet to come, the baseline survey showed that CRCs helped solve inherent problems in the community related to public service delivery, encouraging beneficiaries to express their opinions and suggest solutions. Complementing the CRCs, since 2013 the program put in place the *Puntos Solidarios* as one-stop direct service points where beneficiaries can present grievances regarding administrative aspects handled by the program, ADESS and/or SIUBEN. *Puntos Solidarios* allow households to make requests such as including household members, changing the household head, reevaluating the ICV and the registration of community organizations, among others. The use of these strategies ensures greater inclusion and accessibility of the poor to social protection services.

**The Government defined a roadmap to promote the long-awaited institutional reform of the Social Protection sector.** This effort is based on collaborations with ECLAC, the IADB and the World Bank. As a first task,

<sup>100</sup> World Bank. 2016. Implementation Completion and Results Report for Social Protection Investment Project P090010. Draft.

the sector aims to ensure a conceptual definition of the SP sector in four stages: (i) defining the scope of the non-contributory pillar under a human rights and life cycle approach to incorporate risks associated with each stage of life; (ii) adopting a regulatory framework for the social assistance system sub-systems; (iii) defining the institutional architecture of the Social Protection sector, to address inefficiency and dispersion issues in the supply of programs. Furthermore, this approach could be linked to an analysis of demand and lessons learned from the Results-based financing pilots implemented; (iv) ensuring management tools to strengthen the System of Social Indicators (*Sistema de Indicadores Sociales - SISDOM*) and the Integrated Monitoring and Evaluation System (*Sistema Integrado de Monitoreo y Evaluación - SIME*), and integrating a system to monitor the implementation of national social sector policies. Finally, ensuring the consolidation of the institutional structure could be combined with strengthening of plans to secure funding through a “fiscal pact” to protect resource allocation to social priorities, assessing at the same time the expected impacts of the last tax reform. This is a particularly important issue in a context of fiscal constraint.

## Challenges

**Given the evolving situation of poverty and vulnerability in the DR, social interventions are facing the challenge of adapting to new social requirements, while continuing to provide key basic services to protect consumption and promote human capital of the poorest.** In a country where 44% of the population is considered vulnerable (in March 2015: household income per capita between US\$4 and US\$10 in PPP terms), the supply of SP services should develop to provide increased mitigation strategies for households not to fall back into poverty and improve their living conditions on a sustainable basis. Service provision is still lagging behind in terms of building income generation capacities, which include professional training and promoting productive entrepreneurship, cooperatives and access to financial opportunities.<sup>101</sup> Moreover, in a context of more frequent and intensive shocks, whether in the form of natural disasters or economic crises, interventions must become more responsive and improve their delivery at post-disaster stages.

**Despite an increase in coverage of noncontributory programs targeting the poor and vulnerable, social assistance transfers could improve redistribution by further prioritizing attention to the extreme poor and enhancing linkages to productive inclusion initiatives.**

Transfers to poor households remain small in terms of share of GDP and do not always target the poorest.<sup>102</sup> To this end, *Progresando con Solidaridad* has launched a territorial approach, boosting local operational capacities; improving coordinating structures; and securing an institutional presence in the territory. Moreover, the *Progresando Unidos* strategy, working under an area-based approach, provides a package of services to extreme poor households contributing to ensure an efficient pro-poor targeting. To guarantee greater impact in implementing these strategies, two major challenges would need to be addressed. First, lack of formal documentation for extreme poor Dominicans is associated with reduced access to food security, credit and social protection programs, emphasizing the need to enhance access to identity schemes, implement supply-side incentives mechanisms, and reduce bureaucracy. This would help reduce access gaps to the subsidized health insurance regime that persist in rural areas. Second, there is still room for deepening a territorial approach to reach these populations with a broader package of services not included under *Progresando Unidos*. This requires the establishment of strategic alliances and joint planning with ministries and municipalities to provide water and sanitation, improve infrastructure and foster the development of public roads, etc.

**Formulation of exit strategies for the CCT still require consolidation and the adoption of a comprehensive socio-productive approach to advance in their implementation.** These exit strategies are aimed at families categorized as ICV 3 who receive technical training utilizing the CTC and CPC platforms, ensuring capacity building in financial inclusion, civic values and management of domestic conflict, “cooperativism”, technical training, and agricultural extension services, etc. Efforts to ensure sustainability of the achievements made so far shall include updating the registry of PROSOLI beneficiaries to regularly collate this data with SIUBEN results. Likewise, while there is an Operational Plan for this strategy, which includes agreements to be signed with

101 More information provided in the Inclusive Growth Note.

102 More information provided in the Poverty and equity Policy note.

technical training institutions, and the development of a job skills map including the demand for technical careers in the Dominican labor market, full implementation of the strategy is yet to happen.

**Certain social assistance interventions remain fragmented within the sector and coordination among institutions and sectors could be furthered improved.**

The Dominican Republic has made significant advances establishing inter-sectoral coordination, both from the initial efforts to adopt a Results-based financing approach, and through synergies established between PROSOLI, INFOTEP, the Ministries of Health, Agriculture, etc. However, some social assistance interventions remain fragmented: only about 65% of social spending is targeted through SIUBEN. Interventions implemented through PROSOLI with targeting by SIUBEN include coordination of service delivery to promote the development of labor skills. However, there is still weak coordination of interventions between the contributory and non-contributory schemes, partly due to the lack of exchange of administrative information across the two pillars. There is also no single system for recording information that links these two pillars. Moreover, there is no comprehensive social security policy to protect people who, because of their level of vulnerability, could not make payments to the contributory system. A number of programs are being implemented by different agencies, constituting a challenge in terms of increasing cost-effectiveness and harmonizing targeting of the social assistance sector. Also measures taken in the Economy sector such as the 2012 tax reform, could have an impact on social sector results. However, the two sectors (Economy and Social) have not yet institutionalized a space to review and discuss these effects.

62

## Policy Directions

**Continue enhancing the quality of health and education services with PROSOLI interventions.** With regards to PROSOLI, progress has been accomplished in terms of ensuring the conditions for giving assistance to households through social coaching interventions (*acompañamiento familiar*) implemented by the community links (*enlaces comunitarios*). Similarly, verification of co-responsibilities processes have significantly improved, especially in education where data can be exchanged between the CCT and the sector; however, a similar development has not been achieved yet with Health. PROSOLI could reduce

the gap between affiliates and eligible population, and reinforce incentives to reduce dropouts at the basic level of education. In addition, the training plans of the Education and Health sectors could include building capacities of personnel located in prioritized territories according to PROSOLI, ensuring that a percentage of the trainees come from poor and extreme poor areas.

**Ensure access to social protection services to all extreme poor in the country.**

This would imply enhancing access to identity schemes, by implementing incentive mechanisms for the supply side, reducing administrative barriers for timely registrations (*Declaraciones Oportunas*), expediting procedures for late registrations (*Declaraciones Tardias*) and improving processes for registering Dominicans at birth, including those who have only one parent with Dominican nationality. The Social Cabinet, through PROSOLI, with the Central Electoral Board have implemented a mainstreamed mechanism for documenting the poorest through an active search scheme that have yield positive results in the last 9 years documenting close to 250,000 individuals.<sup>103</sup> In addition, efforts should continue to update the information of all poor households in the country through SIUBEN and, in turn, to expand PROSOLI's coverage to all extremely poor households. While this recommendation might merit further economic analysis, it seems economically feasible based on recent poverty numbers.

**Expand SIUBEN's role to become the entry door of the social protection system.**

SIUBEN is placing great emphasis on improving the quality of procedures for gathering information, optimizing the production chain to include a multidimensional criteria to categorize the families according to their level of deprivation and insecurity. It would be important to reinforce the institutional foundation of SIUBEN, strengthening its legal and regulatory framework. It would also be important to ensure that the targeting system is increasingly exploited, designing incentive mechanisms to encourage its use by different programs, local governments and beneficiaries (to request to be incorporated or recertified). Finally, it is important to assess strategies to secure enough funding and human resources to respond to clients' requests; for instance, approximately 139,000 requests made through the *Puntos Solidarios* have not been addressed due to lack of personnel.

103 WB. Implementation Completion and Results Report for Social Protection Investment Project P090010.

**Develop policies to link the contributory and non-contributory pillars, as well as interventions in the labor market.** The country could develop strategies in the medium-term (non-contributory pensions) and long-term (expand the management system of subsidies to the contributory co pillar, ensure the exchange of information between the two pillars, and prioritize vulnerable sectors with limited ability to contribute to respond with targeted policy interventions). In addition, exit strategies from social assistance programs to labor market policies could ensure the continuity of protection toward securing access to employment. It would be important to articulate social assistance interventions delivered through the GCPS with those territorially prioritized by the strategy *Quisqueya Sin Miseria*.

**Reinforce inter-sectoral coordination.** The Dominican Republic could further improve intersectoral coordination and prevent leakages and duplication of roles; for example, by establishing databases that are interoperable to allow more effective management of the sector. The interoperability of systems should be considered as part of the new institutional architecture of the sector. *Progresando Unidos* is on the right track to connect the poor with productive inclusion interventions; however, it could articulate these efforts under a comprehensive strategic framework that would address regional particularities and include services that respond to the requirements of urban and rural dwellers, and those living in border areas.

**Strengthen the institutional capacities and links with the Ministry of Economy (MEPyD).** Better communication channels could be fostered between the Social Protection and Economy sectors. This would require adoption of social indicators with a national scope, clearly defined, and properly supported and funded. It would be important to promote and maintain coordination between both sectors, providing appropriate instruments and mechanisms to periodically review progress achieved. It is recommended that the SP sector consider institutionalizing good practices since 2012, set policy goals for the sectoral reform, and increase transparency and accountability. In the coming years it would be important to keep allocating resources to the sector within a context of fiscal constraint, ensuring the adoption of tools that strengthen management and enhance efficiency.

**Finally, in order to make better informed decisions regarding the direction of social policy in the coming years, the Government could start documenting and carrying out assessments of interventions that have a major impact on poverty reduction.** Based on these assessments, the sector could prioritize a “vertical” or “horizontal” expansion of protection mechanisms, i.e., choose to cover all the population eligible for the current package of interventions provided that they are currently not included; or implement contingency interventions for risks not covered in the current package (people living with disabilities, for instance). To do so, it is recommended to carry out assessments or evaluations on the impacts of both (vertical and horizontal approaches), including an analysis of available resources.

## ANNEX I: Education and “Ninis” in the DR

In 2013, the percentage of the population between 15 and 24 years of age who neither worked nor studied in the Dominican Republic was 21.4%, slightly higher than the regional average. Despite the fact that the percentage of ninis has remained virtually constant since the late 1990s, the total number of ninis shows an increasing trend going from 356,000 in 1995 to 434,000 in 2013, an increase of 22%. The increase in ninis is almost entirely explained by the increase in men who were excluded from the educational system and who did not work which went from 88,000 in 1995 up to 164,000 in 2013. In 2013, the Northwest and Northeast regions showed the highest incidence of ninis in the Dominican Republic. Regions that display both a high prevalence and a general increase of male ninis are particularly concerning, since according to De Hoyos, Gutiérrez and Vargas (2015), a higher incidence of male ninis, in a weak institutional context, is related to an increase in criminality.

Three out of five ninis in the DR are women, a percentage lower than that of the rest of the region. For Latin American women, the most important factors behind the probability of being nini are marriage and pregnancy during adolescence. According to a World Bank report, between 2010 and 2013 the fertility rate amongst Dominican teenagers fell from 103 to 98 per 1,000 women between the ages of 15 and 19. Although there is a downward trend, the fertility rate among teenagers in the Dominican Republic remains substantially higher than the regional average of 72 per 1,000 adolescent females.

In Latin America, the incidence of ninis varies significantly by income decile, being higher among poor households, systematically decreasing as income increases. This is not the case in the DR. The highest rate of male ninis is found in households in the 3rd decile of the income distribution with 26%, where the percentage of female ninis is very close with 29%. This suggests that the ninis phenomenon in the Dominican Republic is not necessarily determined by the lack of income and could be linked to restrictions in the educational provision, such as low quality of school services or little relevance to meet the needs of the labor market.

One of the highlights with regards to youths between 15 and 25 years of age, is that at the age of 15 the vast majority of the youths are within the educational system. The ninis problem arises between the ages of 15 and 19, when about 40% of youths leave the educational system and only a fraction of them find opportunities in the labor market. This suggests that to address the problem of ninis in the Dominican Republic, it is necessary to implement interventions to reduce the school drop out in upper secondary education or EMS (grades 10, 11 and 12).

There is relevant evidence to design educational policies capable of reducing school drop-outs and interventions to reduce youth unemployment. Given the characteristics behind the problem of ninis in the Dominican Republic, we suggest three interventions:

- *Scholarships*: scholarship programs with transfers only at the end of each year can reduce school drop out in EMS. The effect can be enhanced if there are information systems that can detect, youth at risk during the basic cycle.
- *Program to reduce teen pregnancy*: awareness campaigns coupled with free access to contraceptives can reduce teenage pregnancy.
- *Skills training for work*: programs such as “Youth and Employment” that provide technical-vocational skills or social-emotional skills help generate the necessary human capital to increase ninis’ labor productivity and increase their employability.

Source: Note based on De Hoyos, Rogers y Székely (2015), “Out of School and Out of Work: Risk and Opportunities for Latin America’s Ninis”, World Bank, Washington, D.C.

## ANNEX II: Education and Gender

In the Dominican Republic (DR), there are gender disparities in enrollment and graduation rates, with the gap growing the higher the level of education, and with boys being at disadvantage. This gender gap is significantly larger in the DR as compared to the LAC regional averages: in secondary school the ratio of female to male enrolled students is 1.12 in the DR, compared to 1.06 for LAC; and in tertiary education the ratio is 1.62 and 1.28, respectively.<sup>104</sup> In addition, urban areas have a gender parity index of 1.00, while rural areas have an index of 0.88.<sup>105</sup> This trend continues into graduation ratios, with boys and young men falling behind girls and young women. Overall, total expected years of schooling is slightly lower for both men (12.7) and women (13.7) in the DR than LAC region on average (13.3 and 14.1, respectively).<sup>106</sup>

In 2014, 62% of students enrolled in tertiary education were female. The high enrollment and graduation rates of women in secondary and tertiary education translates into a female labor force in which 65% has secondary or tertiary education; compared to 50% of the male labor force.<sup>107</sup> Women are over-represented as graduates in social and humanities careers, while men outnumber women in technical fields careers. The field of study at university impacts occupational segregation where women generally are concentrated in lower productivity and lower pay occupations.

Women and men have different driving factors behind decisions related to education; many of these are based on ideas of how men and women should behave. Young pregnant women and young mothers feel judged and young men feel “controlled” in schools.<sup>108</sup> Existing stereotypes and prejudice influence youth decision-making with regard to schooling, affecting their future educational and economic outcomes.<sup>109</sup>

To be effective, education policies and programs should consider social and gender norms that constrain choices and influence behaviors within the education system for administrators, teachers and students alike. Research shows that school-based programs provide an opportunity to shape gender norms before they become deeply engrained within children and adolescents.<sup>110</sup> Specific policy may consider:

- Analyzing dropout patterns and designing school dropout prevention strategies with a gender perspective. Strategies could incorporate mentoring; after-school programs and opportunities; support pregnant teens and teen mothers remain in school; improve learning environments; and adjust teacher training and curriculum to include gender-sensitive aspects (next bullet provides more details).
- As part of teacher training, ensuring better understanding of gender socialization and response to issues related to stereotypes regarding gender roles and behaviors, bullying, and sexual and reproductive health.
- Implementing classroom activities and content that incorporate socio-emotional skills training and critical reflection about gender norms. Consider additional modules within the curricula.
- Implementing campaigns against teenage pregnancy, with specific focus on poorer and rural areas. Including socio-emotional skills training, as these skills are likely to improve school attendance and completion.

104 WB. World Development Indicators (WDI), 2013 data.

105 Department of Statistics, MINERD, 2013-2014. Data retrieved from one.gob.do, May 2016.

106 WDI, 2014 data.

107 WDI, 2013 data.

108 ONE, 2016.

109 See, for example, World Bank. 2012. *World Development Report: Gender Equality and Development*. Washington DC.; Ricardo and Fonseca 2008, Cunningham et al 2008

110 Behavioral change through school-based programs has been studied related to, for example, violence prevention in Bott S, Morrison A, and Ellsberg M. 2005. Preventing and responding to gender-based violence in middle and low income countries: a global review and analysis. World Bank Policy Research Working Paper 3618, June 2005. Washington DC; UNICEF. 2014. *Ending Violence Against Children: Six Strategies for Action*. New York.

## ANNEX III: Health: Extending Insurance to Include the Informal Sector: Examples from Other Countries

### Process in Costa Rica

- 1950. The Costa Rica Social Security (CCSS) covered 8% of the population (limited to those earning less than 400 colones in national and provincial capitals).
- 1961. After extending CCSS to rural workers and raising salary limit to 1000 colones, it covered 18% of population. Established Universal Coverage Amendment Act which aimed for universal coverage in 10 years. First step: removed salary limit for contributors so all salaried workers contributed. Workers' dependents were also covered. Self-employed could voluntarily join for a small contribution. Government supported the poor, handicapped, and elderly.
- 1971 (target date of universal coverage). Only reached 45% of population
- 2000. Reached 90%.

### Process in Korea

- 1976. Progressively increased coverage to all workers and their families in the formal and informal sectors. Introduced medical insurance program for individuals working in enterprises with more than 500 workers and their immediate families.
- 1977. Established Free and Subsidized Medical Aid Program for people below certain income level.
- 1988. Started programs in rural areas for self-employed.
- 1989. Included urban self-employed and firms with more than 5 workers.

### Other countries

Other countries have taken different approaches to cover persons not employed in the formal sector.

- The Philippines and Vietnam allow them to contribute to the formal sector scheme
- Colombia requires those with sufficient means to contribute to the formal-sector scheme but in practice, this has been difficult to implement and informal sector workers have been incorporated in the SR
- China and Mexico have a separate voluntary contributory scheme.
- Another possible option is to progressively move toward a common health insurance plan for the entire population that would be financed by taxes similar to what is being done in Brazil

Sources: Gottrett, P. and G. Schieber. 2006. Health Financing Revisited. The World Bank; Jowett, M and W. Hsiao. 2007. "The Philippines: Extending Coverage beyond the Formal Sector" in Social Health Insurance for Developing Nations edited by W. Hsia and R.P. Shaw; Gottret, P., G. Schieber, and H. Waters. 2008. Good Practice in Health Financing: Lessons from Reforms in Low and Middle Income Countries. The World Bank

## Chapter 4.

# Policy Directions for Improving the Quality and Availability of Basic Infrastructure Services

### Introduction

**W**ater supply and sanitation, electricity and ICT services are basic services that are central to alleviating poverty and stimulating economic growth and development. Good quality, adequate, and reliable water supply and sanitation (WSS) and electricity services are essential not only for ensuring human health and wellbeing, but together with information and communications technology (ICT) are also key inputs for the agricultural, industrial, and commercial sectors of the economy. Nonetheless, the sub-optimal quality of these infrastructure services in the Dominican Republic, together with unequal access at lower income levels, are a burden to households and businesses alike. The lack of continuity and poor quality of largely publicly provided WSS and electricity services, together with the high cost of largely privately provided internet access, constitute significant burdens for households and businesses, affecting their quality of life, productivity, and competitiveness. These constraints also limit their opportunities for economic growth and shared prosperity.

**This Note covers the Dominican Republic's (DR) infrastructure delivery sectors (water supply and sanitation, electricity and ICT).** It discusses the main

challenges ahead for the Government, and proposes a set of potential policy directions in key areas to enhance service quality and efficiency, governance, and ultimately, outcomes.

**In recent years the country has taken concrete measures to improve the performance of the water supply and sanitation (WSS) and electricity sectors.** In the WSS sector, this has comprised the renewed momentum built in modernizing the sector's legal and institutional framework, and the significant progress achieved in expanding access to WSS services over the past two decades, with 85% and 84% of Dominicans with access to an improved source of water and sanitation facilities in 2015, respectively. In the electricity sector this has included several electricity sector reforms, preparation and implementation of a strategic plan, a reduction in power system losses from 36.2% in 2009 to 31.4% in 2015, and significant efforts to build consensus to implement the remaining reforms through the Electricity Pact discussions.

**However, the Government continues to face a number of common challenges in the WSS and electricity.**<sup>111</sup> The

<sup>111</sup> It is to be noted that the part of this Note dedicated to the WSS sector is drawn from the recently finalized "Water and Sanitation Sector Finance and Service Efficiency Review and Recommendations" by the World Bank and which was shared with the MEPyD in May 2016.

two sectors share 5 main cross-cutting challenges related to: (i) institutions and governance, (ii) service quality and reliability, (iii) commercial and financial management, (iv) tariffs and cost recovery, and (v) fiscal transfers and subsidies.

- *Institutions and Governance:* both sectors are characterized by weak regulatory frameworks, and by often ambiguous, overlapping and incompatible roles among its respective actors (as well as actors from other sectors) which ultimately affect the sectors' performance in sustaining improvements in service quality. The roles of policy-making and service provision are not clearly separated, and service providers are not managed in an environment conducive to efficiency and financial autonomy or which encourages resource allocation based on sound planning;
- *Service Quality and Reliability:* while access to WSS and electricity is considered relatively high, service quality and efficiency are generally poor. Both sectors are characterized by poor continuity of service throughout the day, as well as by deficient service quality and monitoring. These have negative consequences on productivity, and influence investment in the DR (for example, tourism) and have dire consequences on the population's health (in the case of deficiencies in water quality monitoring or electricity failures in medical centers);
- *Commercial and Financial Management:* both sectors are characterized by low efficiency and sustainability, as well as by poor commercial practices. Low coverage in metering for water and electricity consumption, as well as low revenue collection levels and high administrative overheads lead to a growing dependence of service providers on central government transfers, a situation which does not create incentives for them to improve their commercial, financial and operational performance;
- *Tariffs and Cost Recovery:* tariffs for both water/sewerage and electricity are typically inadequate and not established based on the cost of the services provided or according to cost-recovery criteria. This further hinders improvements in commercial and financial management of service providers. Furthermore, tariff subsidies are often captured more by middle and upper income consumers than the poor;

- *Fiscal Transfers and Subsidies:* service providers in both sectors remain highly subsidized for operational expenses and investment, and public transfers are not linked to performance. This represents a fiscal burden for the Central Government that could be addressed by progressively improving the performance and efficiency of service providers.

**The ICT sector, which is largely privately provided, faces a different set of challenges than the WSS and electricity sectors.** Liberalization of the telecommunications market has allowed the ICT sector to experience tremendous growth in the last decade, and the country has ample mobile phone and mobile broadband penetration. However fixed broadband coverage and internet usage are limited, due to three key factors: (i) institutions and governance; (ii) coverage and affordability, and (iii) demand-side and related factors.

- *Institutions and Governance:* The Instituto Dominicano de las Telecomunicaciones (INDOTEL), the state's independent regulatory authority for telecommunications, combines policy, regulatory and service provider functions, and its regulatory capacity warrants strengthening. For example, in most areas, except in the main cities, only one provider offers retail fixed broadband services and although an interconnection policy is in place, wholesale prices are not regulated.
- *Coverage and Affordability:* The Dominican Republic has connectivity statistics below the regional average indicators for Latin America. Only 18% of households have internet, one in six municipalities in the country has no registered fixed internet accounts, and for the poorest households, fixed internet connectivity prices equal an unaffordable 79% of the household's earnings.
- *Demand-side and Related Factors:* The Government has announced plans under the banner of *República Digital* to achieve national broadband coverage. It will be important to complement these investments with investments in digital literacy and skills building, in digital enablers such as digital identification and digital finance, and in developing policy and practices for next-generation issues such as privacy and cybersecurity.

**The structure of this policy note is as follows.** The first half covers the water and sanitation sector, starting with a description of the country context, then the challenges,

Figure 4.1: Comparison of water access rates to improved water sources for urban and rural areas

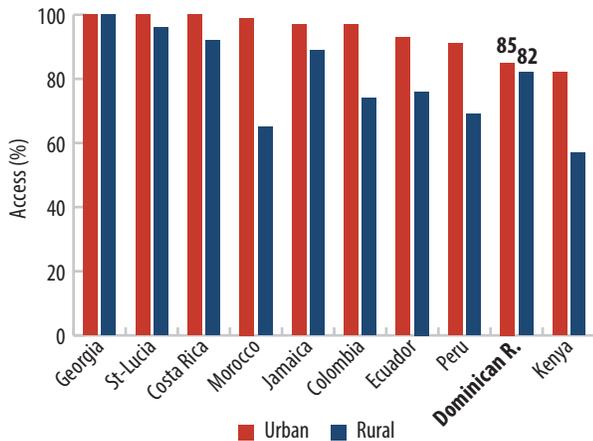
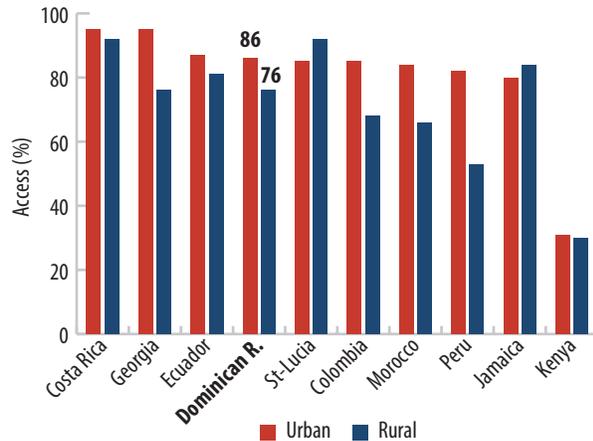


Figure 4.2: Comparison of sanitation access rates to improved facilities for urban and rural areas



Source: WHO-UNICEF Joint Monitoring Programme for Water Supply and Sanitation (2015). Progress on Sanitation and Drinking Water. 2015 Update and MDG Assessment. Available at [http://www.wssinfo.org/fileadmin/user\\_upload/resources/JMP-Update-report-2015\\_English.pdf](http://www.wssinfo.org/fileadmin/user_upload/resources/JMP-Update-report-2015_English.pdf)

and finally proposing potential policy directions for tackling these challenges. Afterwards the note covers the electricity sector, beginning with the country context, then presenting the main challenges and closing with a set of proposed policy directions for addressing the challenges identified. It is our hope that this policy note will provide decision-makers with valuable information on the key challenges and policy options for tackling them.

## WATER AND SANITATION

### Country Context

**The Dominican Republic (DR)'s exceptional economic growth has contributed to expanding access to water supply and sanitation (WSS) services over the past two decades.** As of 2015, 85% of Dominicans had access to an improved source of water (85% in urban and 82% in rural areas), and 84% to improved sanitation facilities (86% in urban and 76% in rural areas), which compare relatively well with countries in the Region with similar GDP per capita figures and countries with similar structural features (see figures 4.1 and 4.2).<sup>112</sup>

112 Countries with similar GDP per capita in the Region were St-Lucia, Jamaica, Ecuador, Colombia and Peru, and countries with similar structural features were Morocco, Georgia, Costa Rica and Kenya. The structural features used for this comparison were: (i) high growth, (ii) low share of income for the bottom 40%, (iii) oil importer, (iv) high tourism revenues, as well as (v) low government revenues and total expenditures.

**The proposed WSS Law is in line with all diagnostics and proposals made for the sector, and its passing and implementation would likely represent a formidable step forward in modernizing and reforming the WSS sector in the DR.** Several attempts to carry out a sector reform have been made since 1999, but the lack of consensus and effective leadership at the highest political level in the country have delayed its approval and execution. Key functions and institutions in place within a modern legal framework are essential to sustained sector development, but in the absence of a WSS Law, other legal documents, such as the 2010 Constitution, and the National Development Strategy for 2030 have helped define a general framework of public policies for the WSS sector. The Constitution promotes principles of equity, quality of services, universality, efficiency and transparency, while the 2010-2030 National Development Strategy developed by MPEyD and the National Board for State Reform (CONARE) includes such goals as guaranteeing universal access to high-quality, efficient drinking water and sanitation services, as well as reform proposals consistent with the above-mentioned principles.

**A recent series of reforms has been promoting improved efficiency and transparency in public spending.** In recent years, the DR has been vying to modernize its public administration and improve efficacy, efficiency, transparency and accountability in public spending. One of these efforts led by DIGEPRES in 2014

**Table 4.1: Central government allocations and external resources spent in the WSS sector (1990-2014)**

Period	Annual average (US\$ million)				
	Central government			External resources	Total
	Current expenses	Capital	Sub-total		
1990-2000	2.7	90.1	92.8	0.6	93.3
2001-2010	27.6	78.1	105.7	39.2	144.9
2011-2014	79.9	75.8	153.5	65.5	219.0

Source: Data from the Treasury's General Budget Directorate (DIGEPRES), Santo Domingo, Dominican Republic.

was the development of the New Dominican Budgeting System (*Nuevo Sistema Presupuestario Dominicano*, NSPD) which introduced a number of measures to improve the quality of public spending by better articulating planning and budgeting, and to promote a cultural change within the public administration: multi-year budgeting, results-oriented budgeting, as well as adequate monitoring and evaluation mechanisms. Even though the non-financial public institutions such as the water and sewerage service providers have yet to make the transition to results-oriented budgeting, DIGEPRES continues to share information on their approved budgets, as well as the execution of the latter. Finally, the recent creation of the *Consejo Directivo para la Reforma y Modernización del Sector APS y la Mesa de Agua* (CODIREyMAPS) to serve as a coordination mechanism to renew the momentum towards reforming and modernizing the WSS sector is a laudable step forward.

**Central Government allocations to the sector, including external resources, have increased over time, indicating the growing needs for the WSS sector.** Table 4.1 summarizes the Government allocations and the external resources received by the sector between 1990 and 2014, and shows that there was a 55% increase in average annual investments in the sector in the 2001-2010 period, compared with the previous ten years. This trend continued with a 51% increase for the 2011-2014 period, as compared to 2001-2010, highlighting the need for continued investment in the sector. This Note will further highlight the underlying trends, most notably related to transfers to service providers and their effect on service provision and efficiency.

## Challenges

### Institutional framework/Sector governance

**The WSS sector in the DR does not yet count on an apex sector agency as well as a regulatory framework to allow it to sustain its improvements in access and services.** In the current framework, the roles of regulation and service provision are not clearly separated, and service providers are not created and managed in an environment conducive to efficiency and financial autonomy or which encourages resource allocation based on sound planning. These shortcomings can have heavy consequences on sector performance and deeply affect its ability to prioritize, to design and implement sector policies, and to provide critical technical assistance to service providers. In addition, the absence of mechanisms to promote and enforce the use of planning tools in the WSS sector has also contributed to creating service gaps in terms of geography, poverty, the urban-rural divide and between the weights of investments in water supply versus sanitation as well as of new investments versus maintenance of existing systems. Even though uncertainty continues to exist around the adoption of the proposed Water and Sanitation and Water Resources laws, these remain a priority element for sector modernization and reform.

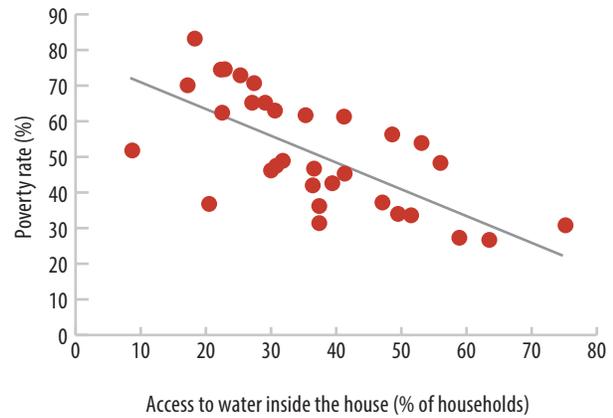
### Coverage of WSS services

**Access rates to WSS are unequal across the country and are lowest in the poorest regions.** Urban areas have access to a much higher level of water service with 54% of households with a water connection inside the house, compared to 24 in rural areas. Open defecation is also the practice for 3% of the urban whereas 14% of households in rural areas still defecate in the open. In addition,

Figure 4.3: Open defecation and poverty rates in all provinces of the DR



Figure 4.4: Access to water inside the house and poverty rates in all provinces of the DR

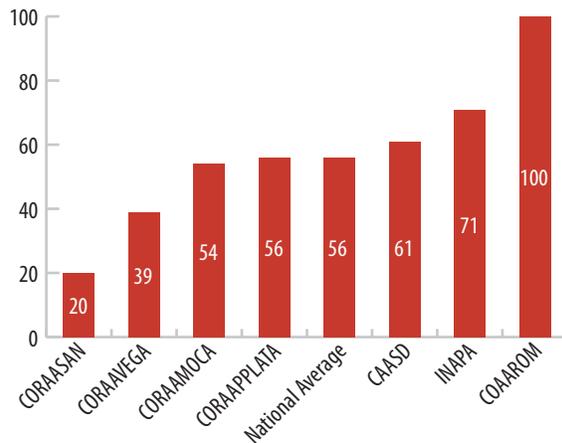


Source: Data from the National Statistics Office (ONE)'s 2010 Household and Population Survey, and the Ministry of Economy, Planning and Development (MEPyD)'s 2010 Poverty Atlas (Economic and Social Analyst Unit, UAES).

according to data from the SIASAR Rural WSS Information System (<http://www.siasar.org>), levels of WSS coverage are incomplete within the DR's rural communities reporting through the information system, with only about 20% of them with adequate coverage. Nearly 40% of these communities report serious deficits in WSS coverage. A closer look at WSS access levels also shows significant gaps between provinces, with the lowest levels of access to water inside the house and to improved sanitation generally found in areas where poverty levels are the highest, particularly in the provinces along the border with Haiti (see figures 4.3 and 4.4, as well as Annex I). Higher levels of open defecation also are strongly correlated with higher poverty levels. It is also worth noting that provinces where poverty levels are the lowest are generally served by CORAAs.

**While access rates to WSS in the DR remain relatively high, the state of the infrastructure is threatened by the general lack of a maintenance culture, and wastewater collection and treatment continue to lag behind water supply.** In terms of the existing sector infrastructure, while it is relatively well developed for water production, it shows limitations for water distribution – many networks need rehabilitation, as well as for wastewater collection and treatment. Moreover, the sector is challenged by limited resources and emphasis put on maintenance, which causes large infrastructure to become obsolete within a short period of time and leads to subsequent high investment costs to replace them: only 53% of the DR's

Figure 4.5: Sewerage lag index comparing sewerage and piped water by service provider



Source: Abreu, R.U. Informe Diagnóstico y Propuestas Estratégicas Sector Agua Potable y Saneamiento. MEPyD, Proyecto Agua y Saneamiento en Centros Turísticos (PASCT). Santo Domingo, September 2012.

water treatment plants and 26% of the fully-functioning wastewater treatment plants were estimated to be at an adequate operating level. Many cities do not have a collection system and only around 20% of the wastewater collected is effectively treated across the country. Figure 4.5 illustrates the gap between sewerage and water supply services, as calculated by the sewerage lag index in several service providers. For example, it can be seen that in 2011, on average, 56% of the national service providers' clients receiving water were not connected to a sewerage network. In addition, CORAASAN had managed in 2011

to provide sewerage services to 80% of its water clients, while COAAROM had yet to invest in wastewater collection and treatment. This illustrates the fact that not only is service coverage lagging behind, but also investments in sewerage, both by the service providers themselves as well as the Government.

### Quality and efficiency of services

**Despite increasing (albeit unequal) coverage levels and efforts to consolidate the institutional framework, the quality of service delivery has been deteriorating.**

The aforementioned figures of access to WSS services hide the fact that public networks are failing to provide quality services and customers need to turn to often more costly alternatives. For example, 78% of households consume processed water (*botellones*), while only 11% of households drink the water from the public network. This latter figure increases to 21% in rural areas.<sup>113</sup> In addition, while there is little current data on the quality of services, anecdotal information indicates that water losses are at a high level and that customers have to deal with poor continuity of service throughout the day and week. For example, CORAAMOCA reported in 2012 non-revenue water levels of 82%, as well as water service continuity levels of 6.6 hours per day. The same year, CORAAPPLATA reported a non-revenue water level of 75%.

**Water quality monitoring is also deficient**, with less than 50% of the water supply systems controlling water quality (25% in rural areas), and it was found that only 14% of the inventoried water systems practiced chlorination. This has significant potential health impacts, especially for the poor, and notably in relation to water- and excreta-related diseases such as cholera. To respond to this water quality issue, INAPA developed the SISMOPA system (<http://sismo.inapa.gob.do>), developed with technical support from PAHO/WHO, and based on the SISKLOR model developed in Haiti after the 2010 earthquake. To this date, the system is in operation in four provinces, and two other service providers are receiving technical assistance in order to adapt and implement SISMOPA in their areas of service. In parallel, the MSP has developed another system to monitor water quality called SISVICA, but it has yet to become operational.

### Efficiency and sustainability of WSS services

**The WSS sector does not count on a solid commercial policy aimed at collecting revenues by means of an effective micro-metering and tariff system and, the principle of paying for water by the volume consumed has yet to be accepted across the country.** As for service quality, there is generally very little quality data on commercial aspects, as well as on efficiency, but the information obtained points to rather concerning trends. Revenue collection levels, labor productivity and metering coverage are typically low across service providers and the significant state subsidies for current expenses and capital have created a growing dependence of WSS service providers on central transfers, a situation which does not create incentives for them to improve their commercial and financial performance.

**Besides being considered generally low, tariffs are typically not established based on the costs of the services provided and vary widely across service providers.** As shown in Table 4.2, recent data obtained from CORAAMOCA and COAAROM indicate that the 2016 tariffs for both water and sewerage were very low compared with regional averages, particularly when compared with other Caribbean countries, as well as with countries with similar GDP per capita or similar structural features. In rural areas, according to the SIASAR information system, only 32% of service providers had a tariff in place (98% as a flat rate regardless of consumption), and only 32% of these providers recovered their operating costs through that tariff.<sup>114</sup>

### Sector financing

**Despite recent improvements, the DR budgeting system still largely aims for products and outputs rather than outcomes and results.**<sup>115</sup> To increase the investment capacity of the sector, it is crucial to ensure that water agencies have the technical capacity to formulate sound projects, which are well adapted to the specific requirements of the sector. There is currently no institutional mechanism to prioritize and vet WSS projects from a sectoral perspective (technical, financial,

114 <http://www.siasar.org>, consulted on May 29, 2016.

115 World Bank, 2015. Dominican Republic Strengthening Management of Public Finances Development Policy Loan. Program Document. Washington, DC.

**Table 4.2: Average tariff for metered water supply and sewerage service, based on a 15 m3 water consumption**

Service provider	Metered water tariff (\$/m3)	Corresponding sewerage tariff (\$/m3)	Average sewerage/water tariff (%)
CORAAMOCA*	0.21	0.06	33
COAAROM*	0.17	0.09	60
CAASD*	0.13	0.03	20
Average LAC Region**	0.83	0.30	45
Average Caribbean**	1.44	0.52	34
Average Central America**	0.39	0.10	30
Average South America**	0.60	0.33	59
Average countries in LAC with similar GDP per capita (PPP) †	0.96	0.35	39
Average countries with similar structural features ‡	0.53	0.23	39

\* Data from service providers; 1\$US = 45 Dominican pesos. \*\* Data from <http://tariffs.ib-net.org>. † St-Vincent and Grenadines, Grenada, Jamaica, Ecuador, Colombia and Peru. Data from <http://tariffs.ib-net.org>. ‡ Morocco, Georgia, Costa Rica and Kenya. Data from <http://tariffs.ib-net.org>

economic, institutional) or to follow-up on their results. In the absence of guidelines or availability of guidance, water and sewerage service providers formulate projects following their own criteria and with unequal quality, mainly consisting of engineering designs and environmental studies. Externally-funded projects, however, are the exception, as they usually need to follow the corresponding financier guidelines and processes.

#### **WSS service providers remain highly subsidized, even though recent years are showing positive trends.**<sup>116</sup>

While it can be seen in Figure 4.6 that the proportion of non-energy current expenses covered by transfers from the Central Government is projected to remain high in 2015 with an average of 41%, there seems to be a general trend towards depending less on transfers to cover these expenses. This could be due to the general increase in the proportion of income coming from water and sewerage services, as illustrated in Figure 4.6, and to the general increase in revenues, as illustrated by a 12% increase in service-related revenues between 2013 and 2014, as

well as a predicted increase of 6% between 2014 and 2015. It could also be a short-term trend not necessarily representative of the sector's financial health, since data from 2007 to 2012 show that the average level of dependency of service providers on government transfers for current expenses maintained itself between 50 and 60% (although this included energy costs) throughout that period. In addition, a deeper dive into the improvements shown particularly by CORAABO and CORAAVEGA in the recent years could provide valuable lessons for other service providers. As for capital expenditures, transfers to cover them remain high at 90 to 100%, and this is likely to endure over the short and medium terms. Current expenses and capital subsidies represented an average of 0.3% of the GDP from 2013 to 2015.

**Water supply remains the funding priority for the Central Government, and service providers often need to turn to their own funds to finance sewerage projects.** Data from the executed budgets of 2014, as well as approved budgets of 2015 show that of the resources allocated to water supply, averages of 51 and 66%, respectively, came from the Central Government, while 38 and 29%, respectively, came from the service providers' own funds. In contrast, resources allocated to sewerage came from the Central Government with nearly

116 Information extracted and calculated from the 2013 and 2014 annual DIGEPRES reports on the execution of non-financial public institutions' approved budgets, as well as from the 2015 DIGEPRES compilation of non-financial public institutions budgets (not executed). The calculations involving current expenses do not include the costs associated with energy consumption by public institutions.

Figure 4.6: Proportion of current expenses financed by the Central Government for different service providers (%)

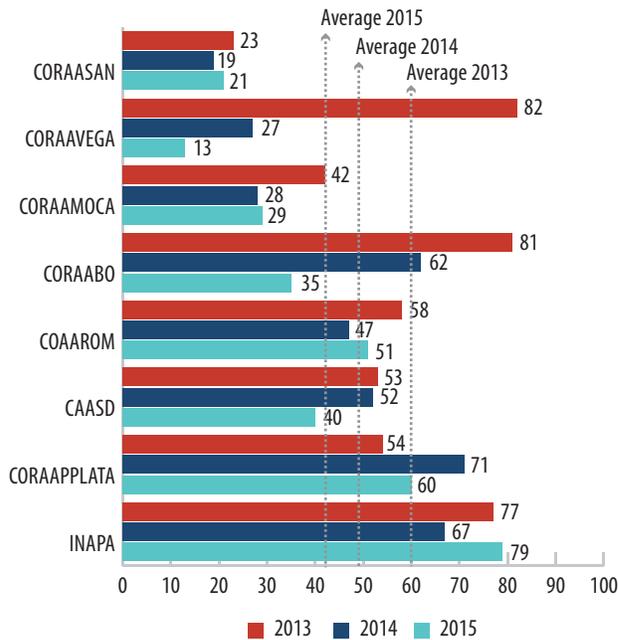
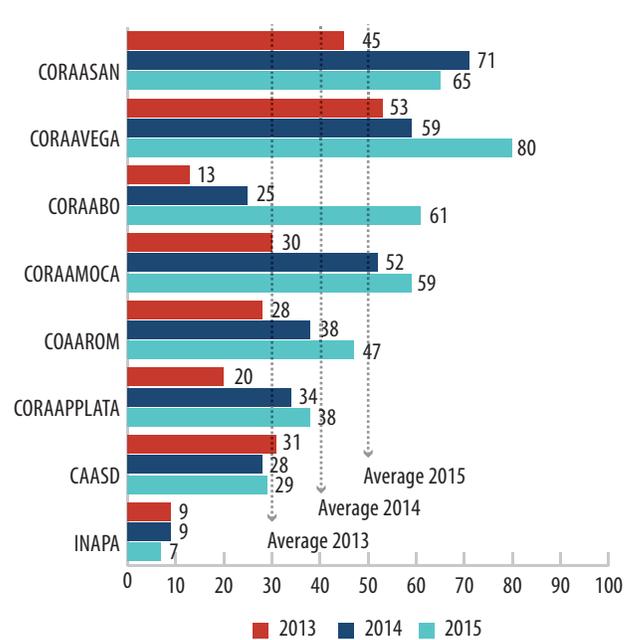


Figure 4.7: Proportion of income coming from water and sewerage services (%) by service provider



Source: data was extracted and calculated from the 2013 and 2014 annual reports from the Treasury's General Budget Directorate (DIGEPRES) on the execution of non-financial public institutions' approved budgets, as well as from the 2015 DIGEPRES compilation of non-financial public institutions budgets (not executed).

52% in 2014 and 24 in 2015, while 43% in 2014 and 68% in 2015 came from the providers' own funds. Few providers actually have resources allocated to sewerage and many depend on their own funds to attend to a minimum of service level. Resources allocated specifically to water supply in the sector as a whole (including infrastructure, administration, operation and maintenance, etc.) represented 32 and 38% of the 2014 and 2015 budgets respectively, while sewerage received 21 and 22% in 2014 and 2015, a significant difference considering the gap in sewerage services faced by many of the municipalities of the DR.

### Policy Directions

**The development of an institutional framework, the strengthening of service providers, and the establishment of a financing policy can lead the WSS sector to a more sustainable future.** In addition to the importance of establishing a WSS sector institutional framework to formulate sector policies, strategies and champion their implementation, multiple options can be considered to improve the sector and put it on a sustainable path to achieving universal and quality service

delivery. While reform materializes and financing and provision of WSS services continues, there is a need for strategic incremental steps to improve service delivery. This Note thus proposes three pillars on which this improvement could rest: (i) continuing and deepening ongoing efforts to establish the proposed institutional framework at the national level; (ii) strengthening the water and sewerage service providers and establishing a corresponding high impact investment and rehabilitation plan; and (iii) establishing a revised and comprehensive financing policy for the WSS sector.

**Pillar I - Continue all efforts to establish and consolidate the sector's institutional framework.** This requires the passing of the WSS Law and continued efforts with the associated decrees, as well as other activities related to its implementation, once the Law is approved. Part of this effort is currently being undertaken by a sector development program financed by the Spanish Cooperation (AECID), and further detailed work would be needed with regards to the strengthening of sector institutions, with the corresponding tools and systems to support them. The sanitation strategy under development is also a sound initiative that should be continued.

**Pillar II - In the short term, take incremental steps to improve service provision in a more efficient and targeted manner, in order to put the sector on a more sustainable path.**

A sector investment strategy with a long-term vision and a short-term program should be established, using the sanitation strategy under preparation, and adding priority water supply investments, strategically designed to maximize improvements in service quality and efficiency. This would focus on strengthening the capacity of the water and sewerage service providers, as well as on improving the institutional framework to support them, and would consist in the elaboration of “Short-Term High Impact Programs” for all service providers, particularly the CORAAs. These programs, similar to business plans, could be geared at improving service provision with increased efficiency and at identifying strategic investments. Based on the World Bank’s experience with three CORAAs under the Water and Sanitation in Tourist Areas Project (PASCT under its Spanish acronym), it is likely that the majority of these programs would focus on the rehabilitation of water distribution systems, improvements in commercial management, the development of information and planning systems, as well as on sanitation infrastructure and services. These programs would be associated with higher-level sector plans and managed by performance agreements with the CORAAs.

**These programs would be associated with higher-level sector plans and managed by performance agreements with the CORAAs.**

As these strategic investments would most likely impact CORAAs’ urban clients, and since most financing and sector improvement activities focus on urban areas, a Rural Investment Program could also be developed, exploring amongst other approaches, the potential involvement of the local private sector to support municipalities and rural water community associations (ASOCARES) and sustainably operate and maintain water supply systems in rural areas and small towns of the DR.

**Improvements in commercial management can rapidly increase billing at a low cost.**

In addition, despite the challenges described in this Note regarding service provision in the DR, it is estimated that significant gains can be reached with minimal efforts in commercial management improvements (see pilot with three CORAAs in Annex 2). On top of the benefits described in Annex 2, current efforts to upgrade the commercial systems

of CORAAMOCA and COAAROM have already provided interesting results: the installation of a commercial management system, as well as staff training, has contributed to increasing billing in both CORAAMOCA and COAAROM by 35 and 50% respectively over the course of the last year. While these are preliminary results, it is worth noting that these positive results were obtained without increasing the number of customers or tariffs. The latter is particularly important, as this indicates that a gradual increase in tariff to match the costs of providing services could further enhance their commercial and financial performance of these.

**Pillar III - Establish sector financing review and follow-up mechanisms.**

With limited resources available, efficiency in budget allocations for WSS projects and programs becomes imperative. This pillar would focus on the preparation of a Sector Financing Policy covering government financing for both investment and operational expenses. Main elements of the financial policy would include:

- *Establishing sector-specific review and monitoring mechanisms for national public investments* (including external sources). The idea would be to create a mechanism that would add a WSS-specific dimension to the allocation process established by DIGEPRES, so that new investments are vetted from technical, economic and institutional angles, and progress and results linked to these investments are systematically monitored and evaluated;
- *Exploring linking operational subsidies to performance agreements with service providers*, in order to provide incentives to improve their performance. While the general idea is to decrease and eventually stop subsidies overtime, such a mechanism can be designed and used to incentivize improvements in performance among the service providers in the meantime. These performance agreements are consistent with the National Development Strategy and are already in place in other sectors.

**Finally, to bring the above-mentioned three pillars into action, sound formulation and implementation arrangements would be required, particularly in the form of a champion agency.**

In the current institutional environment, the CODIREyMAPS could be used or a new unit – as a special purpose vehicle – within MEpyD,

could be created. These champion agencies would liaise with other sector institutions, including participating multilaterals and bilaterals.

## ELECTRICITY SECTOR

### Country Context

**To improve the reliability and continuity of electricity service, the Dominican Republic (DR) began a series of structural electricity 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 electricity sector reforms led to increased investment, technical capacity, and improved systems operations.** 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. As seen in Figure 4.8, 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 (wind and solar).

**However, these reforms were not sufficient to achieve electricity sector financial sustainability.** Monetary transfers from the Government to cover the electricity sector deficit increased from US\$471 million in 2009 to US\$1.3 billion in 2013, although they have since declined due to lower oil prices. Similarly, the three electricity distribution companies (EDEs) had a negative net worth of US\$2.1 billion at the end of 2014 due to cumulative annual losses. The main reasons for these deficits are the failure to transfer the full costs of electricity supply to end-users, poor management and commercial practices by the distribution companies, high electricity theft, and political interference in the regulation of the sector, among other factors.

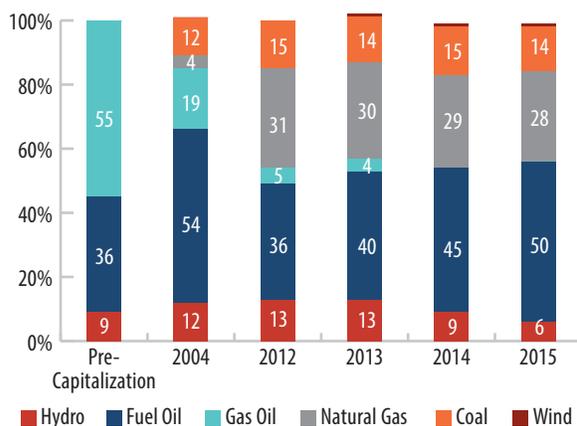
**In recent years the country has taken concrete measures to improve sector performance, but there is still significant work to be done.** The DR has made progress to improve sector performance, including: i) the preparation of the 2013-2016 Strategic Plan which it has started to implement; ii) the implementation of a program to reduce electricity losses with support from international financial institutions, which has resulted in loss reduction from 36.2% in 2009 to 31.4% in 2015; and iii) significant efforts to build consensus to implement the necessary reforms for the recuperation of the sector through the Electricity Pact discussions. Although the country is on the right track, much work remains to restore the financial and operational sustainability of the sector and improve the quality of the service for the entire population.

## Challenges

### Institutional framework/Sector governance

**While the past electricity reforms created a modern legal and regulatory framework, implementation of this framework has been less effective.** The sector

Figure 4.8: Evolution of Electricity Generation by Source



Source: Asociación Dominicana de la Industria Eléctrica (ADIE).

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 electricity 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. The Electricity Law promotes private sector participation in the generation segment of the electricity sector, and since capitalization of the sector there are currently 14 private power generators. The role assigned to the State is normative, supervisory, disciplinary, and a promoter of private investments, however in practice the State goes far beyond these roles including recently by undertaking new investments in power generation. This multiplicity and ambiguity of roles has caused distortions which hinders investment in the sector and effective and independent regulation.

**There is also limited transparency and accountability around the use of Government transfers to the sector and the financial performance of the Electricity Distribution Companies (EDEs).** The Ministry of Finance and Public Credit and the Ministry of Economics, Planning and Development have limited information about the use by sector agencies of the large transfers provided to cover the recurring electricity sector deficit. In addition they have not tied these transfers to improved performance. CDEEE also has limited control over the EDEs to ensure their efficient functioning and good commercial management as CDEEE's executive vice-president and the managers of the EDEs who are all appointed by Presidential Decree, effectively have the same level of authority and there is also no integrated data platform to access real time information about commercial and operational performance. Furthermore, there is a lack of transparency about the actual financial situation of the EDEs, with the last audited financial statements being published back in 2012 with numerous qualifications from the auditors that are yet to be resolved. Thus, the EDEs are not supervised or managed in a manner that promotes transparency, efficiency, and financial autonomy.

**In addition, there are political factors that prevent effective regulation of the sector.** SIE has little autonomy to comply with its functions established in

law of establishing and adjusting electricity tariffs. As a public entity, with a Superintendent appointed by the President, SIE is ultimately responsible for following the Government's policy. Thus while SIE does calculate the cost-recovery level tariff (tarifa indexada) as mandated by law, tariff adjustments to these levels have been delayed due to a lack of political will within Government given its concerns about the potential social backlash. Hence tariffs are often established below the levels of cost recovery for political rather than technical reasons. SIE also has limited actual authority to enforce service quality standards or to fine the EDEs accountable for failing to meet these standards as there is no political mandate to do so given the poor financial situation of the EDEs.

### Quality of Service Provision

**Electricity service is central for stimulating economic growth and enhancing shared prosperity, but service quality and reliability in the DR continues to be lacking.**

High quality electric service is essential to economic development and country competitiveness. Electricity is an important input for productivity, transversally affecting the residential, industrial, and commercial sectors of the economy. However, it is one of the main bottlenecks for doing business in the DR – the country was ranked 128th out of 144 countries in the Global Competitiveness Report issued by the World Economic Forum, in particular due to the low quality of its electricity supply. While the electricity access rate in the DR is 98%, higher than the average for Latin America, it is estimated that only 52% of electric consumers have 24-hour service and there are also frequent voltage fluctuations. These interruptions affect the population's quality of life, productivity, safety and increases spending on alternative sources of energy. As seen in Figures 4.9 and 4.10, the DR has the second highest frequency and duration of power system interruptions among comparable countries in LAC,<sup>117</sup> over twice the average for these countries.

**Due to frequent service interruptions, businesses have to make large investments in back-up equipment, to be able to carry out their day-to-day activities.** A recent research paper titled "Impact of the Crisis in the Electric Sector in the Dominican Economy" carried out by

<sup>117</sup> Comparable countries were selected based the following criteria: 1) size of population, 2) GNI per capita, and 3) composition of the electricity generation matrix.

Figure 4.9: System Average Interruption Frequency Index (SAIFI) for Comparable Countries in 2015

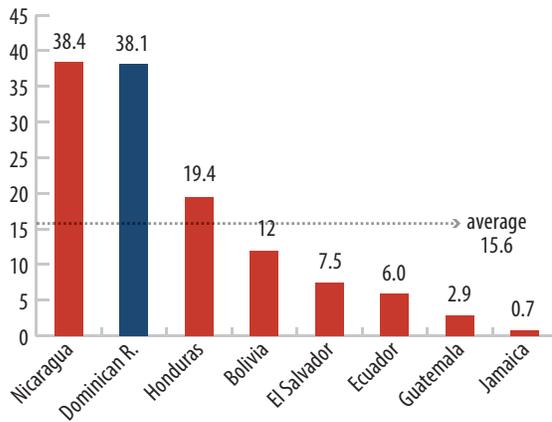
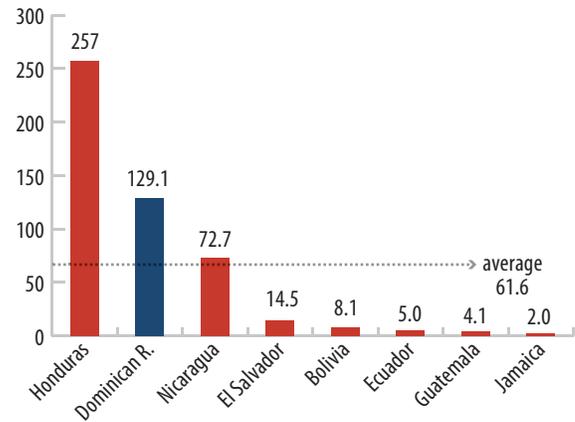


Figure 4.10: System Average Interruption Duration Index (SAIDI) for Comparable Countries in 2015



Source: World Bank, *Doing Business*, 2016. The indicators refer to the largest city for doing business in each economy.

INTEC points out that 96% of large industries have electric generators as well as 78% of small businesses. In 2013 the monthly spending on back up generation ranged-for the small business around RD\$ 16,800, mid-sized ones RD\$ 86,540 and large ones over RD\$ 100,000. These additional costs are a large financial burden, especially for small businesses. This situation increases the cost of production of goods and services provision and undermines business competitiveness.

**The poor quality and continuity of service also negatively affects households, especially the poor.** It is estimated that 18% of households have their own inverter or generator, representing a private spending of US\$150-US\$200 million (CNE, 2005). This situation is even more serious for the poor, who receive less hours of electricity service and spend more in relation to their incomes on alternative energy sources. While 45% or more of families with middle to high income levels own a generator, only 10% or less of poor families own one. Those who do not have sufficient resources to purchase this back-up equipment have to make do without electricity during the recurrent programmed blackouts, which are even more frequent in poor neighborhoods.

### Efficiency and Sustainability of the Electricity Sector

**Generation – One of the principal impediments to the efficient operation, competitiveness, and**

**expansion of the generation sector has been payment uncertainties.** 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. When the arrears owed to generators reach excessive levels, then the generators stop generating (or threaten to do so) until receiving payment. 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. Consequently, Government transfers to cover the overall electricity sector deficit (including the arrears owed to generators) also rose from 7.6% of the national budget in 2010 to 12% in 2014, before declining to 8.6% in 2015.

**The government and CDEEE identified the high cost of electricity generation as one of the main causes of the sector's financial deficit.** The Government, aiming to reduce generation costs has begun constructing the Punta Catalina 720MW coal-fired power plant complex in Bani. While its operation can help lower generation costs should oil prices rise again and help meet the country's power capacity needs, it has also created uncertainty about the role of the public sector versus private sector in the generation segment since the Electricity Law

promotes private sector participation in new generation investments and the Government undertaking these investments on its own could crowd-out future private investment.

**The contracts with many private generators will end this year and there is a need to secure electricity at affordable prices to meet demand moving forward.**

Existing power purchase agreements (PPAs) between the generation and distribution companies will come to an end in August 2016. According to the law, distribution companies need to maintain contracts with generators for at least the following 18 months. However, direct procurement of new generation capacity or negotiation of new contracts without using public tenders reduces competition and could increase costs as it creates uncertainty that can deter new investors. Furthermore, uncertainty about the rules of the game hinders new investment in the sector. This has particularly been the case for renewable energy companies that are struggling to obtain definitive concessions and PPAs to allow them to operate under SENI despite the existence of renewable energy legislation.

**Transmission – Like the generation companies, the Dominican Electricity Transmission Company (ETED) also suffers from not receiving timely payments for its services.**

Delays in the payment of transmission tolls limits the resources ETED has to maintain the transmission network to ensure good reliable service and expand the grid when required to meet growing demand. These delays result in the postponement of network expansion and maintenance plans which could undermine the reliability of the electricity transmission system and ultimately service quality.

**Distribution – The continuous cash deficits of the EDEs compromise the financial stability and viability of the entire sector and represents 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 other inefficiencies*). The EDEs also have much higher staffing levels relative to the number of clients served than many other countries in the region and this situation has been worsening in recent years which further adds to operational costs. The combination of these factors led to deficits that had to be covered by the central government. As seen in Table 4.3, the value of transfers from 2010 and 2015 to the EDEs exceeded US\$5 billion.

**While progress has been made to reduce electricity system losses, the pace of these improvements has been slow and losses are still well above efficient levels.**

As seen in Figure 4.11, the EDEs have made some improvements in the amount of energy billed, collections, and loss reduction since 2009. Between 2012 and 2015 losses were reduced from 35.5% to 31.4%, which represents 1% per year. Nevertheless, this rhythm of non-technical loss reduction is insufficient given that the high losses contribute to the financial deficits which have to be covered by transfers from the national budget.

**As seen in Figure 4.12, the DR's power system losses of 32% are still higher than those of comparable Latin American and Caribbean (LAC) countries, nearly twice the regional average of about 17%.**

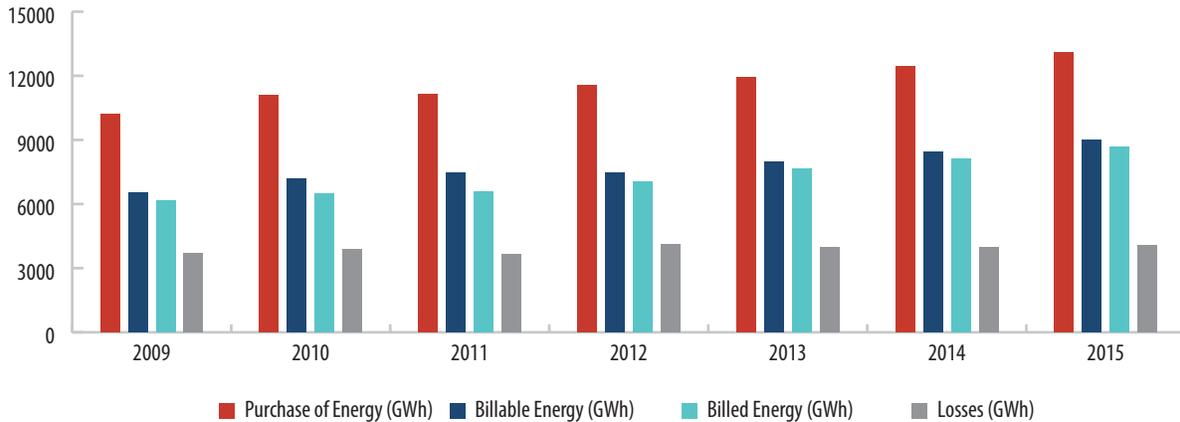
For this reason loss reduction was included as one of the three pillars of the

**Table 4.3: Contributions GoRD to EDEs**

Government Contributions						
US\$MM	2010	2011	2012	2013	2014	2015
EDESUR	165	245	157	452	264	150
EDENORTE	136	285	166	415	287	191
EDEESTE	85	202	141	394	257	209
CDEEE	222	246	141	242	194	135
<b>Total</b>	<b>608</b>	<b>978</b>	<b>606</b>	<b>1,504</b>	<b>1,002</b>	<b>685</b>

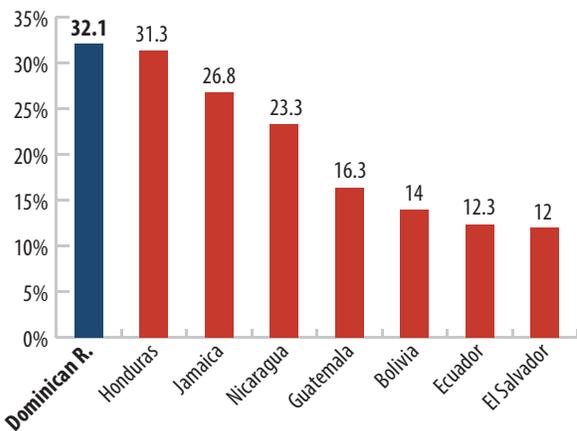
Source: CDEEE, doesn't include the contributions through the Reserve Bank.

Figure 4.11: EDES Commercial Data



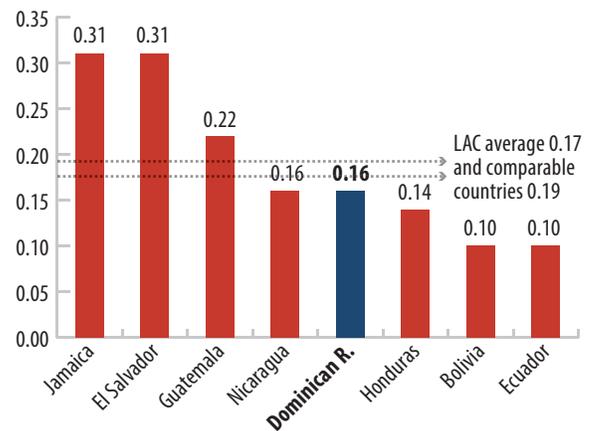
Source: CDEE.

Figure 4.12: Total Power System Losses in Comparable Countries (2014)



Source: CEPAL: "Centroamérica: estadísticas del subsector eléctrico, 2014"; CREEES for DR, MER for Ecuador; MSET for Jamaica; and IDB: "Electricidad Perdida" for Bolivia.

Figure 4.13: Residential Electricity Prices in Comparable Countries in 2014 (US\$/kWh)



Source: CIER: "Tarifas Eléctricas en Distribución para clientes Regulados"; CEPAL: "Centroamérica: estadísticas del subsector eléctrico, 2014" for Honduras and Nicaragua, CARILEC for Jamaica.

CDEE's Strategic Plan 2013-16, which establishes a goal of reducing non-technical losses by 3% per year until the target of 15% is reached, a goal which has also been incorporated into the Electricity Pact.

**Tariffs—Despite the high costs of production, residential electricity prices charged in the DR are below the LAC average and that of comparable countries of the Region.** As depicted in Figure 4.13, residential electricity prices applied in the DR are below the LAC average and lower than prices in many of the comparable countries in the region. Electricity bill payments represent, on average, between 4.9 and 6.8% of the monthly household expenses

according to the recent study from INTEC. Households spend a higher share of resources on telecommunications than on electricity.

**However, this masks the fact that electricity prices charged in the DR were heavily subsidized.** Electricity tariffs for regulated clients have not been adjusted since 2011, and the difference just between the indexed tariff based on costs and the tariff actually applied during the past 4 years has cost around US\$1.3 billion (cumulative), which had to be covered by government subsidies. Over the last few years' oil prices have declined enough for tariffs to recover costs. This has allowed the Government

to recuperate some of the costs of providing subsidies in previous years as tariffs have not been adjusted downwards. However, if oil prices rise again as international forecasts suggest without corresponding tariff adjustments, this would again result in large subsidies. Recent studies by the Ministry of Finance show that in the past these untargeted subsidies benefited higher income end-users more than the poor end-users that need them the most. In a particular study done in 2014 using ENIGH survey data showed that 94% of residential electricity subsidies were actually captured by non-poor households due to their significantly higher electricity consumption.

**Climate Change Vulnerability – The DR’s power system is vulnerable to the impacts of climate change given the country’s geographic location and electricity generation mix.** Climate change is contributing to more frequent and severe storms and natural disasters, higher sea levels, and more precipitation at a global level. These impacts lead to high wind speeds, floods, and landslides which may damage power infrastructure. They also result in more hydrologic variability which affects hydropower generation and the continuity of the service. DR is located in the hurricane belt of the Atlantic and therefore is vulnerable to the impacts of climate change. Moreover it has already been impacted by droughts that reduce hydropower production, which may become more severe in the future due to climate change and need to be factored into the cost-benefit calculations for future investments.

**The DR has experience with emergency preparedness and adaptation to climate change, but further actions**

**could be taken to enhance the resiliency of the electricity sector.** The nation has gained experience in prevention and management of climate events, has designed plans to mitigate their effects, and the SENI networks are designed for high-speed winds, but this does not exempt them from the risk of future impacts. Tropical storms Olga and Noel damaged several hydro dams, generation plants, and transmission and distribution lines in the DR and that had to be rehabilitated as part of the Emergency Recovery and Disaster Management Project financed by the World Bank, which cost the country over US\$30 million. While the project helped to increase the capacity of the electricity sector to respond to emergencies caused by natural disasters and strengthened the resilience of the rehabilitated infrastructure, there are still opportunities to improve the resilience and adaptation of the sector to the potential future impacts of climate change.

## Sector Financing

**The recurring electricity sector deficit has brought about a severe fiscal problem in the DR.** The electricity sector deficit has been financed by government transfers, which represented on average over 7% of the country’s total expenditures between 2010 and 2015 as seen in Table 4.4.

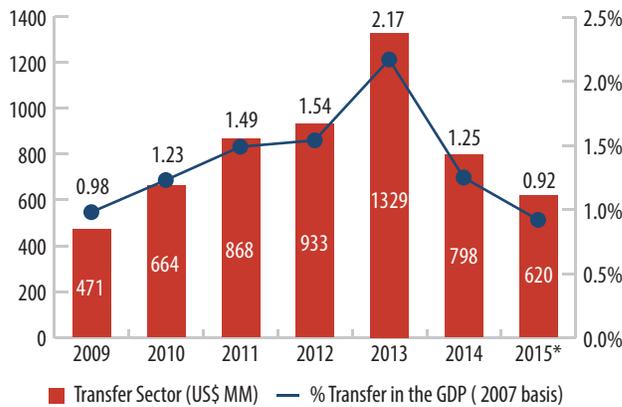
**Public transfers to the electricity sector to cover the deficit also represent a significant portion of the country’s gross domestic product (GDP).** Public transfers to cover the electricity sector deficit exceeded 1% of GDP

**Table 4.4: Country Incomes and Expenses**

	2010	2011	2012	2013	2014	2015
Total Revenues (RD\$MM)*	255,085	280,457	318,559	369,413	417,390	441,862
Total Spending (RD\$MM)	313,239	340,383	475,233	451,277	498,135	534,293
Current transfer to the Electricity Sector (RD\$MM)	23,837	26,162	35,489	34,606	40,234	24,575
Electricity sector transfers as a percentage of total spending (%)	7.6%	7.7%	7.5%	7.7%	8.1%	4.6%
Current transfer to the Electricity Sector (US\$MM)	647	687	903	828	924	545
GDP (RD\$MM)	1,978,852	2,218,429	2,377,504	2,558,586	2,786,230	3,023,116
Exchange Rate (RD\$/US\$)	37	38	39	42	44	45

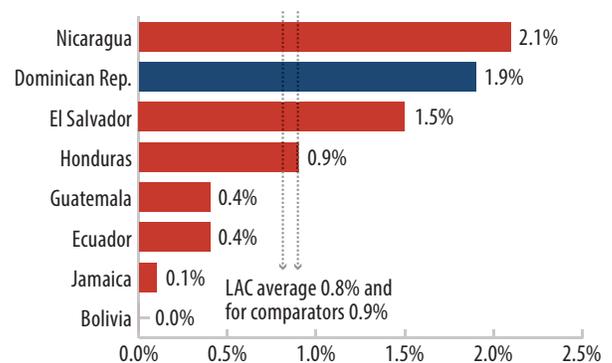
\*Excludes donations. Source: Central Bank.

Figure 4.14: Monetary Transfer to the Electricity Sector 2009 - 2015



Source: CDEEE 2015. The participation of the Transfer to the sector in the GDP was calculated for all years on the new 2007 basis. The 2015 GDP was calculated based on a growth of 5.5%, according to IMF's "2015 Economic Outlook - Americas".

Figure 4.15: Electricity Subsidies Pre-tax in Comparable Countries (% of GDP, average 2011-13)



Source: IMF: "Energy Subsidies in Latin America and the Caribbean: Stocktaking and Policy Challenges", February 2015. The data does not include fuel subsidies, which in some cases lowers electricity costs (such as in Bolivia).

between 2009 and 2014. In 2013 these transfers reached over 2% of GDP as can be seen in Figure 4.14. Although transfers to the sector have declined recently due to the reduction in international oil prices, they are still significant given the technical and non-technical losses of the EDEs and other sector inefficiencies. Historical prices and future projections suggest that low oil prices are likely a temporary phenomenon and could rise again to US\$70/barrel or more by 2020, which would result again in high transfers to the sector if its structural problems are not fixed. It could also result in the reemergence of untargeted electricity price subsidies, which benefits higher income end-users the most given their higher electricity consumption than the poor.

**Furthermore, from 2011 to 2013, electricity subsidies as a percentage of GDP in the DR were more than double the LAC average.** They were also over twice the average of comparable countries in the region as seen in Figure 4.15. The use of these resources burdens the national budget and reduces the available resources to invest in other priority sectors such as education and health, with significant public benefits.

### Policy Directions

**The electricity sector needs to transition from the current vicious cycle to a virtuous cycle that promotes financial sustainability and enables good quality service for households and businesses alike.** There are

several policy options that the Government of the DR and the different sector players could consider to contribute to achieving sector sustainability in the medium term. These policy options are underpinned by three main pillars: (i) improving the institutional framework and electricity sector governance; (ii) enhancing the quality of service provision; and (iii) achieving the efficiency and the financial sustainability of the electricity sector.

#### Pillar I - Improving the institutional framework and electricity sector governance.

- Institutions and Governance.** It is important to clearly define the different roles of the sector actors to achieve a more efficient sector. As announced by President Medina's during his inaugural speech, the MEM should become the institution responsible for all electricity sector policies in the Dominican Republic in the near term. This would mean that the MEM should absorb the functions of the CNE and those of CDEEE. However, until this change is effectively made, sector governance needs to improve, and it will be important have effective coordination between the CDEEE and the EDEs to achieve an efficient administration. It is also important that the government grant SIE the authority and autonomy established in the law with regard to setting tariffs, ensuring healthy competition among the sector agents, and monitoring and supervising compliance with laws and regulations, including service quality.

- **Transparency and Accountability.** In the short to medium-term improving the MEM, SIE, Hacienda, and CDEEE's ability to monitor the operations of the EDEs is vital to enhance accountability and eliminate the operational deficit. Afterwards it will be important that the CDEEE begins operating within its legal boundaries. Improving transparency and ensuring the quality of information provided by the sectoral agents, in particular state-owned companies, could also have a broad impact on the electricity sector and contribute to the enhanced sector credibility at the international level. The EDEs in particular should carry out annual audits of their financial statements, by independent and reputable audit firms based on international financial reporting standards and practices no later than six months after the close of the fiscal year. Capacity building to assist the EDEs to do so could be initially supported by the World Bank financed Distribution Grid Modernization and Loss Reduction Project. To further increase transparency and accountability, these financial reports could be published in a national newspaper, and on the EDEs webpages. Publication of generation procurement (plans or transactions) by CDEEE and the EDEs as well as staffing and other operational and financial performance data would go a long way to improving transparency and also enabling civil society oversight of the electricity sector. The way in which the Board members and managers of the public-sector electricity companies are hired could also be improved so that these are professional or performance based appointments to hold these institutions more accountable for performance.
- **Electricity Pact.** The Electricity Pact discussions provide a unique opportunity to generate political consensus among all stakeholders to accomplish real and sustained reforms. It is important to maintain an open dialogue and to broadly disclose all information related to the sector in order to infuse the needed trust and empowerment of all stakeholders. The solution to sector issues should be systematic and will require commitment from all sector actors to achieve an efficient, competitive, and sustainable electric service.

#### **Pillar II - Enhancing the quality of service provision.**

- **Improved service quality.** All final end-users should be able to have continuous, high-quality, reliable,

transparent and affordable electricity service. The programmed electricity blackouts should be reduced to diminish the need for investments in alternative energy sources and help promote economic growth and shared prosperity. With this goal in mind, it is crucial to adopt measures to deliver continuous electricity service to all the clients. Currently there are technical means to transfer many clients to 24-hour circuits. Over the medium-term the sector should strive to ensure that all clients pay their bills on time and are provided constant electricity service, with appropriate voltage levels and no fluctuations. A solid social outreach program will be needed to complement the technical improvements to enhance awareness and willingness to pay for service and to regularize customers to achieve this goal so that increased service availability does not translate into even higher losses that need to be covered by the Central Government transfers.

#### **Pillar III - Restoring the efficiency and financial sustainability of the electricity sector.**

- **Generation.** It is essential to have clear rules of the game and greater transparency in the generation sector, both for conventional and renewable energy. It is also important that the state better defines its participation in the sector. This would provide clearer signals that could increase transparency and competition and enable the entry of new market participants. More certainty and clarity on the market rules for renewable energy investments in particular is needed to increase competition and supply from these generation sources. It is also vital that the EDEs carry out a call for tenders to power producers to cover their power capacity and energy needs given that the existing contracts will be closing at the end of August 2016. The country could also benefit from the low prices of natural gas to help bring down generation costs. SENI has the potential of converting around 1,000 MW of the existing plants into gas plants, with an investment worth of approximately US\$200 million. Various barriers related to expanding access to natural gas supply and securing finance would need to be addressed to exploit this potential.
- **Transmission.** It is important to ensure the operational and financial autonomy of ETED and allow

it to collect transmission fees to provide sufficient resources for it to fulfill its functions under the law. This would require effectively passing these costs onto customers in bills and then having the EDEs pay ETED for these services from payment collections. ETED will also have to ensure that transmission fees are collected from the electricity market participants that use the transmission network to exchange power. In order to maintain the networks in good condition and expand it when needed to satisfy the growing demand, ETED's operational and financial autonomy needs to be guaranteed.

- **Distribution.** To eliminate the operational deficit of the EDEs, it will be important to implement an integrated loss reduction program to reach the goal of 15% total losses. With support from the Dominican Government and international financial institutions, this program should focus on: technical and non-technical losses, efficient administration, service continuity, installation of meters and improved meter reading, registration and billing of customers in a timely manner, and collection of payments. The loss reduction program should also incorporate a social management strategy aimed at restoring trust between end-users and EDEs, raising payment levels, and educating customers on the use of electricity in a more efficient and safe way. Making this happen will also require improved sector governance, transparency, and oversight. The EDEs are the cashbox for the sector who purchase the energy produced by the generation companies and transported by ETED and thus the financial health of the sector depends on their recuperation of these costs.
- **Electricity tariff.** Application of a technical tariff represents one of the key reforms needed to restore the financial sustainability of the EDEs and to eliminate the power sector deficit. SIE should publish the procedures and formulas used for the automatic adjustment of electricity tariffs based on costs as required by the law. SIE could take advantage of the currently low international oil prices and apply the technical tariff in the short run so that the transition will be more viable since it would not require major adjustments. If needed a glide path could also be used to gradually make needed adjustments since cross-subsidies and generalized subsidies for all consumers would be eliminated. To protect the poorest consumers, subsidies could be targeted and provided

to those low-income users that qualify for the targeted cash transfer program Bonoluz. This would imply that Bonoluz coverage should be expanded so that it covers all low-income electricity users that are eligible for the Government's Sistema Único de Beneficiarios (SIUBEN) programs.

- **Climate Change.** Electricity infrastructure resiliency is critical to address and recover from emergencies caused by natural disasters, which will become more serious and frequent due to climate change. Good planning and design and investments to strengthen and reinforce electricity infrastructure so that it can withstand future climate events would help improve its resiliency. The preparation of a solid emergency preparedness and response plan for how to respond to and recover from these types of events is also essential for reducing the vulnerability of the Dominican electricity system and ensuring continuity of the service even after these types of events occur.

**The country has made significant strides to reform the electricity sector and to reduce distribution losses, but there is still much work to be done to improve service availability and quality in the DR.** The policy directions mentioned above are intended to mitigate the need for large government transfers to the sector in the future, generalized subsidies, high losses, frequent blackouts and overall poor service quality by improving the performance and financial viability of the different sector actors. The World Bank is committed continuing to support the Dominican Republic to move down this path toward achieving a more sustainable sector and improved service quality for all.

## INFORMATION AND COMMUNICATIONS TECHNOLOGY

### Country Context

**Liberalization of the telecommunications market has allowed the Dominican Republic's ICT sector to experience tremendous growth in the last decade.** The General Telecommunications Law in 1998 created Instituto Dominicano de las Telecomunicaciones (INDOTEL), the state's independent regulatory authority for telecommunications, and opened the market to competition. The ICT sector has since grown significantly, with mobile phone subscriptions surpassing 89% in

December 2013, compared to 58% in 2007,<sup>118</sup> and prices have fallen as well. Mobile internet coverage has also expanded significantly, with INDOTEL's Rural Broadband Network Project (2007) installing 3G broadband internet access in most municipalities. The mobile phone market is undergoing restructuring, with two secondary operators being taken over by a foreign group of investors, however it remains dominated by Claro, the former state-owned monopolistic operator (Codetel), which has about half of the market share in most of the main retail services.

**The DR has excellent mobile and international broadband connectivity and coverage, but it lacks an integrated and complete national fixed broadband backbone.** One of the best examples is mobile phone penetration, as of 2014, 90.9% of the households had at least one mobile phone.<sup>119</sup> The DR also has ample excess capacity in terms of international broadband connectivity through the Network Access Point (NAP) of the Caribbean (see Figure 4.16).<sup>120,121</sup> It also has fairly strong broadband coverage along the Puerto Plata–Santiago–Santo Domingo–La Romana–Punta Cana axes via telecommunications operators like Claro and TRICOM, and via electricity transmission companies like ETED (Empresa de Transmisión Eléctrica Dominicana) and CEPM (Consortio Energético Punta Cana-Macao). There are also several cable television operators that could offer fixed broadband access services if they were connected to international connectivity points at affordable prices, but the DR lacks intermodal connections between these providers, and it has inadequate coverage in poorer, more remote parts of the country.

**The Government has made a commendable effort to complement investments in ICT infrastructure with outreach, connecting the country through different programs and initiatives.** Among them, the Telecommunication Development Fund (Fondo de Desarrollo de las Telecomunicaciones – FDT), which

Figure 4.16: Submarine Cable Map for the DR



Source: [www.submarinecablemap.com](http://www.submarinecablemap.com), accessed on September 15, 2016.

facilitates the financing of projects in areas with low income and of areas of targeted social interest, and the Rural Broadband (Banda Ancha Rural – BAR) project, which has connected more than 500 communities that cover all the provinces in the country. The Government has announced plans under the banner of República Digital to achieve national broadband coverage, and to make one computer available to each schoolchild and teacher. While international experience is mixed on the merits of one laptop per child programs, what has been confirmed as critical is to ensure adequate skills building and digital literacy to complement investments in infrastructure. For example, high digital literacy among internet users in Hong Kong means they contribute more entries to Wikipedia than all of Africa combined, although Africa has 50 times more internet users.<sup>122</sup> Technology can make workers more productive but only if they know how to use it, and it can in fact displace workers unless mechanisms are put in place to enhance and rapidly adjust skills in an environment of increasing technology. Women are also less likely to use or own digital technologies than men,<sup>123</sup> so efforts to engage women early in ICT programs are warranted, as are efforts to incorporate people with disabilities into the labor force through digital technologies.

118 INDOTEL Statistics, March 2014.

119 ENHOGAR-MICS, 2014

120 The lit capacity is less than one-tenth of the maximum bandwidth and the usage is a mere fraction of the lit capacity. Source: Telegeography, January 2013.

121 Network Access Point (NAP) of the Caribbean. It offers Data Center, Disaster Recovery and Business Continuity Solutions. The main broadband suppliers in the DR offer their connectivity services in the NAP of the Caribbean (Tricom, Wind Telecom, CEPM, Orange, Viva, Claro, Columbus Network, Estrela Telecom, Unified Communications y OneMax).

122 See World Development Report: Digital Dividends. The World Bank, 2016.

123 See World Development Report: Digital Dividends. The World Bank, 2016.

## Challenges

### Institutional framework/Sector governance

**The key institutional and governance challenge to ensure ample coverage at affordable prices is to strengthen regulation so as to promote greater competition.** In most areas, except in the main cities, only one provider offers retail fixed broadband services and although an interconnection policy is in place, wholesale prices are not regulated. Thus when the NAP of the Caribbean offered wholesale high speed internet at US\$125 for each Mbps of symmetrical (uploading and downloading) speed, in most municipalities there is no competition and a single provider offers the service for about US\$500.<sup>124</sup> INDOTEL, faces a conflict of interest in regulating this, as it is both regulator and service provider.

### Coverage and Affordability

**The cost of broadband access in the DR is high, contributing to broadband ICT usage statistics that are well below the regional average indicators for Latin America.** Only 4% of the population subscribes to the broadband internet, compared to 7.5% in LCR and 10% in other Upper Middle-Income Countries. One in six municipalities in the country has no registered fixed internet accounts (see Figure 4.17). Usage is relatively low in part due to network coverage and in part due to prices. In order to ensure affordability, households should dedicate no more than 5% of their incomes to internet usage fees, but at current prices, this rules out the poorest 40% of the population. At 4.5% of GNI per capita, broadband costs are almost twice as high as in Panama and four times higher than in Trinidad and Tobago. For the poorest 10%, internet fees are equivalent to almost 80% of their incomes, making affordability a key consideration (see Figure 4.18). Even for public services, only 30% of schools have some internet access and medical facilities face similar shortfalls, although health and education pay a combined \$6 million for their limited services. Usage of ICTs is also low in MSMEs and they can be direct beneficiaries of the installed broadband.

**The national benefits of improved internet coverage are significant but are not currently being reaped.**

<sup>124</sup> See the Project Appraisal Document for the DR Caribbean Regional Connectivity Improvement Project (Report No. 1061).

Broadband infrastructure does not only facilitate transparency or the delivery of government services, such as education or health, but also simplifies citizen's access to information. At the national level, various studies have estimated increases of between 0.24 and 3.2 percentage points of GDP associated with a 10% increase in fixed broadband penetration, as well as between 1.5-4.5 indirect jobs for every job created.<sup>125</sup> At the local level, access to internet coverage can, for example, improve market price information for farmers and allow them to shift to more perishable but high return cash crops. And a strong internet backbone can contribute to better citizen security (e.g. via extension of the 911 service), more accountable government (e.g. via the Municipal SIGEF), and increased opportunities for SMEs through ICT usage in business throughout the country.

### Demand-side and Related Factors

**Investing in and continuously upgrading digital enablers is essential.** The DR has in place Law 126-02 on Electronic Commerce, Documents and Digital Signatures, as well as Law 53-07 on High Technology Crimes. Internet banking services are widely available among banks in the DR and mobile banking is on the rise. However, the state of the art is in continuous evolution in these areas and on next-generation issues such as privacy and cybersecurity, as well as internet governance and creating a global digital market,<sup>126</sup> warranting further analysis and subsequent policy adjustments.

## Policy Directions

**The DR can usefully adopt a three-pillar approach to catch up with LCR and with other Upper Middle-Income Countries on internet coverage and affordability.**

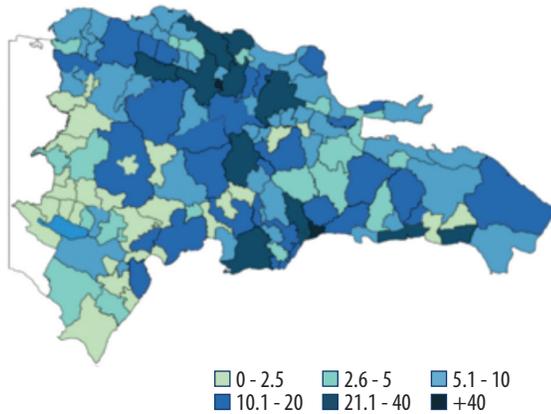
**Pillar I - Improving the institutional framework and sector governance.**

- **Strengthening regulations to promote competition.** This involves ensuring equitable

<sup>125</sup> See Katz et al. (2010), Qiang and Rossotto, IC4D: *Extending Reach and Increasing Impact, Chapter 3: Economic Impacts of Broadband*, The World Bank (2009), and García-Zaballos and López-Rivas, *Control gubernamental sobre el impacto socioeconómico de la banda ancha en los países ALC. The Inter-American Development Bank (2012).*

<sup>126</sup> See World Development Report: Digital Dividends. The World Bank, 2016.

Figure 4.17: Internet Penetration (%)



Source: INDOTEL (2013).

access to the international gateway and cable landing stations and open access to incumbents' networks, ensuring all major infrastructure (e.g. roads, pipelines, transmission lines) have provisions for an optical fiber link, promoting intermodal competition (e.g. between cable and telecommunications providers), mandating incumbents to make local access lines available to competitors at wholesale prices (local loop unbundling), and focusing INDOTEL on enhanced sector regulation.

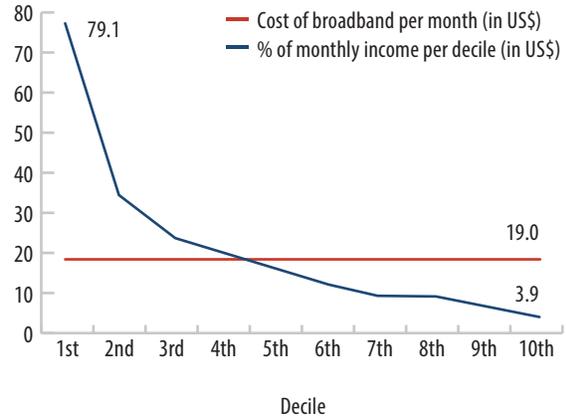
**Pillar II – Enhancing coverage and affordability**

- **Investing in ensuring national coverage of the broadband backbone.** To complement the existing coverage in wealthier urban centers and future private investments to expand the network, government can undertake public investments that ensure inter-nodal connections between existing unconnected private (e.g. cable) providers and expand the backbone to poor, remote municipalities to ensure full coverage, and thereby reach the National Development Strategy goal of 80% internet coverage by 2030.

**Pillar III – Addressing demand-side and related factors**

- **Investing in skills and policies for the future.** This involves enhancing broadband use by creating an Open Innovation Hub to improve digital literacy through training and promote an ICT-enabled open innovation ecosystem in the DR (with citizens, public

Figure 4.18: Broadband prices versus income



Source: Elaborated by World Bank staff based on data from World Development Indicators, World Bank Open Data, and ITU, 2010.

authorities, academia, etc.); connecting knowledge with investors, and keeping up with the state of the art via policy analysis and reform. It is important to introduce ICT skills from primary education to help break the digital divide on future generations, by implementing programs both for teachers and students, and not only developing policies that concentrate efforts on the distribution of computers to children/teachers. Companies and MESCyT have already identified a set of ICT skills needed in order to increase competitiveness of existing firms and create jobs in knowledge-based industries,<sup>127</sup> as employment is currently moving to sectors where productivity is lower. The IT-ITES industry frequently hires young people, whose ICT skills are greatly appreciated.<sup>128</sup> Furthermore, young people, even those without any specific educational background, can be trained in a matter of months in coding, digital animation or design for the creative industries, among others. This is particularly beneficial as it can target youth with risky-behaviors and school drop-outs, and the trainings can be delivered in partnership with the private sector.

127 Ministerio de Educación Superior, Ciencia y Tecnología (Ministry of Higher Education, Science and Technology)

128 Information Technology and Information Technology-Enabled Services

## ANNEX IV: Access levels of households to WSS and poverty rates by province

Province	Access to piped water (%) *		Access to sanitation (%) *		Poverty rate (%) **
	Inside the house	Inside the house or in courtyard	Improved sanitation	Open defecation	
Elías Piña	18.3	52.3	65.8	24.3	83.2
Pedernales	22.9	65.8	60.6	24.8	74.6
Baoruco	22.3	65.2	46.4	42.8	74.5
Independencia	25.3	71.4	63.8	19.9	72.9
El Seibo	27.4	51.6	57.7	22.4	70.7
Monte Plata	17.2	39.7	70.7	15.8	70.1
Açua	27.1	74.3	68.0	15.9	65.2
Barahona	29.1	75.9	67.9	14.3	65.2
San Juan	30.6	73.6	71.9	15.0	63.0
Hato Mayor	22.5	40.3	73.2	13.5	62.4
San José de Ocoa	35.3	81.2	74.7	9.4	61.7
Monte Cristi	41.2	80.9	73.5	9.7	61.3
Valverde	48.6	82.8	75.0	6.3	56.3
Dajabón	53.1	87.2	82.8	6.3	53.9
La Altagracia	8.7	14.8	69.5	5.0	51.8
Samaná	31.8	54.3	71.2	10.9	48.9
Santiago Rodríguez	56.0	73.7	85.5	5.4	48.3
San Pedro de Macorís	30.8	60.8	70.7	10.1	47.5
Peravia	36.6	68.2	75.5	6.0	46.7
Sánchez Ramírez	30.0	51.1	78.8	8.9	46.2
La Romana	41.3	74.9	70.3	4.9	45.3
Duarte	39.4	54.7	82.6	6.6	42.6
María Trinidad Sánchez	36.4	62.0	78.2	9.1	42.0
Puerto Plata	47.1	63.2	83.4	5.1	37.2
Hermanas Mirabal	20.5	31.7	85.6	3.4	36.8
San Cristóbal	37.4	66.8	74.6	6.0	36.2
Españat	49.5	63.9	81.6	5.0	34.0
Santo Domingo	51.5	69.8	86.1	3.5	33.6
La Vega	37.4	47.6	81.8	4.8	31.4
Santiago	75.2	84.4	89.2	2.5	30.8
Monseñor Nouel	58.9	70.3	87.9	3.9	27.3
Distrito Nacional	63.5	79.6	86.1	1.2	26.7
National total	46.3	67.2	80.6	6.0	40.4
National urban	53.8	74.2	84.0	3.4	38.5
National rural	24.4	46.9	70.7	13.6	46.1

\* Data from the National Statistics Office's 2010 Household and Population Survey. Improved sanitation is here estimated by individual flush toilets and latrines, even though the household survey does not differentiate between improved and unimproved individual solutions. \*\* Data from MEPyD's 2010 Poverty Atlas (Economic and Social Analysis Unit, UAAES). Includes extreme poverty.

## ANNEX V: Targeted water metering programs to become more efficient and increase revenues

As part of its institutional strengthening component, the World Bank-financed “Water and Sanitation in Tourist Areas Project” (*Proyecto de Agua y Saneamiento en Centros Turísticos*, PASCT) supported the implementation of metering pilots with three CORAAs, namely CORAAPPLATA, CORAAMOCA and COAAROM, to help address efficiency challenges these regional companies were facing. Between 2012 and 2014, the PASCT financed the development of business plans for these CORAAs, with particular emphasis on improving commercial and financial management, and, as a result of the diagnosis and recommendations produced, the installation of 11,500 micro-meters was initiated in January of 2015.

The results presented in Table A2.1 indicate that for the cost of increasing the number of metered clients by approximately 10%, monthly revenues can be increased by 16 to 28%. Besides these results, the metering pilot generated other positive outcomes, as presented below.

**CORAAPPLATA.** Institutional strengthening activities financed by the PASCT, as well as the positive outcomes resulting from the implementation of the metering pilot, contributed to CORAAPPLATA's decision to enter into a delegation contract with the private sector for commercial management-related aspects such as client cadaster, installation of meters, customer relations and billing. Under this contract, it is estimated that an additional 21,000 macro- and micro-meters will be installed, with the potential to further contribute to increased revenues and efficiency gains.

**CORAAMOCA.** In addition to the increased revenues, CORAAMOCA reported improvements in both non-revenue water (from 82 to 76%) and payment collection efficiency (from 83.5 to 87.5%), as a result of the metering pilot. Payment collection efficiency was even found to increase to 91% for the metered customers, as opposed to 86% for non-metered customers. To achieve these positive results, CORAAMOCA also engaged very closely with the neighborhood groups (*juntas de vecinos*) in areas where the meters would be installed and designed a communication strategy which was implemented with their collaboration. The strategy included information about the pilot, but also awareness with regards to the importance of reducing intra-domiciliary water losses, as well as benefits of water conservation, a particularly critical theme given the fact the country is facing its worst drought of the last two decades. According to CORAAMOCA officials, the pilot allowed the company to create tighter links with the community, a valuable asset for future interventions.

**COAAROM.** In La Romana, the pilot was put in place in four of COAAROM's sectors, one of which already had had meters installed in the past, but these now required to be replaced. COAAROM reported that in this sector, a 23% increase in revenues was recorded after the installation, whereas in the other sectors where households had never before been metered, revenues increased by 47%.

Table A2.1. Results of the metering pilot with three CORAAs

	CORAAPPLATA	CORAAMOCA	COAAROM
Number of micro-meters installed	4,000	4,500	3,000
Proportion of metered clients - before pilot (%)*	1.9	5.1	8.6
Proportion of metered clients - after pilot (%)*	12.0	13.0	17.4
Increase in revenues (%)	16.1	21.7	27.8

\* with functioning meters.



# Chapter 5.

## Policy Directions for Sustainable and Inclusive Growth in the Dominican Republic

### Introduction

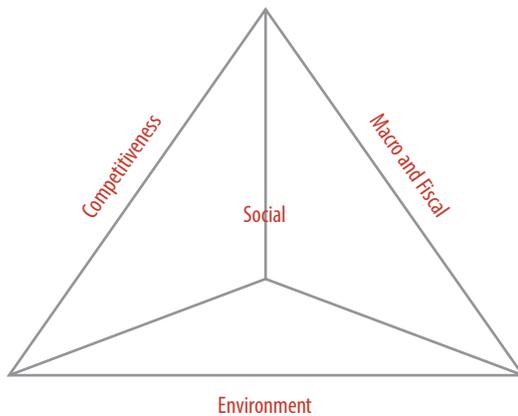
**T**he strong pace of economic expansion in the Dominican Republic has been underpinned by a favorable external environment and sound policies. Growth levels in the country have been among the highest in the Western Hemisphere averaging 7% in 2014-15, fueled by strong domestic demand. The drop in oil prices has contributed to boost disposable income along with the recovery in the U.S., which has helped through higher tourist arrivals and higher remittances. Over the last two years, poverty rates declined by more than 10 percentage points and the income per capita of those in the bottom 40% of the income distribution grew at an annual rate of 2.5%, which is more than twice the rate of growth for those in the top 60%. The authorities have leveraged this overall benevolent external environment with sound policies that have underpinned the country's strong economic performance. On the macro side, for example, monetary policy has been able to keep inflation at low levels through an effective inflation targeting mechanism, and fiscal consolidation efforts have prevented further increases in public debt levels.

**To sustain high economic growth rates and address remaining poverty and equity challenges, the DR needs a concerted reform effort.** Figure 5.1 illustrates four

inter-related areas that could have self-reinforcing effects on long-term growth: (a) macro and fiscal management; (b) competitiveness of the economy for inclusive growth (including several factors, such as, for example the quality of infrastructure, the business environment, the soundness of the financial sector, among others); (c) factors that affect social sustainability (including the quality of public service delivery in core sectors such as education, health, water and sanitation, and electricity); and (d) environmental sustainability and resilience to climate change. While there are sector-specific challenges and policy choices that could affect outcomes in each of these four areas in isolation, spillovers from one sector to the other could impact trend growth and have an effect on the long-term growth rate. For example, maintaining an adequate macroeconomic and fiscal management framework could help improve the competitiveness of the economy and attract foreign direct investments. Strengthened competitiveness could help the authorities improve tax collections, which have been historically low in the DR, and contribute to generate a higher fiscal space. The additional fiscal space could then be used to strengthen the resilience to climate change and natural disasters and help create positive virtuous cycle by reducing the pressure on the budget and freeing space for improving the quality of public service delivery.

**This note focuses on policy directions that could help the DR to sustain the high economic growth rates that**

Figure 5.1: Factors that Can Affect the Sustainability of Growth



Source: World Bank (2016).

**will be required to generate faster improvements in living standards and making the country more equitable.** Because previous notes have focused explicitly on aspects associated with the quality of public service delivery, including in the social sectors (health, education, and social protection) and in the infrastructure sectors (water and electricity), this note focuses exclusively on aspects associated with macroeconomic and fiscal management, competitiveness, and environmental sustainability. For each of these three topics, the note presents the respective country context, identifies current challenges, and suggests policy directions that will need to be addressed that could help the DR maintain high growth and make it more inclusive.

**While several downside risks to the macroeconomic outlook could affect the growth performance of the economy in the short and medium terms, the focus of the note is broader and oriented toward those challenges that could affect the long-term performance of the economy.** On the macro and fiscal front, for example, attention was given to structural challenges such as the historic low tax revenue ratio in the country. On the competitiveness side, the note focuses on horizontal and vertical bottlenecks that need to be addressed to increase domestic linkages in the economy, create more and better jobs, and reduce their risk of a decline in the country's growth potential. On the environmental front, the note emphasizes the reforms that could make the DR economy more resilient to climate change and natural hazards.

## MACRO-FISCAL SUSTAINABILITY

### Country Context

#### The Fiscal Position and Debt Levels

**Over the last fifteen years, the DR has managed to reduce substantially its overall consolidated fiscal deficit.** During this period, the consolidated fiscal deficit –including one-off tax receipts, capital grants, and tax amnesty collections– has varied widely between 1.3 and 8.0% of GDP, experiencing separate periods of improvement and deterioration alternately. Following the 2012 tax-reform package, significant fiscal consolidation has helped improve macroeconomic balances, by reducing the consolidated overall fiscal deficit from 7.7% of GDP (2012) to 1.3% of GDP (2015), including a central government primary fiscal surplus of over 3% of GDP (see Figure 5.2, Panels A and C).<sup>129</sup> Structural reforms that have supported the governments' consolidation efforts 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 and reducing their servicing cost.

**A key feature of the DR's overall fiscal framework is its limited revenue mobilization capacity.** With tax revenues at 13.7% of GDP in 2015, one of the lowest in the world, the DR has found it difficult to mobilize additional tax revenues. Revenue generation compares poorly with the average levels for the LAC region, Central America and the Caribbean small states (see Figure 48, Panel B). The tax system of the DR continues to rely mainly on indirect taxation which represents 64% of all taxes (see Figure 5.2, Panel D) but that remain at around 8.7% of GDP, a modest amount relative to other lower-middle-income countries. The government attempted to compensate for the lower tariff rates mandated by the CAFTA-DR regional free trade agreement by increasing the value-added tax (VAT) rate from 16% in 2004 to 18% in 2012. This, together with the introduction of selective taxes on telecommunication services, and the introduction of income tax on interest earning, have been the most far-reaching reforms.

<sup>129</sup> Includes capital grant of 3.1% of GDP resulting from the PetroCaribe debt buyback operation of Jan. 2015.

**Revenue collection capacity is further hampered by high levels of informality and existing tax exemptions.**

Tax evasion is a major contributor to low collection rates, but given its informal nature it is rather difficult to measure it with any precision. Nevertheless, the General Directorate for Internal Revenue (*Dirección General de Impuestos Internos*, DGII) estimates the ITBIS evasion rate at close to 30%, representing roughly US\$840 million in lost public revenue. On the other hand, tax expenditures represented an estimated 6.6% of GDP in 2014 (including 3.2% of GDP in VAT exemptions) and appear to be generally regressive. Meanwhile, 15-year corporate income tax holidays for companies established in Special Economic Zones further increased tax expenditures, and there is a relatively high minimum threshold for personal income tax liability.

**Public expenditures in the DR are also low by international standards with current expenditures greatly surpassing capital expenditures.**

Total expenditures (relative to GDP) have been recently contained to an average of 17.5% of GDP for 2014 and 2015, down from 20% in 2012. However, current expenditures have increased from 12% of GDP in 2010-11 to 14.6% in 2015, driven by an increasing wage bill (currently at 4.9% of GDP), increasing interest payments, and sizeable current transfers – equivalent to 5.4% of GDP on average between 2010 and 2015. This is low if compared with the average for LAC, Central America, and the Caribbean Small States (see Figure 5.2, Panel E). And while this is usually good news, the fact is that in recent years, the composition of government expenditures has shifted in favor of current expenditures and in detriment of capital expenditures. The ratio of capital expenditures over current expenditures has decreased from 0.32 during the period 2007-10 to 0.22 during 2013-15. In other words, current expenditures have significantly increased its relative importance in the overall public expenditure envelope. While current expenditures have increased, investment decreased from an average of roughly 4% as a share of GDP in 2007-10 to 3.2% in 2013-15, and is expected to decrease further to 2.5 by 2016-17.

**Debt levels are at a sustainable level but there are signs of a worsening trend over time.**

The consolidated public debt ratio is currently at moderate levels (at 49% of GDP), and is expected to increase to about 53% by 2020. Debt levels are expected to move over time closer to the indicative threshold of 50-60% requiring higher scrutiny

for emerging markets,<sup>130</sup> and particularly in the case of an island economy. Interest payments have increased from 1.8% of GDP in 2010 to 2.9% in 2015, and are expected to reach 3.4% of GDP in 2020. In line with this trend, government debt service has increased from 5.5% of GDP in 2010 to 11.2% in 2015,<sup>131</sup> and is expected to exceed 7% of GDP by 2020. Public gross financing needs have hovered between 10 and 15% of GDP in recent years, depending on whether only central government debt is accounted or the consolidated public sector debt. Also in this case, this level of exposure is approaching the indicative 15% threshold that requires higher scrutiny, for emerging markets. Indicators like the external financing requirements and the EMBIG appear to be moving in a relatively safe zone (see Figure 5.3),<sup>132</sup> as the government does not face constraints in mobilizing resources in the short or medium term, through a combination of domestic and external issuance. On the other hand, as the debt burden is set to increase, the room for additional external borrowing is narrowing.

## Public Financial Management

**Since 2007, the government has made important strides to strengthen its public financial management and procurement systems.**

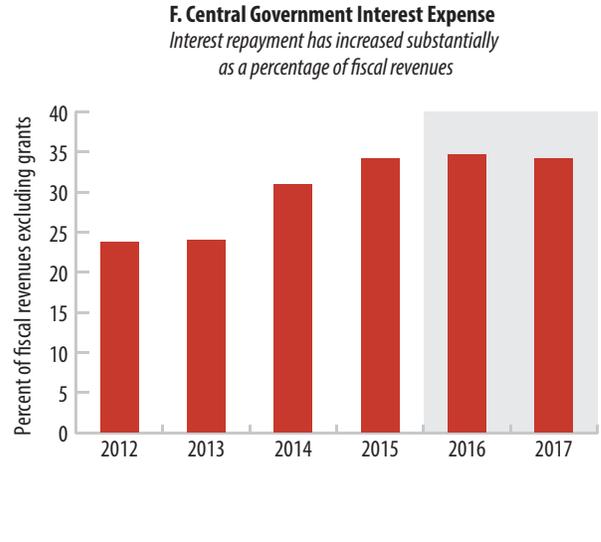
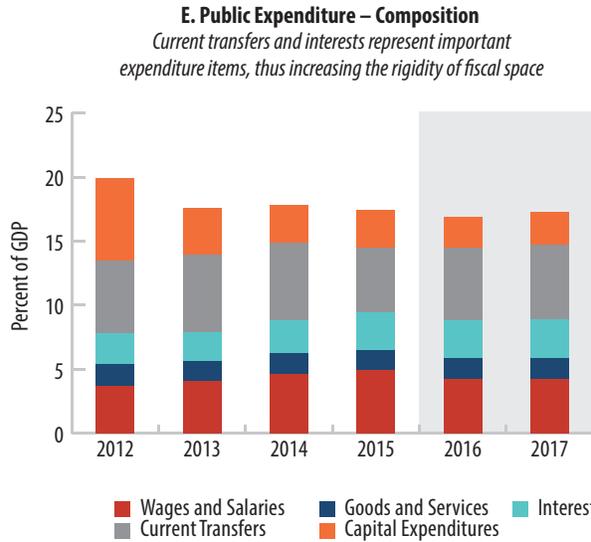
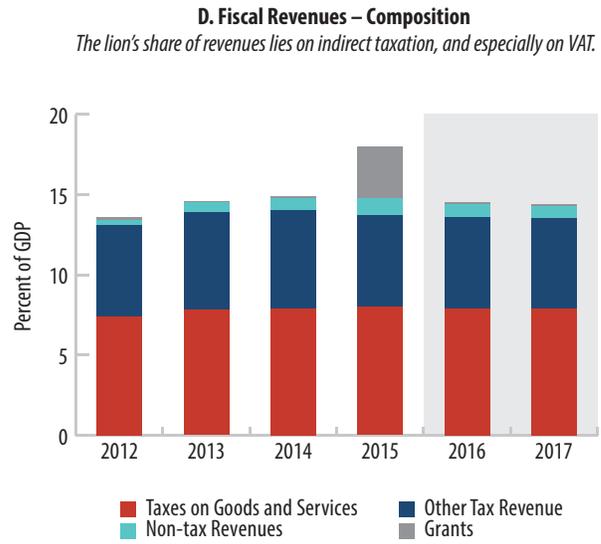
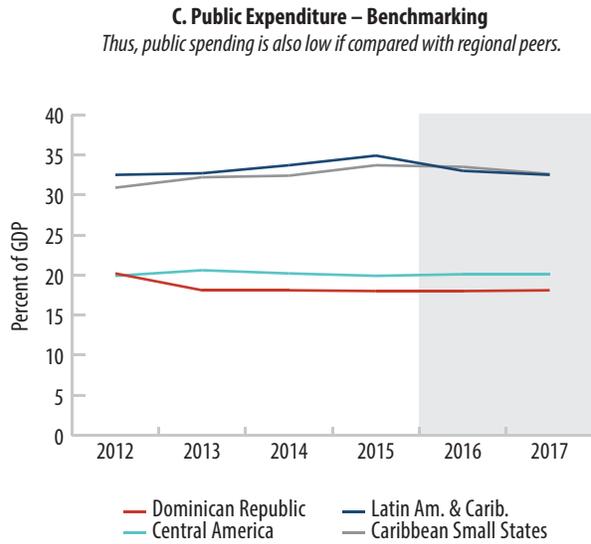
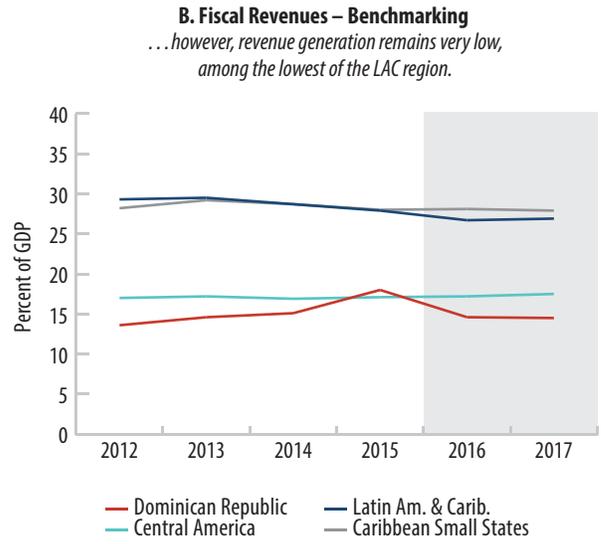
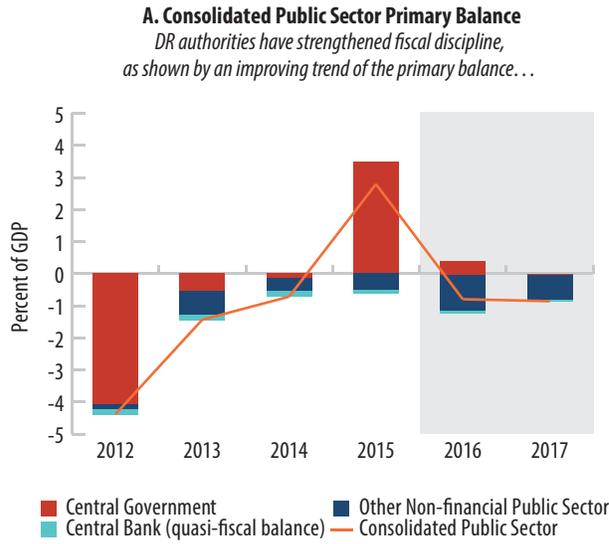
The government's progress in institutional governance was acknowledged in the 2007, 2010 and 2012 Public Expenditure and Financial Accountability assessments (PEFAs), as well as in the 2009 Report on the Observance of Standards and Codes (ROSC) for Accounting and Auditing. The government's 2013-16 Multiannual Plan for the Public Sector aims to strengthen the ability of public institutions to improve expenditure management and service delivery. It introduces medium-term, results-based planning and budget execution practices, especially in the health sector, where results-based financing mechanisms have started to produce promising results. The implementing regulations for the 2012 Law on Public Procurement expanded disclosure requirements, introduced procedures for promoting engagement with small and medium enterprises, and mandated the publication of annual procurement plans. Since then there has been a dramatic increase in the

130 See IMF (2003), Public Debt in Emerging Markets: Is It Too High?, IMF World Economic Outlook, 2003.

131 The peak registered in 2015 was a one-off largely due to the exceptional repayment of the PetroCaribe debt.

132 The "Emerging Market Bond Index Global" (EMBIG) is a benchmark index for measuring the total return performance of international government bonds issued by emerging economies.

Figure 5.2: Dominican Republic Fiscal Accounts, 2012-2017



Source: Central Bank of the Dominican Republic, Dominican Republic's Public Credit Office, IMF, Bloomberg, World Bank World Development Indicators, World Bank World Governance Indicators, and World Bank staff estimates.

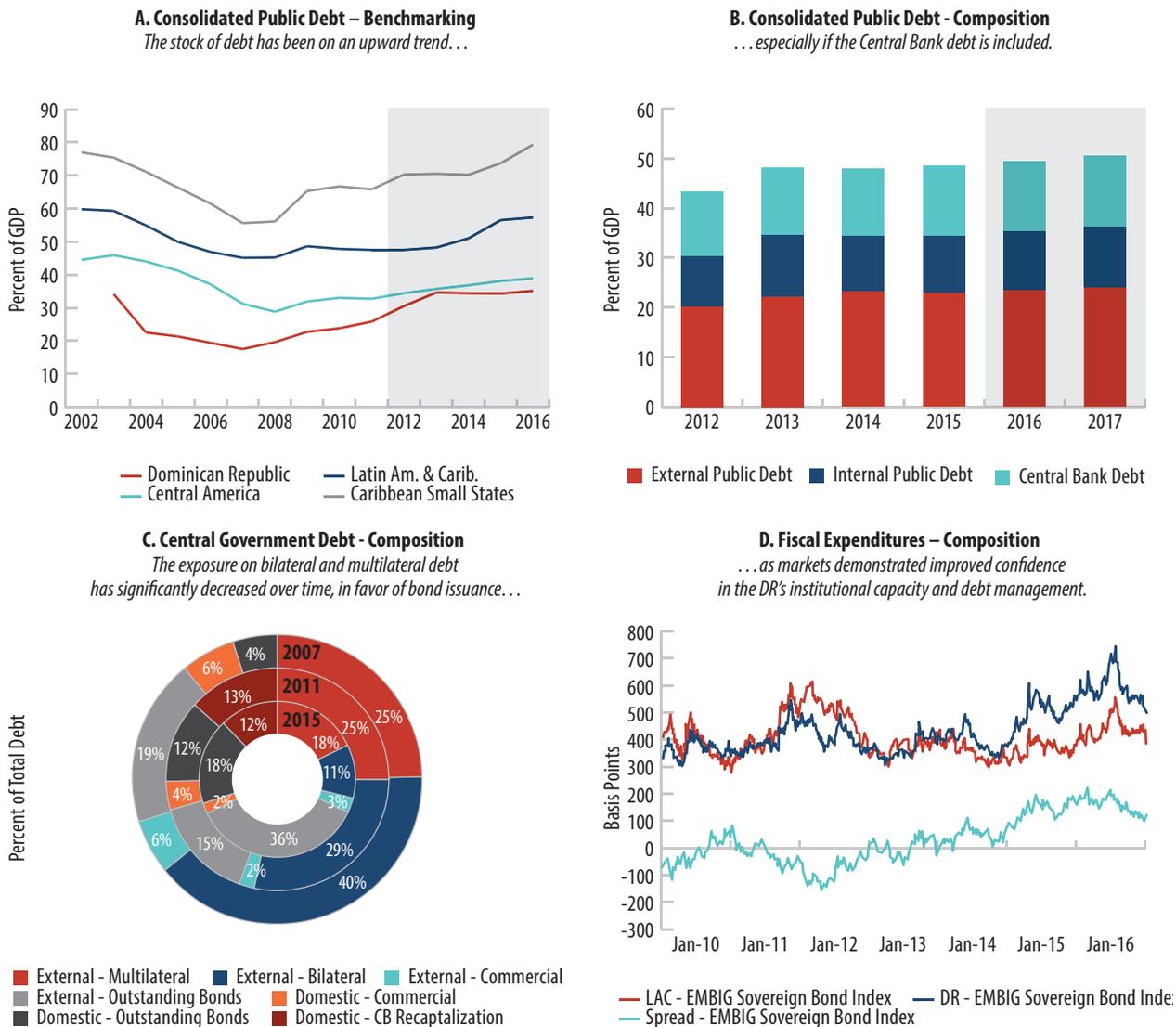
number of public procurement processes that have been published online, more and more institutions have published annual procurement plans, and an e-procurement portal has been developed and piloted.

**Collaborative processes between citizens and public institutions are helping design new reform initiatives.**

Examples include the Participatory Anti-Corruption Initiative, the Dominican Initiative for Quality Education, and the Caribbean Growth Forum. More recently, the Government launched a nationwide dialogue to design reform agendas for the education sector, the energy sector and the PFM system. Parallel efforts are underway in other policy areas, including municipal administration,

procurement reform, budget reform, and financial commitments to non-state actors. This process offers an unprecedented opportunity for constructive dialogue and engagement between the public sector, the private sector and civil society. Meanwhile, the online “citizens’ budget” initiative has successfully enhanced public awareness regarding the budget. The citizens’ budget, which includes a simple illustrated version, has encouraged public participation in the budget process, greatly improved access to budgetary information and increased transparency and accountability. As the participatory governance agenda has gained traction, the authorities have created more structured spaces for building consensus around the national development agenda.

Figure 5.3: Dominican Republic Debt Structure, Various Years



Source: Central Bank of the Dominican Republic, Dominican Republic's Public Credit Office, IMF, Bloomberg, World Bank's World Development Indicators, World Bank's World Governance Indicators, and World Bank staff estimates.

## Challenges

### Challenges on Fiscal position and Debt Levels

**A fundamental challenge for the DR remains associated with the need to improve revenue mobilization.** Tax revenues as a share of GDP stand among the lowest levels for countries with similar income per capita levels and are also one of the lowest in the world.<sup>133,134</sup> A fragile and inefficient electricity sector is the recipient of significant transfers from the Government, which heightens pressures on an already inelastic fiscal envelope. A major challenge for medium-term fiscal sustainability, therefore, is to address long-standing inefficiencies in the electricity sector. The opportunity-cost to provide significant public transfers to the electrical sector is very high, as it feeds a fundamentally inefficient sector while limiting available resources to social policies or investment in productive forms of capital.<sup>135</sup> In addition, the rampant informality observed in the country typically results in a loss in budget revenues by reducing total taxes and contributions paid to the State. As roughly one-half of the country's total employment (including self-employed, family workers, and other informal workers) is estimated to be in the informal sector,<sup>136</sup> significant untapped gains in fiscal collection are possible, which are relevant not only in terms of overall revenue mobilization, but also in terms of progressivity of the fiscal regime.

**There are several sources of inefficiencies in tax administration that limit the ability of the authorities to improve tax collections.** Lower than expected revenue collection trends (estimated at about 0.5% of GDP) signal the need to strengthen DGII's collection functions, which currently operate under an overall weak institutional and operational setting. Preliminary assessments suggest that the DGII needs to revamp its current organizational structure, business operations, and HR management to overcome critical performance gaps that contribute to inadequate tax compliance and revenue collection levels. In particular, the following areas have been highlighted

as critical functions that require improvements: (i) audit and enforcement (enforcement-led collection stands only at about 0.9% of total collection, against the 2% that international best practice suggests); (ii) collection operations (only 60% of overall payment compliance rate against a minimum of 75% suggested by international best practice); and (iii) management of large taxpayers (lack of point-to-point process oversight and inaccurate data sets).

**The growing weight of current expenditures in the budget could have negative impacts on long-term growth.** While it is laudable that public expenditures are low as a share of GDP, the fact that a higher share of total expenditures are spent with consumption raises questions about the ability of the government to focus its spending on productive investments that could spur growth in the long term. In a context of increasing debt exposure it is critical to direct enough public resources towards investments that can help boost productivity and growth, so as to enhance the repayment capacity necessary to service the public debt incurred.

**The Dominican Republic is among a group of countries that tends to have a pro-cyclical fiscal stance during boom and downturn years.**<sup>137</sup> The implication of that behavior is that the country tends to exacerbate the volatility of output and misses an opportunity to behave in a counter-cyclical way to drive the economy out of a downturn.

**The debt profile shows vulnerabilities to potential exchange-rate shocks.** Further to the PetroCaribe debt buyback and the increased dollar-denominated bonds in 2015, external public debt financial stocks currently represent more than half of the total external debt (their share was only about a quarter in 2008). A number of international conditions have favored this buildup of dollar-denominated securities, including low interest rates and stronger global appetite to fund emerging markets' debt. While this has caused a public external debt shift into an overall longer maturity profile,<sup>138</sup> the increasing share of foreign-currency-denominated (mostly in USD) debt

133 Countries with an income per capita level similar to the DR tend to have tax revenues ranging between 13 and 44% of GDP.

134 Tax revenues, globally, tend to range between 11 and 68% of GDP. Intervals estimated using WEO data.

135 Please see the dedicated note on the electricity sector, for a more in-depth view.

136 "La informalidad en el mercado Laboral Urbano de la Republica Dominicana", Central Bank of the Dominican Republic, 2007.

137 See Carneiro and Garrido (2015), New Evidence on the Cyclicity of Fiscal Policy, Policy Research Working Paper No. WPS7293, The World Bank.

138 The portion of short-term public debt has fallen from about 1/3 to an estimated 1/10 between 2008 and 2015.

has amplified potential exchange-rate risks, stressing the need to maintain reserves at adequate levels. Authorities appear to be well aware of this, as reserves have increased to all-time highs over the last months, hovering around USD 5.5 billion (roughly 3.5 months of imports). According to the IMF's risk-weighted metric assessment however, current levels are still not fully adequate against long-term external debt risks, and represent roughly 60% (in 2015) of the IMF's suggested adequacy range.

## Challenges on Public Financial Management

**Important challenges remain in multiannual planning and budgeting processes and in implementing PFM reforms.** There are still variations between budgeted revenues and expenditures. Expenditure control and procurement systems are fragmented, enforcement is weak, and financial reporting and external auditing – while strengthened in recent years – require further improvement, notably in terms of follow-up on audit findings. Poor coordination between the planning, monitoring, and evaluation functions of agencies in different government institutions disrupts the alignment between the END and the national budget. The lack of a consistent performance-monitoring approach makes it difficult to track progress on national development objectives and increases the reporting burden on institutions that are already overwhelmed with multiple reporting requirements. Together, these issues represent a critical challenge to the strategic management of the public finances. In addition, weak monitoring and evaluation (M&E) mechanisms contribute to inefficiency in public spending and can encourage corruption and waste.

## Policy Directions

**Reforming tax policy should be a priority.** The forthcoming Fiscal Pact offers a unique opportunity to address reforms to strengthen fiscal sustainability. The widening of the tax base, particularly, should be given high precedence, together with a reform of VAT and exemption schemes. The pillar of any tax reform should be the VAT. The ITBIS exemptions represent close to 3% of GDP and the majority of these exemptions is related to the consumption of middle and upper class households. One option could be for goods in the basic consumption basket to remain taxed at a zero rate, along with health and

education services.<sup>139</sup> Other exemptions, especially those that are regressive, could be removed, potentially granting up to 0.5% of GDP in additional revenue collection. The impact of the removal of VAT exemptions on electricity for the poorest could be mitigated through transfer programs (such as Bonoluz, for example). These measures have the potential of opening fiscal space for needed infrastructure and social spending, as well as reducing distortions in the tax system. Efforts should focus initially on eliminating exemptions for upper-income taxpayers, while maintaining exemptions aimed at protecting socially vulnerable groups, or eliminating exemption on a larger scale while compensating the most vulnerable with equivalent transfers. Undertaking a thorough cost-benefit analysis of the incentives on corporate income taxations would also be advisable.

**There is much to be gained by improving the efficiency of the tax administration system, and the authorities should consider starting with a gap analysis and benchmarking exercise that could guide reform efforts in that direction.** To facilitate the adoption of a commonly accepted baseline and assessment among key stakeholders, the authorities (particularly in DGII) should consider undertaking a full-fledged diagnostic using the Tax Administration Diagnostic Assessment Tool (TADAT). TADAT is an internationally recognized, PEFA-like initiative for measuring tax administration performance, which was launched in 2016 with the support of the G20, international organizations (including the IMF and the World Bank) and regional tax administration centers (including CIAT), with the objective to provide governments with a generally accepted assessment framework to identify strengths and weakness of countries' revenue administration systems. The World Bank can assist the Dominican authorities with a TADAT assessment at their request.

**Additional tax revenues could finance additional pro-poor spending.** Ending extreme poverty and ensuring the poor have access to public education and health would require an increase in public resources to social services equivalent to 1.3% of GDP, other things remaining equal.<sup>140</sup> In addition to reforming the indirect (ITBIS) taxation regime, some gains could also come from Personal Income Taxes, which make up the lion's share of direct tax

<sup>139</sup> The consumption basket is based on the national poverty measurement methodology.

<sup>140</sup> Defined under the international poverty line of US\$2.50 PPP a day.

collections. According to recent WB analysis, effective rates (3.5%) among upper-class earners (i.e. more than US\$40 a day PPP) are far from the statutory rates (15%) called for in the tax schedule. A positive impact on personal income tax revenue would come from tax administration measures to reduce evasion by the upper class and measures to decrease informality among independent workers.

**The rising debt trends should not be overlooked.** The improving trend of fiscal balances, and in particular the recent surplus of the primary fiscal balance demonstrated the Government's commitment to improve fiscal sustainability, however this is not sufficient to curb the debt trajectory. Some fiscal adjustments are needed to curb debt down to lower levels and preserve long-term sustainability. Such a goal will require further efforts, and in particular it will be critical that authorities remain focused on avoiding future primary deficits, in order to prevent additional pressure on the debt path. Under the current baseline, an adjustment of around 1.5% of GDP over one year would be needed to stabilize debt at current levels. Putting the debt on a downward trajectory would require fiscal consolidation efforts equivalent to a 2-2.5% of GDP adjustment over the next 3 years.<sup>141</sup>

**A medium-term fiscal framework with a clear counter-cyclical orientation should be adopted.** The government has already begun moving in the direction of a medium-term expenditure framework, and establishing binding fiscal targets and budgetary performance indicators would facilitate this process. Authorities should leverage the favorable momentum of public debate and appetite for reforms – achieved in the aftermath of the May 2016 elections – to strengthen the fiscal policy framework, including the evaluation of approaching a rules-based fiscal framework with a more clearly defined counter-cyclical orientation. Adopting a medium-term fiscal policy with clear objectives may not only facilitate improving the fiscal position but could also contribute to further strengthen the overall credibility of macro-fiscal policies.

**A comprehensive framework for Monitoring and Evaluation (M&E) and auditing should be developed.** Gradually adopting results-based budgeting principles could greatly strengthen public oversight and accountability. The MEPyD, the Ministry of Finance and

the Ministry of Public Administration should develop a comprehensive framework for M&E and auditing. This framework could be piloted on a small number of key public programs before being extended across the public sector. For instance, DIGEPRES could empower institutions like the Department of Economic Studies, which may offer this kind of detailed and up-to-dated fiscal data, to achieve an exhaustive oversight of planning, budgeting, execution of public spending, with a view of highlighting slippages and support the decision-making process.

## COMPETITIVENESS AND INCLUSIVE GROWTH

### Country Context

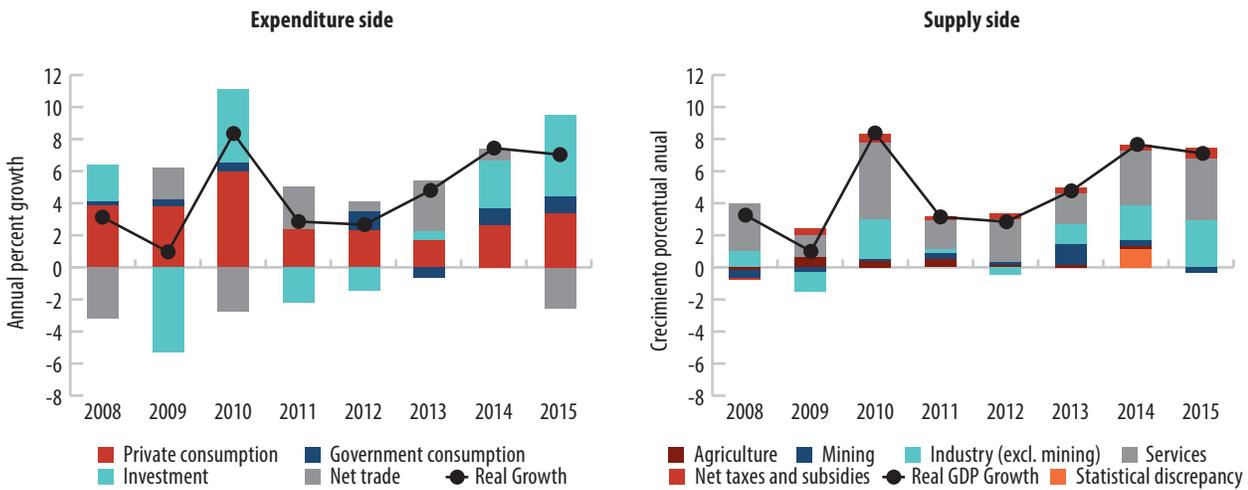
#### Structural Transformation and Growth Engines

**Over the last three decades, the structure of the Dominican Republic's economy has changed away from agriculture and resource extraction and toward a more diversified production base.** Historical preferential market access to the U.S. underpinned this structural transformation. Beginning in the late 1960s, the Dominican Republic started to diversify its economy, bringing to an end centuries of dependence on agriculture, especially sugar production. By the 1980s, the country's economic focus had shifted to mining, tourism, and manufacturing. The country's manufacturing sector was strengthened by the creation of Special Economic Zones (SEZs), which offered tariff exemptions and a series of tax concessions to foreign companies. The main activity in the SEZs was garment assembly for export to the U.S. in the context of fixed import quotas under the Multi-Fiber Arrangement (MFA). The phasing-out of the MFA, completed at the beginning of 2005, along with the signature of the CAFTA-DR agreement and the extensive use of SEZs to generate job opportunities, created the conditions necessary to attract investment from multinational companies that produce relatively sophisticated goods to serve the U.S. market.

**While the sources of growth in the DR have been fairly diversified, the main propellers in recent years have been private consumption and overall investment and services.** The primary sector has grown by 4% a year, between 2010 and 2015, largely sustained by agricultural production. The services sector has benefitted from a

141 Estimates based on IMF and World Bank staff calculations.

Figure 5.4: GDP Composition 2008 -2015 - Contribution to Real GDP Growth



Source: Authors' own calculations based on data from the World Development Indicators.

resurgent U.S. economy: tourism alone has grown at an average rate of 5% a year since 2010, on an upward trend. Low oil prices reduced imports, and a gradual nominal depreciation of the Dominican peso (RD\$) against the USD boosted exports. Private consumption has been consistently strong, supported by steady job creation and improvements in the availability of credit to the private sector. Gross fixed capital formation has been strong, and especially in its private component (83% of total, in the period 2005-2015), mostly in the form of construction projects.

**Foreign direct investment (FDI) inflows to the DR have consistently exceeded the Latin America and Caribbean average, at 5.6 of GDP in 2012, 2.6% in 2013 and 3.7 in 2014.** Most of this investment has been directed to tourism, mining and special economic zones (SEZs). Foreign Direct Investment has been a catalyzer for economic activity in SEZs that are mainly used as an export platform to assemble products to be sold in the U.S. market. The CAFTA and the EPA agreement, both of which have investment provisions, have been also fundamental in attracting this so-called efficiency-seeking Foreign Direct Investment (FDI).<sup>142</sup> Additionally, the country has 11 Bilateral Investment Treaties (BITs) in force mostly with developed countries.<sup>143</sup>

142 Efficiency-seeking investment refers to the type of investment in which the investor chooses a host country in order to take advantage of some competitive factor, such as a cheap/productive, knowledgeable or efficient labor force, utilities, services etc.

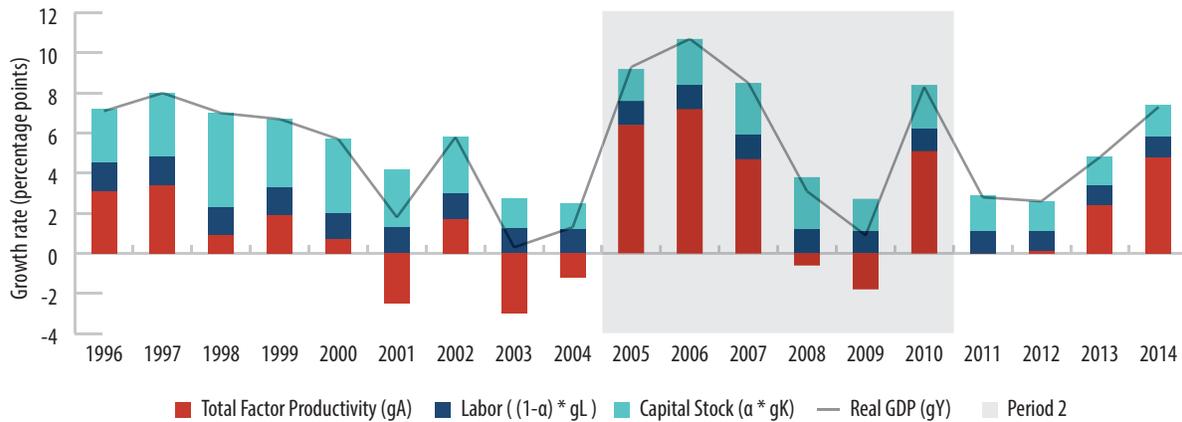
143 The BITs currently in force (with the associated date on entry into force) are with Spain (1996), Taiwan (2001), Chile (2002), France

**The Dominican Republic has secured preferential market access for its exports in key regional and international markets as well as implemented regulatory reforms to align its Special Economic Zones regimen with WTO commitments.** The CAFTA-DR agreement, which entered into force in 2007, provides preferential access to Central America and the US and has been a driver of the transformation of the production composition of SEZ zones. The CARIFORUM-EDU Economic Partnership Agreement (EPA), signed in 2008, provides preferential treatment to the EU. The expiration of the deadline to make the SEZ program compatible with the WTO Agreement on Subsidies and Countervailing Measures led to the elimination of the export share requirements to receive fiscal incentives—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. The current SEZ framework is believed to be compliant with WTO requirements.

**Rapid productivity growth has driven the Dominican Republic's good economic performance.** TFP growth has been consistently positive for most of the past two decades, the only exceptions being the national banking crisis in the early 2000s and the global financial crisis in 2008-09. Moreover, the rate of TFP growth in the DR has been significantly higher than both the LAC average and

(2003), Switzerland (2006), Panama (2006), Morocco (2007), Finland (2007), Netherlands (2007), Korea (2008), and Italy (2009).

Figure 5.5: Growth accounting decomposition (Solow model)



Source: Authors calculations based on World Development Indicators data.

the rates of the DR's closest regional comparators. Positive changes in TFP in the early nineties could be attributed to the expansion of an initially successful Special Economic Zones (SEZs) model, with foreign firms establishing subsidiaries. Paradoxically, improvements in productivity after 2004 (the year in which trade preferences in textile expired) are likely to be related to the need of reconversion in these SEZs; this implied a reduction in the number of workers employed and the introduction of more sophisticated machinery to keep productivity up and diversify into products with higher value added in a context of increasing global competition.

## Business environment and competition

**Over the past few years, the Dominican Republic has taken a number of relevant steps to improve its business environment and promote competition, as a tool to foster productivity growth and competitiveness.**<sup>144</sup>

While the 2017 Doing Business report ranks the Dominican Republic in the middle range of countries surveyed at position 103 out of 190 economies in terms of the ease of doing business, the country has launched major business environment reforms. These have included the simplification of business start-up registration (through

144 Competition drives productivity growth through two key mechanisms: it shifts market share toward more efficient producers, and it induces firms to become more efficient to ensure their survival, generating employment, and ultimately speeding up economic growth and improving overall welfare.

the *Formalizate* program) and the passing of the insolvency law. In terms of promoting competition economy-wide, a Competition Law was approved in 2008 and an independent Competition Authority (*ProCompetencia*) set up in 2011. In addition, a number of efforts to remove sector-specific barriers to competition have enabled the country to catch up with regional peers. New data on Product Market Regulations (PMR) in the DR measures the extent to which public policies promote or inhibit market forces in key sectors in the economy and shows that the country is aligned with the Latin American and Caribbean regional average.<sup>145</sup> Strong participation of the private sector in network industries, notably telecommunications, the unbundling of different market segments in electricity, the establishment of independent sectoral regulators, relatively open access to professional services markets,<sup>146</sup>

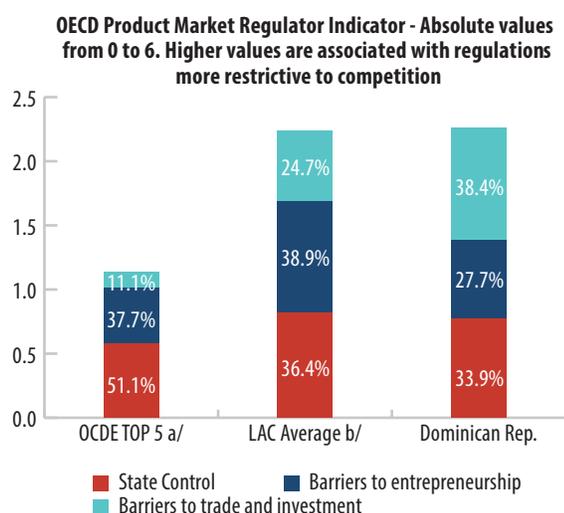
145 Each of the areas addressed within the PMR methodology sheds light on specific restrictions of the regulatory framework both economy-wide and in key sectors of the economy on twelve topics: electricity; gas; telecom; post; transport; water; retail distribution; professional services; other sectors; administrative requirements for business start-ups; treatment of foreign parties; other, such as governance of public-controlled enterprises or antitrust exclusions and exemptions. The information for the DR was collected by the WBG in 2013 as part of a regional initiative to calculate these indicators in collaboration with the OECD for 16 LAC countries (between 2012-2013 Argentina, Colombia, Costa Rica, Dominican Republic, El Salvador, Honduras, Jamaica, Nicaragua and Peru; in 2014-2015 Uruguay; and between 2015-2016 Ecuador, Bolivia, Guatemala, Paraguay, Panama and Venezuela). For details on the methodology of the PMR data please see Nicoletti et al. (2000), Summary Indicators of Product Market Regulation with an Extension to Employment Protection Legislation, Economics Department Working Papers No. 226, Organization for Economic Co-operation and Development.

146 The PMR data analyzes four regulated professions: lawyers,

and the lack of restrictions to FDI in most sectors are some of the areas that reflect notable progress in implementing an effective competition policy in the DR.

**The financial sector, while dominated by a concentrated banking sector, is robust and stable.** Overall, key financial sector indicators show robust capitalization, provisioning, liquidity, and profitability ratios. Profitability has been stable and above the regional median. By 2015, returns on assets (ROA) stood at 1.9% and returns on equity (ROE) at 16.4%, above the regional median (1.4% and 13.7%, in 2014, respectively). In terms of capitalization, the capital adequacy ratio (regulatory capital to risk weighted assets) stood at 16% by the end of 2015 well above the 10% requirement, with a proportion of liquid assets to short term liabilities above 400%. Portfolio quality and provisions are at good levels and above regional benchmarks as well. At the end of 2014, non-performing loans (NPLs) to total gross loans represent only 1.5% and loan loss provisions are above 200%. The system held assets equivalent to 45% of GDP at end-2015, and is among the smallest in the region. It comprises 65 financial institutions of which the 17 commercial banks account for 85.3% of the total assets of the financial system.<sup>147</sup>

Figure 5.6: Restrictiveness of Product Market Regulation (PMR) for the Dominican Republic



Source: WBG/OECD PMR data 2013-2016. a/ Top 5 OECD countries include: Netherlands, United Kingdom, Austria, Denmark and New Zealand. b/ LAC countries include: Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Honduras, Jamaica, Mexico, Nicaragua and Peru.

accountants, engineers and architects.

147 17 commercial banks, 10 saving and credit associations, 19 saving and credit banks, 17 credit corporations, 2 public institutions.

## Migration and Growth

**Strong commercial ties between Haiti and the Dominican Republic create opportunities for both countries.** Trade relationships between Haiti and the DR are mutually very important, as both countries are the second largest trade partner for each other, after the U.S. In that context, migration from Haiti and other countries represents an important factor that contribute to growth outcomes in the DR. Haitian migrants in the DR provide roughly 22% of remittances to Haiti (i.e. the second largest source of remittances after the United States of America). These remittances have an important impact on the poverty levels in Haiti; if remittances from the DR were to stop, extreme poverty in Haiti would increase by 3 percentage points, for example. Besides the migration flows, trade relationships between Haiti and the DR are mutually very important, as both countries are the second largest trade partner for each other, after the USA. Haiti migrants to the DR contribute to the economic activity with young workers who are willing to take on the jobs that the Dominican citizens do not want to fill.

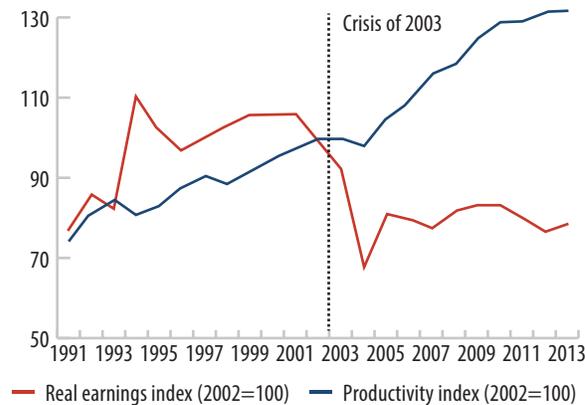
## Challenges

### Insufficient Linkages and Spillovers in the Domestic Economy

**While the economy has exhibited strong productivity growth in the past decade, little of the productivity gains have been passed through to workers in the form of wages.** Since 2003, real earnings growth has increasingly diverged from productivity growth. Indeed, between 2000 and 2013, productivity increased in real terms by 39% while labor compensation fell by 26% (Figure 5.7). Real earnings fell and/or remained stagnant in all sectors, including manufacturing as well as transport and communications, where productivity has grown since 2002.

**A key factor underlying this development is the labor implications of the structural shift in the composition of production in SEZs from garment assembly to medium-high skill manufacturing industries, such as medical devices, footwear, pharmaceuticals, and electrical products.** The potential of SEZ zones to continue generating jobs at the same pace as before is likely to be reduced because the employment intensity in these more

Figure 5.7: Real earnings index and productivity (output per worker) index, 2002=100, 1991-2013



Source: The Conference Board Total Economy Database and authors calculation based on the Central Bank of the DR.

complex processes is lower than in the apparel sector. 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 skill workers increases. The recent rebound of the textile sector may alleviate the negative pressure on job creation in SEZs.<sup>148</sup>

**The emergence of more sophisticated manufacturing processes in SEZs has increased the domestic value addition that is generated in the country but the lack of domestic linkages is a pressing challenge to foster positive spillovers into the local economy.** The more sophisticated nature of the manufacturing production taking place in the zones nowadays entails that many inputs are imported because products are unavailable domestically or do not meet required standards. As the Dominican Republic connects with longer and more sophisticated global value chains, it is paramount for the government to support the ability of domestic firms to meet the scale and technological requirements of SEZ firms. As of 2012, Dominican companies in SEZs were acquiring 81% of their inputs abroad.<sup>149</sup> In addition, while the current SEZ regulatory framework appears to be

compliant with multilateral commitments upheld by the WTO, there is a need to continue leveling the playing field between firms operating within the special regulatory regimen and the rest of the economy.<sup>150</sup>

**The tourism sector has been an important source of growth and employment in the DR but, similarly to the SEZs, it generates few spillovers with the rest of the economy.** In 2014, the tourism sector contributed 16% to GDP and 35% to exports accounting for 4.4% of direct employment and 15% of indirect jobs. Despite increasing competition from other Caribbean countries, including Cuba (see Box 1), tourist arrivals have grown rapidly in recent years, reaching a total of 5.6 million non-resident air arrivals in 2015: the largest of any Caribbean destination. Meanwhile, cruise ship arrivals doubled between 2014 and 2015. At the same time, little of this growth spills over to the rest of the economy. All-inclusive resorts represent about 75% of the DR's tourism sector. A key feature of this type of tourism is that tourist activities remain concentrated in small geographic areas of the country and do not benefit to a large extent other sectors of the domestic economy. When compared to other types of tourism such as independent adventure tourism, the average spending on an entire trip in the DR compares poorly (with a total amount of US\$1,096 per person based on 2014 data) against the average spending on an independent adventure trip (US\$2,710 per person according to the annual Adventure Travel Trade Association Industry Snapshot, 2013). For each US\$100 spent on an all-inclusive tour, only around US\$5 actually remains in a destination's economy, a far lower share than that of independent tourists and adventure-package tourists.

**One of the challenges for non-SEZ firms is the quality of agricultural products, which is perceived to be lower than that offered by regional competitors.** This perceived lack of competitiveness hampers the likelihood that demand for domestic products will increase without a proactive strategy to revert the current situation. For small and medium size farmers, it is difficult to meet the quantities and qualities of products requested by the market, as scale and consistency of

148 World Bank (2016): "Special Economic Zones, Global Value Chains, and Domestic Linkages in the Dominican Republic".

149 Engel, J., Daniel Reyes and M. E. Sánchez-Martín (2016): "The evolution of backward linkages in a dual economy: the case of the Dominican Republic, 1993-2010," Working Paper, forthcoming.

150 Defever, F., Daniel Reyes, A. Riaño and M. E. Sánchez-Martín (2016): "Does the Elimination of Export Requirements in Special Economic Zones affect Export Performance? Evidence from the Dominican Republic," Working Paper, forthcoming.

### Box 1: The 'Cuba Effect' on Tourism

While the DR's tourism sector has competed with Cuba's for many years in European and global source markets, the prospective normalization of US-Cuba relations is expected to divert a substantial number of US tourists toward Cuba. The size and duration of this impact is hard to estimate, and it would likely take time to materialize, as Cuba has a limited capacity to absorb new tourists. However, the resumption of US-Cuba tourism could create new opportunities for the DR by intensifying incentives to access high-income consumers or exploit niche markets. Moreover, the strengthening US dollar will likely bolster overall US tourism demand, at least partially offsetting the diversionary effect.

production are often limited. In addition, the perceived quality of Dominican agro-exports is low, and 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. However, its ability to comply with US Sanitary and Phytosanitary (SPS) regulation is low. For example, as of August 2016, all raw agricultural products as well as processed foods and seafood products were under the U.S. FDA alert's red list.<sup>151</sup> Red-listed products are automatically detained at the port of entry until the exporter proves compliance with US regulations. This process increases the time and the cost to enter the US market for Dominican exporters. Rejections of Dominican products are mainly due to problems related to: (i) *inappropriate use of pesticides*; (ii) *Salmonella contamination*; and (iii) problems with permits or registrations as well as with non-SPS compliant shipments. The high levels of rejection faced by Dominican agrarian exports call for a revision of the national quality infrastructure to meet international standards, including improvements in physical and institutional infrastructure, better coordination between international bodies and the private sector, and increased transparency along the value chain.

<sup>151</sup> The red list is an automatic process known as Detention Without Physical Examination (DWPE), which entails the automatic detainment of all shipments at the point of entry until the exporter shows compliance with U.S. regulations. Additionally, the Dominican Republic faces, on average, around 5 rejections per \$10 million of exports of agricultural products, which is higher than in other CAFTA countries.

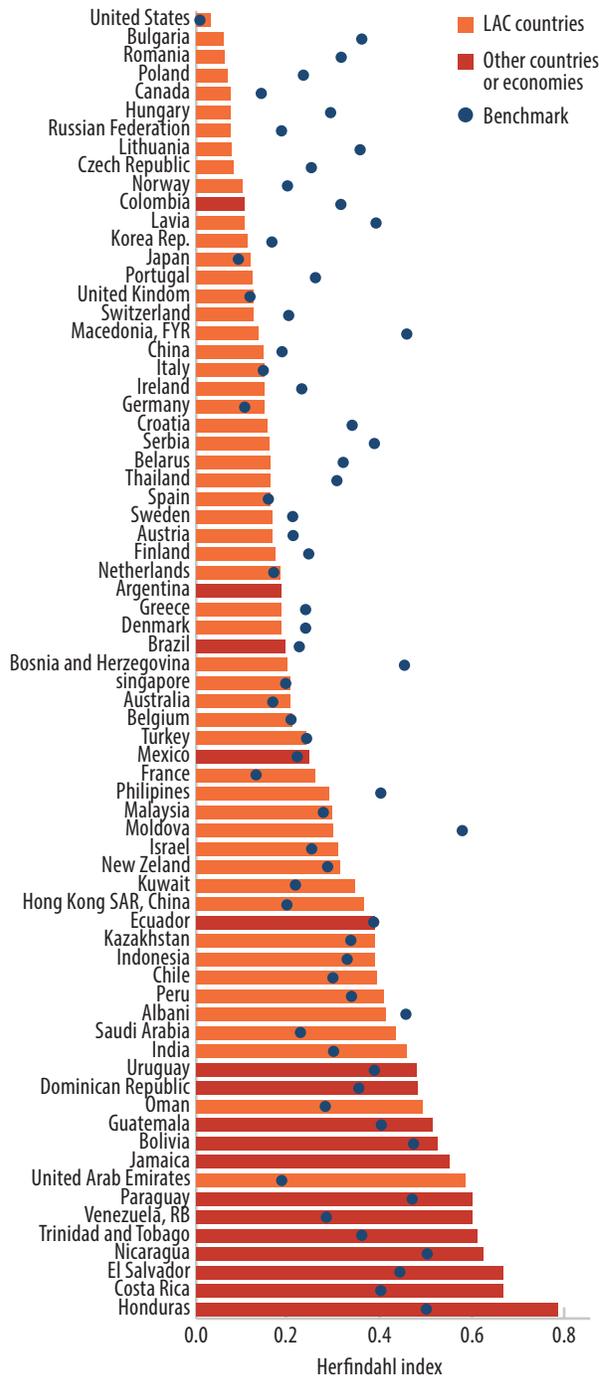
### Business Environment and Competition

**In spite of recent progress on the ease of Doing Business, the Dominican Republic still has complex and expensive regulatory procedures, and its legal institutions remain weak when compared to other countries in the region.** Even with notable reforms, challenges remain to further facilitate business entry/operation procedures and strengthen regulations on protecting minority investors, enforcing contracts and access to credit. For example, according to the 2017 Doing Business Report, in Santo Domingo the average cost to complete a procedure to enforce a contract is 40.9% of the demand, compared to the 31.3% in the Latin America and the Caribbean region, and 21.3% in the OCDE. Other example is the average cost to complete a contract enforcement procedure. In Santo Domingo it costs 40.9 (% of the claim) compared to 30.8 in Latin America and the Caribbean, and 21.1 in OECD-high income economies. The Doing Business Subnational survey in the Dominican Republic also showed wide geographic variations in regulatory compliance. For example, the time to obtain the same permit from the Ministry of Works in four different cities varies from 52 to 158 days.<sup>152</sup>

**Despite progress in promoting competition, continuously high market concentration in the DR may be conducive to the formation and stability of harmful cartel agreements.** A recent study by the General Directorate of Internal Revenue (DGII) found that 35% of the DR's markets are highly concentrated,

<sup>152</sup> Doing Business in Central America and the Dominican Republic 2015. Dajabón: 158 days; Santo Domingo: 90 days; Higüey: 90 days; Santiago de los Caballeros: 52 days

Figure 5.8: Actual and benchmarked index of market concentration in 17 non-tradable industries in selected countries



Source: World Bank Group (2014) "Latin American Entrepreneurs: Many Firms but Little Innovation", based on data from World Development Indicators and firm-level data from Orbis. Note: Bars show the average Herfindahl index of concentration of revenues across a selection of two-digit nonfinancial services sectors for which data were available for more than 80 countries. A value of 1 represents a market captured entirely by a single firm (the highest level of concentration); lower values indicate less concentration. Revenues were averaged across 2007–10. Dots represent a benchmark predicted value from a regression for each sector with (log of) population and GDP (adjusted for purchasing power parity) as explanatory variables. The regression model was estimated for each of 17 sectors separately; the dots are the averages of all sectors. The regression used all available countries. The figure presents only comparator countries. LAC = Latin America and the Caribbean.

8% are moderately concentrated, and the remaining 57% are not concentrated.<sup>153</sup> This is in line with other studies that have identified high market concentration in manufacturing as well as in non-tradable industries in DR (see Figure 5.8).<sup>154</sup> In general, high market concentration does not necessarily imply lack of competition per se. In a small economies, markets are naturally more concentrated and a situation with few firms will often be the efficient outcome in light of fixed costs and economies of scale. However, in this context, ensuring that markets remain contestable becomes even more crucial since cartels (on prices, production quantities or market sharing) are easier to sustain in markets with fewer players. To that end, anticompetitive behavior, especially cartels, should be effectively punished. In addition, regulatory restrictions that enable anticompetitive practices in the first place should also be eliminated. While the DR has a competition regulatory and institutional framework in place, the competition authority, ProCompetencia, does not have an Executive Director; as a result, no investigations into anticompetitive behavior have been launched yet.<sup>155</sup>

**In addition, PMR data also identifies persisting anti-competitive restrictions in network industries and input markets that may be limiting the competitiveness of downstream firms in the country** (see Figure 5.9). In network industries, potential competitors face incumbents, either public or private, that appear to benefit from regulatory protection resulting in an unlevelled playing field. For instance, in air transport, authorities can deny (ex-ante or at any later time) foreign airlines the right to operate on international routes based on the sufficiency of existing supply.<sup>156</sup> In electricity, while the regulatory conditions seem to foster open markets in the sector, entry (in those segments where competition would be economically viable and efficient) seems to have been discouraged by low prices subsidized by the

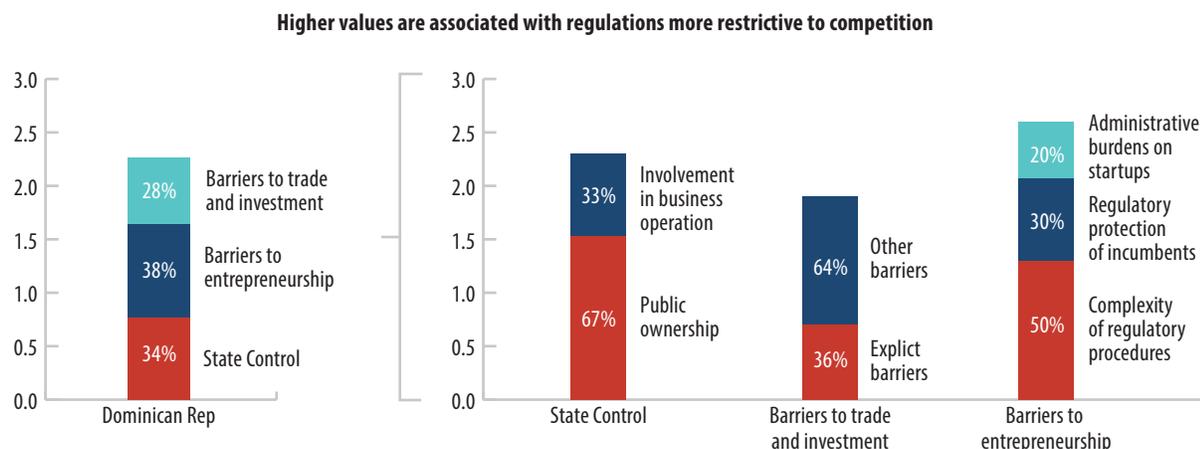
153 General Directorate of Internal Revenue (2015a). Concentración de Mercado en la República Dominicana [Market Concentration in the Dominican Republic], 2015. The study uses tax declarations filed in 2014 for FY 2013.

154 Concentración de Mercado en República Dominicana, 2015, Departamento de Estudios Económicos y Tributarios, Dirección General de Impuestos Internos de la República Dominicana.

155 The DR regulatory framework states that the Executive Director will head the Investigation Department in charge of antitrust investigations. See Article 33-34 of the Competition Law of the Dominican Republic.

156 Law 491-06 of Civil Aviation at Article 246 points a and b.

Figure 5.9: Restrictiveness of Product Market Regulations by components/sub-components for the Dominican Republic



Source: WBG/OECD PMR data 2013-2016.

state,<sup>157</sup> further resulting in suboptimal investments in the sector and recurrent blackouts (an average of 3h/day per household is reported by the *Superintendencia de Electricidad*).<sup>158</sup> Moreover, as captured by PMR sub-indicators, issues with the governance of SOEs may further insulate public operators from market forces.

**Longer-term access to finance in the economy is scarce, particularly to small productive operators.**

New forms of exclusion have been emerging worldwide as digital technology advances and risk profiling becomes increasingly sophisticated. In addition, access to finance is a major constraint faced by (the many) informal firms in the DR – which makes it harder for them to integrate in the economic system and grow. Commercial loans to SMEs increased from around 12% of GDP in 2007 to 17% in 2015, but average loan amounts remain low and maturities are typically short. Financial intermediation remains low and net interest margins are high, reaching 9.1% in 2014, compared to a LAC median of 5.6%. Private credit was equal to 25.4% of GDP as of 2014, almost half of what would be expected given the DR’s level of financial sector development, and well below the regional median of 43%. The country also lags behind the region with regard to

157 There are no legal monopolies or limitations to access the different market segments, there is separation between generation/transmission/distribution, and the sector is overseen by an independent regulator-

158 See Superintendencia de Electricidad, Statistics for quality service of consumer supply for year 2016 available at <http://sie.gob.do/mercado-minorista/estadisticas> of market operators: EDESTE, EDENORTE and EDESUR.

payment system and digital payments indicators: despite some recent increase, the presence of POSs and ATMs are among the lowest in LAC region. Credit card usage is low by the standards of LAC and upper-middle-income countries worldwide, and less than 40% of adults report using ATMs, versus a LAC average of over 70%.

**Migration and Labor Market Outcomes**

**The Dominican Republic has experienced significant immigration over the past 15 years and there are concerns associated with the effects of this rapid inflow of migrants in the local economy.**

Strong migration flows into the DR have led to an increase in the working-age population of 4.6% between 2002 and 2010 and accounted for just over 5% of the country’s population in 2012.<sup>159</sup> Due to historical and circumstantial reasons, about 9 out of 10 immigrants in the DR are from neighboring Haiti. At the same time, despite being one of the fastest growing economies in Latin America, real wages in the DR have remained fairly stagnant following the country’s recovery from the banking crisis of 2003/04. As in other immigrant-receiving countries, continued challenges in the labor market have resulted in local concerns that immigration may be leading to decreased employment opportunities for local workers—and thus contributing to the stagnant wages and low poverty reduction.

159 Due to data limitations in the 2010 census, only individuals born outside of the Dominican Republic are considered immigrants for the purpose of this report.

**The evidence that Haitian migrants are driving down real wages in the DR, however, is weak.** The extent to which immigration affects wages in local labor markets is in large part determined by whether immigrants' skills are substitutes or complements to those of local workers. If they are substitutes, this can result in increased competition for jobs while complementary skills can lead to increased productivity for local workers. Recent research by the World Bank finds that Haitian workers are highly clustered – in unskilled work,<sup>160</sup> in specific sectors, and geographically - in the Dominican Republic. In particular, given the relatively low levels of schooling among Haitian immigrants and the low levels of employment among Haitian immigrant women, it would be expected that competition for jobs with Haitian labor would be primarily felt by Dominican men with low levels of schooling. However, 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. Therefore, there does not seem to be strong empirical evidence supporting the hypothesis that Haitian labor in the Dominican Republic has led to stagnating wages for local workers. Instead, it suggests that since Haitian immigrant labor is largely limited to unskilled and informal employment in agriculture and construction, Haitian immigrants are more likely to be complements than substitutes to both capital as well as the relatively more skilled Dominican workers.

for firms outside the few establishments and firms that currently constitute the bulk of economic growth. Leveling the playing field between firms will involve fixing the current asymmetries across each sector in terms of access to information, markets, regulation, and finance.

## Horizontal reforms

### **Policies aimed at forging domestic linkages between SEZs and the domestic economy should be prioritized.**

A comprehensive strategy to support and develop linkages includes actions around three areas. First, a regulatory review to remove ineffective policies such as harmful local content requirements and protectionist non-tariff measures that restrict the ability of domestic firms to import and transform key inputs. In this context, formal and informal barriers for supplying SEZ firm from national territory should also be removed. Second, connect domestic suppliers by designing targeted programs for local suppliers, developing a supplier database, creating matchmaking services, and introducing incentives to encourage local sourcing from SEZ firms. Third, attract competitive international suppliers and support the upgrading of domestic suppliers through non-equity modes of investment (e.g. franchising). A program aimed at improving the ability of selected domestic value chains to internationalize, either directly or indirectly by being connected to SEZ firms, would be an important step to forge domestic linkages and internalize the positive spillover effects of FDI.

### **An overarching national policy is needed for export promotion and FDI attraction that leverage SEZs as an engine of an inclusive economic growth.**

This strategy should improve the institutional coordination across multiple actors working on the overall support framework for trade and FDI 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 progressively reducing the number of "strategic sectors" and eventually eliminating them altogether. Finally, a robust cost-benefit analysis of the role of SEZs in terms of economic outcomes (jobs,

## Policy Directions

### Tackle Market Distortions That Favor Only Specific Economic Agents

**Ensuring sustained economic growth and improving inclusive growth in the Dominican Republic depends on economy-wide horizontal reforms, on reforms to strengthen links between firms located inside and outside SEZs, and on vertical interventions in the key sectors underpinning the Dominican economy.** An important objective of public policy to share growth dividends will be to improve the environment for growth

<sup>160</sup> See Sousa, Liliana; Diana Sanchez; and Javier Baez (2016), Wage Effects of Haitian Migration in the Dominican Republic; and Kone, Zovanga and Caglar Ozden (2016), Labor Market Implications of Immigration and Emigration in the Dominican Republic, in Carneiro, F. and S. Sirtaine (eds), When Growth is not Enough, The World Bank, forthcoming.

domestic linkages, etc.) and forgone tax revenue would help to inform the policy debate. The design of support policies aimed at ameliorating the labor adjustment costs accrued by the change in sectoral specialization of SEZ is also important (see Poverty and Equity policy note). The Government has been strengthening the regulatory framework to facilitate PPPs, and the launch of the *Iniciativa por la Productividad y la Competitividad* exemplifies some of the recent efforts made to leverage on public-private dialogue,<sup>161</sup> with a view to bolster infrastructure upgrading and, ultimately, competitiveness.

**The competitiveness of national industries which do not have easy access to up-to-date information on existing opportunities should be fostered, by revamping the role of the Export Promotion Agency (EPA).** The international experience has shown that EPAs can help exporters reach new markets and become better integrated. EPAs are more effective when they offer bundled services and tailored approaches. A well-designed and effectively managed EPA could introduce firms to new export opportunities, thus diversifying the DR's export markets. This could be done by, first, clarifying of the roles of all existing institutions involved in export promotion; and second, balancing the EPA budget so that payroll is not a burden limiting resources available to support export promotion activities.

**Further legal reforms on competition and business regulations are needed.** The authorities should particularly focus on the following areas that are expected to yield immediate results: i) launch the enforcement of the existing competition law in order to prevent and punish anticompetitive behavior by strengthening the Competition Authority, *Procompetencia*, especially through the appointment of an Executive Director; ii) develop a strategy to review and remove regulatory restrictions in key Product Markets, especially those that risk to enable anticompetitive behavior of market players; iii) finalize the implementation of the new insolvency law by developing accompanying rules and regulations; iv) finalize the draft law on secured transactions for parliamentary approval; iv) remove barriers to open new business from the Commercial Code (such as minimum capital requirements); and v) enhance the regulatory framework to promote the attraction and retention of

efficiency-seeking investments to maintain FDI inflows into the country.

**Efforts should be made to improve regulations and encourage greater transparency related to financing of MSMEs while also creating additional instruments.**

Strengthening financial infrastructure would further contribute to increasing access to finance. The current legal framework does not adequately support the development of financing instruments that can rely on movable collateral such as leasing and factoring. A legal reform should be considered to solve the inefficiencies of the secured transactions and insolvency systems, including registration, enforcement and recovery of collateral, as well as corresponding amendments to the prudential lending regulations. The main priorities to improving access to finance among small establishments relate to: i) increasing volumes and sources of private sector finance beyond banks, such as angel investors, venture capital funds, and leasing; ii) increasing the use of financial services to support productive activities while reducing transaction costs; iii) increasing the scope and depth of non-financial services to address key constraints to credit, iv) further developing private capital markets would help alleviate market concentration.

### Industry-specific reforms

**The development of non-all-inclusive tourism niches should be fostered.** The focus of the DR's tourism sector on all-inclusive beach resorts has largely ignored the country's enormous potential for cultural, environmental, historical and adventure tourism. Refocusing the country's brand identity to encompass these features would enable it to both leverage its price advantage in its existing source markets and exploit emerging opportunities in nontraditional source markets.

**In order to ensure that more firms are able to comply with international standards, it is important to strengthen national systems for quality inspection and verification.** The objective is to ensure that the DR can strengthen existing institutions and improve its track record of compliance with international standards and key trading partners' specific requirements to (i) guarantee a higher level of protection of the domestic population, (ii) contribute to (sanitary) disaster risk mitigation, as well as (iii) increase and maintain access to high value export

<sup>161</sup> *Iniciativa por la Productividad y la Competitividad Nacional* was launched by President Medina in August 2015

markets. Enhanced oversight will require improvements in physical and institutional infrastructure, better coordination between international bodies and the private sector, and increased transparency and traceability along value chains. New standardization agencies and certification systems will need to be created, and capacity building will be required in existing institutions. Enhancing quality verification will be especially important in the agricultural, livestock and fisheries sectors, and the Dominican authorities should work closely with the WTO's sanitary and phytosanitary standards committee to expand the range of agricultural exports that meet international requirements. A recent project meant to increase the competitiveness of the banana industry, made up of several components (e.g. technical assistance, institutional strengthening, funds to finance producers) with the support of the UE, proved particularly successful and should serve as a model for other industrial clusters.

**Efforts are needed to increase the relatively low marginal productivity and limited access to information and markets of smallholder farms.** Smallholder farmers represent the majority of farmers in the DR and face a range of obstacles, including heightened vulnerability to shocks and a diminished capacity to respond to shifting market demands. Producer associations can help expand access to input and output markets, negotiate bulk prices, and facilitate investments in post-harvest handling, aggregation and processing. Yet many producer groups in the DR lack the skills and financial resources necessary to implement key investments and effectively market their goods. Firms operating on a small scale would also benefit from greater access to information about climate conditions, soil quality, extreme weather events and improved crop varieties. The Ministry of Agriculture should finalize the National System for Agricultural Information (under preparation). This, together with the existing meteorological information system could serve as the basis for a more ambitious and comprehensive information platform.

**Producers should be integrated into domestic and global value chains.** The competitiveness of producer groups could be fostered through strategic alliances between the public and private sectors and would require: (i) technological innovation to raise productivity; (ii) targeted market intelligence to enhance market access; (iii) financial capital to boost access to productive assets;

and (iv) capacity-building and technical assistance to be able to meet the market demands. Using differentiated incentives under a transparent and market-driven scheme would allow relevant stakeholders to build mutual credibility, which would thereby provide incentives to the commercial and private financial sectors to share risks in the rural productive investments.

**The inclusion of smaller industries in the agricultural cluster should be facilitated, by improving services on sanitary and phytosanitary (SPS) compliance.** The principal objective would be to upgrade SPS national capacities, building in particular on recommendations of independent evaluations (e.g. OIE PVS Pathway for Veterinary Services). Veterinary, phytosanitary and food safety (national) authorities should be able to comply with international standards and key trading partners' specific requirements, with a view to (i) guarantee a higher level of protection to the domestic population, (ii) contribute to (sanitary) disaster risk mitigation, as well as to (iii) increase and maintain access to high value export markets. Policy actions on this front would include institutional and legislative reforms, including those meant to deepen the coordination and synergy with the private sector. Other actions include: 1) improving capacity to carry out essential functions of risk analysis, surveillance, prevention, preparedness and response to sanitary crisis, cost-benefit analysis, sanitary information, quality assurance (in particular for laboratories), communication, and certification; 2) upgrading physical infrastructure including refurbishing some laboratories to enhance analytical testing capabilities and possibly creating new inspection warehouses at several border points.

### Dealing with Haitian Migration

**Regarding migration, while more analytical work is needed to inform future policy decisions, a “do no harm” approach seems to be the most appropriate for the moment.** This could take the form of an orderly effort to document and regularize migrants who currently live and work in the DR. Haitian migrants to the DR play a non-negligible role in the economy and restricting their ability to work in the country could have severe impacts on the ability of the DR economy to sustain the high growth rates observed today. Estimates from the World Bank suggest that an “open policy scenario”, in which the DR opts for a fully open migration policy from Haiti,

toward both current and future migrants, would increase the level of wages between 2-3%, over the next 8 years, and particularly the unskilled urban wages (4%). On the other hand, a “deportation” policy (i.e., where all migrants are deported and no new migrants are allowed to enter) would translate into a decrease of 3-5% of wages. The trend can be explained by the fact that Haitian migrants do not compete with Dominicans on the same type of jobs, and therefore a decrease of Haitians would shift a portion of Dominicans into lower skilled jobs, and translate into lower average wages. On the growth side, the openness policy would translate into a 0.35% additional GDP growth by 2022, while a deportation policy would cause GDP to stand 5.7% below the baseline scenario, by 2022. Trade would also be affected, as global exports from the DR would decrease by 5% vis-à-vis the baseline, by 2022, while the bilateral exports to Haiti would shrink by over 6%.

## ENVIRONMENTAL SUSTAINABILITY AND RESILIENCE TO CLIMATE CHANGE

### Country Context

**Like many other countries in the Caribbean, the DR is extremely vulnerable to natural disasters and the overall impacts of climate change.** The DR is highly exposed to rapid weather related disasters (tropical storms, hurricanes, cyclones, floods and landslides), slow climate change processes (sea-level rise and desertification) and seismic events such as earthquakes and landslides. Roughly 92% of its economic production and 97% of its population are located in areas vulnerable to two or more types of natural disaster.<sup>162</sup> Geographic location plays a large role in explaining this high degree of exposure to weather events, but so do structural weaknesses such as unplanned urban growth, land degradation, and weak enforcement of building codes and zoning regulations.

**The incidence of disasters affects economic activity and livelihoods, especially for the most vulnerable segments of the population.** Disasters have slowed annual GDP growth by an estimated 0.69%, or US\$420

million per year, from 1961 to 2014.<sup>163</sup> In 1979 alone, hurricane-inflicted damages reached 16% of GDP.<sup>164</sup> Losses from earthquakes and tropical cyclones have been estimated at US\$683 million per year.<sup>165</sup> Disasters also have negative effects at the household level, and poorer households are especially vulnerable. Lack of resources can force poor households to adopt coping strategies with deeply negative long-term effects, such as withdrawing children from school so they can contribute to household labor. In that context, a poor households’ recovery from a single disaster can take an entire generation.

**The development of the agri-food sector, which is one of the engines of growth in the DR, creates important environmental sustainability concerns.** The sector (agriculture, livestock, forestry, fisheries and agroindustry) contributes 16% to the national GDP.<sup>166</sup> Primary agricultural production has been contributing a relatively constant 6 to 7% to the national GDP over the past 10 years. Agri-food exports (animal, vegetable and foodstuff) accounted for 20% of total value of official exports in 2012. Nevertheless, three quarters of the agricultural production is transformed downstream the value chain by the agroindustry sector,<sup>167</sup> adding value and creating jobs in the country. The main agricultural products (by value of production) are chicken, cattle, banana, rice, papaya, avocados, milk, sugarcane, pigs, and pineapples. On the flip side, agriculture puts pressure on natural resources, including forests, soil, water management and biodiversity. Slash-and-burn farming, for example, continues to contribute to deforestation, soil erosion, watershed pollution and the destruction of habitats for the DR’s many endemic species.

**Amid rapid economic growth rates, forest coverage has increased over the last decade.** While many countries in the world that have sustained high rates of economic growth have not been successful in maintaining their forest coverage, the DR stands out as a fast-growing economy that has managed to effectively protect its forests. The

162 See World Bank, 2005, Natural disaster hotspots: A global risk analysis. Washington, DC: World Bank: <http://documents.worldbank.org/curated/en/2005/04/6433734/natural-disaster-hotspots-global-risk-analysis>

163 This estimate is in 2010 US\$. This represents a conservative assessment, as no major earthquakes occurred during this period.

164 See “República Dominicana: Repercusiones de los Huracanes David y Federico sobre la Economía y las Condiciones Sociales”, CEPAL México, 1979.

165 This evaluation was performed using the Caribbean Catastrophe Risk Insurance Facility’s MPRES platform.

166 See Junta Agroempresarial Dominicana (2009): Estrategia para el Desarrollo Agropecuario y Agroindustrial Sostenible para la RD.

167 See Ministerio de Agricultura (2011): Plan Estratégico Sectorial de Desarrollo Agropecuario 2010-2002.

country's total forest cover increased from 32% in 2003 to almost 40% in 2011, due to increased environmental protection and the successful control of forest fires. In addition, the country is firmly committed to reducing carbon emissions. In fact, Article 194 of the Constitution specifically references the need for adaptation to climate change. The country has also ratified the UNFCCC in 1998 and the Kyoto Protocol in 2002.

## Challenges

### Vulnerability to Climate Change and Disaster Risk Management Capacity

**The lack of high-level coordination mechanisms hampers the effectiveness of the country's disaster risk management capacity.** Disaster-risk management (DRM) and adaptation to climate change are priority objectives of the END. In September 2002, the government established the National System for Disaster Prevention, Mitigation and Response (*Sistema Nacional para la Prevención, Mitigación y Respuesta ante Desastre*, SN-PMR), which defined the general principles of a risk-reduction policy for all levels of government. However, the SN-PMR lacks the high-level coordination mechanisms necessary to harmonize the operations of all line ministries and technical institutions responsible for managing disaster risk. The SN-PMR receives a small budget allocation,<sup>168</sup> and limited institutional ownership weakens the link between disaster-risk analysis and risk-reduction policies. The current national DRM policy will expire in 2016, and the Ministry of the Presidency has been leading a review of the relevant legislation in an effort to strengthen the legal and institutional framework for DRM.

**The DR lacks a clear financial strategy for disaster responses.** Although the government is required by law to earmark 1% of anticipated fiscal revenues for use in the event of a 'public calamity', contingent financing for disaster response is insufficient. Standard & Poor's estimates that a major disaster in the DR could trigger a downgrade in the sovereign credit rating of 3 notches, the

168 In 2012 only US\$12.9 million was assigned to the SN-PMR, or 0.1% of the annual budget. See Ministerio de Economía Planificación y Desarrollo de la República Dominicana (MEPyD), 2012, "Análisis de recursos necesarios de funcionamiento para operación básica del sistema nacional de prevención, mitigación y respuesta", Programa de Prevención de Desastres y Gestión de Riesgos, MEPYD/ DGODT/ BID.

largest prospective downgrade among the 48 countries assessed.<sup>169</sup> Low rates of private insurance (1.2% of GDP) exacerbate risk exposure, especially in the agricultural sector, where insurance rates are especially low and where almost a third of disaster damages have historically occurred.<sup>170</sup> Without a comprehensive financial strategy to manage these risks, disasters can impose a very high opportunity cost, as resources previously allocated to development projects may have to be diverted to cover disaster-related losses. Reallocating these resources through ad-hoc budgetary processes can also delay emergency response and recovery efforts, diminishing the efficiency of reconstruction.

**In addition, DRM and climate change adaptation are insufficiently integrated into national development planning and decision making.** The Ministry of Economy, Planning and Development (MEPyD) has progressively incorporated DRM into its public investment system.<sup>171</sup> However, the information available at the sector level (risk maps, vulnerability assessments, etc.) is not sufficient for thorough risk assessments of public investment projects. Meanwhile, weaknesses in the institutional framework for land-use planning result in unplanned urban growth in risk-prone areas. While the national construction code was updated to incorporate seismic resistance in 2010, its enforcement remains uneven, and few structures have been retrofitted since the new regulations came into effect.

### Competitiveness and Sustainability of Agri-food Systems

**The agri-food sector of the Dominican Republic faces important structural, biophysical, and climatic vulnerabilities:**

*Climatic Vulnerability:* The country faces an unprecedented number of adverse weather events (droughts and floods). Reflecting a second consecutive year of drought, imports

169 See Standard & Poor's, "Storm Alert: Natural Disasters Can Damage Sovereign Creditworthiness", 2015.

170 See MEPyD-WB, Ministerio de Economía Planificación y Desarrollo de la República Dominicana (MEPyD), y Banco Mundial, 2015, "Gestión Financiera y Aseguramiento del Riesgo de desastres en la República Dominicana": [http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2015/11/24/090224b083393dc4/1\\_0/Rendered/PDF/Gesti0n0financ0Rep0blica0Dominicana.pdf](http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2015/11/24/090224b083393dc4/1_0/Rendered/PDF/Gesti0n0financ0Rep0blica0Dominicana.pdf)

171 In 2013 a basic risk analysis was mandated for all projects above US\$10 million.

of cereals in 2015/16 are forecasted to remain above the country's five-year average. Imports of maize are expected to increase almost 7% to 1.2 million tons, in line with this year's lower production, while wheat imports are forecasted to remain relatively stable at above 500 million tons. This adversity is likely to worsen in the near future. According to the National Strategy for Adaptation to Climate Change in Agriculture 2014-2020,<sup>172</sup> total annual rainfall may decrease to 1,137 mm in 2030 (11% decrease from 2010). Climate scenarios project an increase of temperature of 0.5 to 1°C by 2030 and by 1 to 2.5°C by 2050. Areas currently subject to drought could become permanently arid with climate change.

*Biophysical Vulnerability:* Agriculture is a source of pressure on natural resources. Despite encouraging progress in reversing deforestation trends, additional efforts are needed to reduce ecosystem degradation in specific regions of the country as a result of intense agricultural activity. This sector is contributing to deforestation in upper watersheds, soil erosion, and pollution of water sources that are threatening the landscapes, the country's economic development and the health of its population. The majority of deforestation (60%) continues to be caused by the expansion of slash and burn agriculture and poor extensive livestock production practices in protected areas on the borders with Haiti. Other direct causes of deforestation/degradation include illegal logging, unsustainable cattle grazing, natural disasters, forest fires, and infrastructure projects for mining, energy and tourism. The regions most affected by deforestation and ecosystem degradation, including soil erosion and consequently lower water availability in the watersheds, are the south side of *Cordillera Central*, the highest mountain range in the country; *Sierra de Neyba*; and along the country's border with Haiti.

## Policy Directions

### Increase Resilience to Climate Change and Natural Disasters

**Integrate disaster risk management tools in core administrative processes.** Disaster risk management

172 Estrategia Nacional de Adaptación al Cambio Climático en el sector Agropecuario de la RD 2014-2020, prepared by the National Council for CC and Clean Development Mechanism (Consejo Nacional para el CC y el Mecanismo de Desarrollo Limpio).

should be integrated into public investment and territorial planning processes by introducing screening mechanisms and disaster-risk considerations. Further actions to promote disaster risk reduction in priority sectors through the development of hazard and risk information tools (e.g. safe school or safe hospital index) may also be considered. The creation of a dedicated risk-analysis unit is also recommended. It would update DRM disaster plans, develop DRR tools for public institutions, identify and analyze high-risk areas, and develop and disseminate risk maps and information in coordination with relevant authorities and local communities.

### Include risks resulting from climate change into fiscal risk management strategies.

It will be crucial to better understand and quantify the contingent liabilities associated with disasters in order to develop an optimal combination of risk-retention and risk-transfer instruments to reduce the fiscal impact of disasters. Contingent loans in case of disasters would allow the Government to increase its budgetary capacity in the aftermath of disasters. Promoting the expansion of insurance, particularly in the agricultural and housing sectors, could reduce the indirect contingent liabilities borne by the government. Protection against large disasters, would warrant internationally pooled risk insurance.

### Strengthen the Growth Potential of the Agri-food Sector

**Adopt an integrated approach to boost the growth potential of the agri-food sector.** Sustainable growth in the countries' agri-food sector can be achieved with an integrated approach that aims at tackling limitations to competitiveness, linking farmers to markets and providing an improved access to climate-resilient innovations. The World Bank proposes an integrated approach for the sector with the following four entry points: (i) making producers more productive and resilient, while lowering their carbon footprint, through climate smart agriculture;<sup>173</sup> (ii) integrating producers into domestic and global value

173 Climate-smart agriculture (CSA) is an approach that seeks to increase productivity in an environmentally and socially sustainable way, strengthen farmers' resilience to climate change, and reduce agriculture's contribution to climate change by reducing greenhouse gas emissions and increasing carbon storage on farmland. CSA is therefore about adaptation and mitigation of the agricultural sector.

chains; (iii) strengthening institutions and the provision of public goods; and (iv) promoting the sustainable use and management of natural resources at the watershed level.

- **Encourage Climate Smart-Agriculture:** This could be achieved through a comprehensive landscape approach that encompassed: (i) promotion of good agricultural practices on pastures, land grazing and rain-fed agriculture in the upper and middle sections of the watershed and; (ii) promotion of modern and efficient irrigated agriculture in the middle and lower sections of the watershed. The promotion of CSA can also support the GoDR to fulfill its commitments to the COP21 on the mitigation agenda and reach its goal of adaptation to CC. In its Intended Nationally Determined Contribution (INDC), the proposal of the Government for mitigation is to reduce the GHG emission by 25% in 2030, in relation to the 2010 baseline (3.6t of CO<sub>2</sub> equivalent) and the agricultural sector can play an important role in achieving this objective.
- **Promote the Conservation of Natural Resources Assets:** Under the Ministry of Environment's mandate, the promotion of Integrated Water Resources Management at Watershed level, the implementation of Payment and Compensation for Ecosystem Services,<sup>174</sup> the participation of REDD+ are among the most important activities to be carried out to guarantee a sustainable conservation of natural resources.<sup>175</sup>

174 One pilot project has been carried out in Yaque del Norte.

175 The World Bank is assisting the country to design and carry out the Readiness Preparation Activities for REDD+.









**WORLD BANK GROUP**